





Livelihoods Assessment June 2007

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ZAMBIA

Livelihoods Assessment

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TABLE OF CONTENTS

	ACRONYMSv
I.	INTRODUCTION
II.	METHODOLOGY 3 Geographic scope and site selection 3
	Secondary data sources
III.	LIMITATIONS
IV.	DISTRICT OVERVIEW7
V.	STRUCTURES AND SYSTEMS10Political11Traditional Leadership13Economic14Agriculture16Environment and Natural Resources18Emergency Preparedness and Response20Education21Health22Informal Sector24Water and Sanitation25Community Welfare26
VI.	ASSESTS, WEALTH RANKING AND COPING STRATEGIES 27
VI.	ASSESTS, WEALTH RANKING AND COPING STRATEGIES 27 A. NATURAL ASSETS 27 Land 27 Water. 29 Rainfall 31 Forests 32 Mining 33 B. PHYSICAL ASSETS 34 Livestock 34 Tools 34 Roads. 35 Housing. 36 Markets. 36 C. HUMAN ASSETS. 42 Labor. 42 Skills 42
	Education43Health Care.44

	D. POLITICAL AND SOCIAL ASSETS
	Political
	Traditional
	<i>Church</i>
	Cooperatives and Farmer Groups
	NGOs and Community Groups 50
	Family Network 51
	E. FINANCIAL ASSETS
	<i>F. Wealth Ranking.</i> 52
	Characteristics of the (3) wealth categories
	The Poor Household 53
	The Average Household 54
	The Rich/Better off Households 54
	Importance of Livestock 55
	Ndola Wealth Ranking Findings
	Mongu Wealth Ranking findings
	Sesheke Wealth Ranking findings 58
	G. COPING STRATEGIES
	Selling of Assets
	Engaging in Casual Labor/Piecework
	Livelihoods Diversification
	Seeking Assistance/Remittances
	Hiring Out Land 62
	Foraging
	Reducing consumption
VII.	VULNERABILITY CONTEXT
VIII.	KEY ISSUES/GAPS
	Natural Resources
	<i>Physical</i>
	Human Resources
	Political and Social
	Financial
IX.	LIVELIHOOD STRATEGIES AND OPPORTUNITIES
	<i>Strategies</i>
	Opportunities
Х.	CONCLUSION
	APPENDIX 1. CRS CONCEPTUAL FRAMEWORK FOR INTEGRAL
	HUMAN DEVELOPMENT (IHD)
	APPENDIX 2. FIELD PROCESS GUIDE

ACRONYMS

ADC	Area Development Committees		
AIDS	Acquired Immune Deficiency Syndrome		
BEO	Block Extension Officer		
BRE	Barotse Royal Establishment		
CAP	Community Action Plan		
СВоН	Community Action Plan Central Board of Health		
CCD	Catholic Commission for Development		
CEMP	Community Environment Management Program		
CEO	Camp Extension Officer		
CHW	Community Health Workers		
CRAIDS	Community Response to AIDS		
CRS	Catholic Relief Services		
C-SAFE	Consortium for Southern Africa Food		
	Security Emergency		
DC	District Commissioner		
DACO	District Agriculture and Cooperatives Office		
DAIO	District Agriculture Information Officer		
DDCC	District Development Coordinating Committee		
DDMC	District Disaster Management Committee		
DHMT	District Health Management Team		
DHTF	District HIV and AIDS Task Force		
DMMU	Disaster Management and Mitigation Unit		
DWAC	District Welfare Assistance Committee		
FEZ	Food Economy Zone		
FFS	Farmer Field Schools		
FRA	Food Reserve Agency		
GM	Growth Monitoring		
НН	Household		
HIPC	Highly Indebted Poor Countries		
HIV	Human Immunodeficiency Virus		
IHD	Integral Human Development		
INGO	International Non-Governmental Organization		
LGB	Large Grain Borer		
MACO	Ministry of Agriculture and Cooperatives		
MCDSS	Ministry of Community Development and		
	Social Services		
MCDSW	Ministry of Community Development and		
	Social Welfare		
ΜοΕ	Ministry of Education		

M-11			
МоН	Ministry of Health		
NFNC	National Food and Nutrition Commission		
NWASCO	National Water and Sanitation Company		
NGOs	Non-Governmental Organizations		
ovc	Orphan and Vulnerable Children		
PACO	Provincial Agriculture and Cooperatives Office		
PAM	Program Against Malnutrition		
PAIO	Provincial Agriculture Information Officer		
PDCC	Provincial Development Coordinating Committee		
PRA	Participatory Rural Appraisal		
PWAS	Public Welfare Assistance Scheme		
RDC	Residential Development Committee		
RHC	Rural Health Centre		
SPP	Strategic Program Plan		
тт	Training for Transformation		
UN	United Nations		
UNDP	United Nations Development Programme		
VAC	Vulnerability Assessment Committee		
ZAWA	Zambia Wildlife Authority		

I.INTRODUCTION



The CRS Zambia Livelihoods Assessment is an integral part of the Strategic Program Plan (SPP) process. Given the food insecurity situation in past and current years, and the severe impact of HIV and AIDS in Zambia, numerous other assessments have been completed. After analysis, the CRS Zambia team determined that these assessments did not provide sufficient understanding

of the relationship between asset development and structures and systems within a context of recurrent shocks (drought and HIV and AIDS). CRS Zambia decided that more detailed livelihoods data was needed in order to evaluate if existing programs are adequately addressing the needs of communities, if CRS is reaching the most vulnerable and to inform strategic planning and future programming.

The overarching goal of this livelihoods assessment is to *inform the CRS Zambia SPP process and kick start the development of a livelihood baseline.* The purpose of the assessment is to establish the understanding of household (HH) livelihood strategies, constraints and opportunities using the Integral Human Development (IHD) framework in selected representative communities in Mongu, Sesheke and Ndola districts to contribute to the CRS Zambia SPP process.

The livelihoods assessment focused on the following specific objectives:

- 1. To obtain an overview of the community concerning resources, social groups, structures and institutions
- 2. To develop a sound understanding of livelihoods assets and their accessibility as perceived by the community
- 3. To assist communities to develop a deeper understanding of risks and vulnerabilities and how it affects their livelihoods
- 4. To assist communities to identify opportunities, and to develop and diversify strategies to improve their livelihoods
- 5. To assist communities to identify and assess livelihood outcomes resulting from the implementation of livelihood strategies

1

In order to gather information that fully represents the complexities of rural community livelihood systems, the livelihoods assessment was designed using the components of the IHD framework (Appendix 1). The team used a Participatory Rural Appraisal (PRA) approach to engage communities in the process of assessing their assets, risks, vulnerabilities, systems and structures, opportunities and outcomes. A Field Process Guide, shown in Appendix 2, was proposed to assist the team in applying the IHD framework.

This report presents the findings from the assessment, key issues/ gaps identified by the communities, as well as potential opportunities for interventions. The team is confident that the assessment has provided the additional information and insights that will strengthen the outcomes of the SPP. The livelihoods assessment began with the teams studying issues papers written on HIV and AIDS, Macro-economic analysis and Food Security. A planning workshop was held early October 2005 to discuss and review the assessments conducted to date, and to identify gaps.

Through the PRA process, communities were engaged in participatory qualitative approaches in order to seek an understanding of what the poorest people in communities see as:

- Their biggest issues and constraints in regards to IHD,
- *Their greatest opportunities* for addressing these issues and constraints, and
- The most effective and appropriate approaches for doing this.

The process guided the communities through a series of activities, including: community mapping; wealth ranking; discussions on coping strategies for each wealth group; analysis of organizational relationships; asset analysis; market mapping and resource flow analysis; discussions on HIV and AIDS; and community action planning. Activities with community members were also supplemented by interviews with key informants from relevant government departments, Diocesan staff and other key actors in each community.

Geographic scope and site selection

Assessments were carried out in three districts covering two provinces of Zambia and three Dioceses where CRS works: the Dioceses of Ndola, Mongu and Livingstone, with two communities per district participating in the Livelihoods Assessment namely: Mukulungwe and Nkwazi in Ndola district, Siwito and Muilwe in Mongu district and Limpupu an Silolo in Sesheke district.

The assessment committee used the following criteria for selection:

- Dioceses (10)
- Agricultural economic zones (3)
- Different Livelihood zones in the provinces

The site selection was purposeful as this exercise had limited time and funds and focused on CRS operational areas. Targeted communities were selected in consultation with the partners and other community stakeholders, taking into account the following additional factors.

- Zambia is divided into three agro-ecological zones that have distinctive soil, ecological and socio-economic characteristics. For years, the zones have determined economic importance in these regions. Recently, the Vulnerability Assessment Committee (VAC) decided to improve the food economy zone mapping by initiating a livelihoods rezoning exercise. The results of this process have led to the incorporation of the livelihood zones as opposed to the Food Economy Zones (FEZ) for their vulnerability assessments (see back cover for more details).
- The assessment team also selected communities based on their urban, peri-urban and rural status to a more balanced view of all livelihood contexts. Most of CRS' livelihood programming has been focused on rural areas, but with the deteriorating effects of HIV and AIDS and their higher prevalence in urban and peri-urban areas, there is a need to more fully understand livelihood dynamics in these areas.

Training for data collectors with key concepts and analytical frameworks in livelihoods was conducted from the 25th to the 28th of September 2005. The assessment was conducted between the 3rd and the 14th of October 2005. To support this process, one colleague from CRS Malawi (Deputy Head of Programming: Livelihoods), the Program Quality Advisor from CRS Madagascar, SARO, and the Senior Technical Advisor for Agriculture from CRS headquarters participated. The assessments also included CRS partners from the Dioceses of Mongu, Livingstone, Ndola and Kasama, and the Catholic Commission for Development (CCD).

Secondary data sources

The CRS livelihoods assessment team reviewed various secondary data including the Zambia Vulnerability Assessment Committee Livelihoods Rezoning Report, the INGO forum coordinated crop/drought assessment, United Nations mission reports, National AIDS Council country strategies and the Zambian Poverty Reduction Strategy Paper.

The assessment also used a variety of PRA tools including:

- Focus group discussions
- Community mapping
- Action planning
- Key informant interviews
- Field observations

III. LIMITATIONS

The teams did not experience significant obstacles during the process that negatively impacted on the overall results of the exercise. However, there were a number of challenges that should be considered in the future:

- 1. At the time of conducting the assessment, Zambia was experiencing a fuel crisis. This situation caused delays in starting time and in some cases rescheduling of appointments with communities.
- 2. Because the traditional leadership was initially suspicious of the process, they occasionally influenced opinion and participation of some community members.
- 3. The communities associated the process with the ongoing relief food distribution as the assessment was conducted at the time Zambia was experiencing a food crisis due to drought. This may have distorted the results and lead to biased results.
- 4. The assessment was conducted in the summer when daytime temperatures were very high causing some meetings to be postponed.
- 5. Some participants covered long distances to meeting places and thus demanded food, and to be released early.
- 6. Lack of feedback to communities by other agencies on similar activities conducted in the past reduced community confidence in CRS.
- 7. The time in the field was quite limited, relative to the process and outcomes that were sought.
- 8. Sometimes too many community members wanted to participate, making it difficult to choose participants to provide the information.
- 9. There were difficulties getting women to talk openly in front of men. In this case the team separated them from the men so they would feel more at ease.
- 10. People were also reluctant to identify livelihood opportunities and to categorize themselves as "average" or "rich" during the wealth ranking exercise since they felt that this would result in fewer outside assistance resources given to the community. They were expecting material benefits out of this process.
- 11. The team felt that language was a barrier. The process guide should have been translated.

- 12. More time should have been spent on the initial training of team members on how to use the process guide. The guide was hard to follow in some places.
- 13. Partners selected communities and proposed meeting dates for each community without prior agreement with the research team. This resulted in the necessity of selecting different participants and communities in some cases. For example in Ndola, the Consortium for Southern Africa Food Security Emergency (C-SAFE) committee members were selected, which may have biased the data collection process.
- 14. More tape recorders were needed.
- 15. Drawing of maps was done twice to ensure clarity. In addition, drawing the map on the flip chart was done twice, using pencil and then a marker to give room for mistakes.
- 16. Absence of certain key informants, as they were reported out of office during the assessment period, and limited knowledge by most key informants who were new office bearers, limited the amount of information that could be used.
- 17. Communities needed more time and assistance with their action plans.



The 2005 livelihoods assessment covered Ndola, Mongu and Sesheke districts (see Map 1). Ndola district is an important mining and commercial centre in Zambia's Copperbelt Province; Ndola borders the Democratic Republic of Congo. Copper mining is the main economic activity in the zone, although due to the recent sale of mines, a number of people have been retrenched and have migrated to other zones. Sesheke district is located in the Western Province sharing borders with Namibia and Botswana. Mongu district is the provincial headquarters of Western Province and is capital to the Litunga of Western Province. Mongu is popular for its annual traditional ceremony, the Kuomboka, and is a huge tourist attraction. Table 1 illustrates the geographic and demographic profiles of each district.

Map 1: Zambia

Districts



District		Ndola	Mongu	Sesheke
Size KM (SQ)		883	10,075	29,272
Population		393,793	166,609	78,664
Males %		49.2	48.2	48.8
Females %		50.8	51.8	50.2
HIV Prev (%)		26.6	22.2	16.1
HIV +	Males	35,658	8,171	2,759
	Females	40,676	14,065	4,726
# Orphans & Vulnerable Children (OVC)		92,908	24,479	8,216

Table 1: Geographic and Demographic Data

Table 2 illustrates the livelihoods zones covering the assessed districts and characterizes them by their geographical areas and main income generating activities. **The assessment targeted six communities in the three target districts: Munkulungwe**/peri-urban and **Nkwazi**/ urban (Ndola); **Siwito**/rural and **Muilwe**/rural (Mongu); and **Limpupu**/rural and **Silolo**/rural in Sesheke. Selection was purposeful to have a mix of rural, peri-urban and urban communities across different livelihood zone.

District	Zone Name	Description	Income sources
Mongu & Sesheke	Sioma Plain	Medium rainfall areas, endowed uplands and wetlands, sparsely populated, forest reserves and game parks.	Crops, timber and livestock.
Mongu & Sesheke	Zambezi floodplain	Low rainfall areas, flood plains, sparsely populated, flood and drought prone.	Crops, livestock and fishing.
Sesheke	Kazungula- Mwandi Plain	Medium to low rainfall areas, sparsely populated, with fertile to low fertile soils.	Crops, wage labor, timber, curios and cross boarder trade.

Table 2:

District	Zone Name	Description	Income sources
Sesheke	Mulobezi Woodlands	Low rainfall areas, infertile soils, sparsely populated, commercial timber activities.	Crops, fishing, livestock, timber and game meat.
Sesheke	Central Maize- Cotton	Medium rainfall, medium populated, very fertile soils with high commercial agriculture.	Cash crops, game meat, trading, wage labor, charcoal burning & mining.
Ndola	Copperbelt Mining	High rainfall area, highly leached soils, relatively forest coverage, highly populated, good road network infrastructure and heavy mining, processing and manufacturing activities.	Cash crops, trading, wage labor, charcoal burning and mining.

V. STRUCTURES AND SYSTEMS



Surrounding the community's social and political assets are the governmental and civil society systems that extend upward to the district, provincial and national levels. These systems are composed of structures at each level, be they service providing structures such as schools and health centers or line ministry offices, and the system is top down with serious communication problems in both

directions. Resource allocation is ineffective and even though districts receive clear policy guidance, they are unable to fully implement because they do not receive necessary funding and human resources.

The existence of multiple systems: governmental, non-governmental organization (NGO), Church, Community Based Organization, etc., means that the quality of assistance is diminished. In theory there should be one system that all stakeholders contribute to that is directed and supervised by the government. However, since the government cannot project its supervisory and coordinating function, most times each civil society actor will create a parallel system. This leads to duplication of efforts and lack of coverage.

It appears that the provincial level oftentimes is not involved in civil society programs since there is a tendency for coordination to be done with the national and district levels. The provincial offices do collect data and pass it back to the national level as well as control limited resource allocation.

To better understand the dynamics at play in these systems, this section will focus on sectoral areas and attempt to make the relevant connections.

Political

Zambia is comprised of nine provinces; these provinces are further subdivided into districts (72 in total) for administrative purposes. In terms of political representation, the districts are split into constituencies, for which a Member of Parliament is elected to represent its citizens. The constituency structure has two additional sublevels – wards and branches. After the 1991 election, when the constitution was changed to incorporate the current multiparty system, the ward chairpersons' and branch committee leaders' positions were removed from the political structure. Wards are still in existence and are the lowest level of the political structure; however they are essentially non-functional and are mainly used as an enumeration unit for the census data collection.

At the district level, the organizational structure varies depending on the status of the district. In some districts, the council secretary is charged to oversee and coordinate operations of the heads of departments of the various government ministries, while in other districts the town clerk has the mandate to oversee these operations. Functionally, there is no difference between the two positions. Only town clerks are found in districts that incorporate the bigger towns and cities, while the council secretaries are found in the districts of the smaller municipalities. These two positions are civil service positions and are filled by government appointees and not elected officials.

Each district has a council that is composed of elected officials representing: the wards, all Members of Parliament representing the constituencies, and also several traditional representatives or Chiefs from within the district. The political leader of the council is the mayor. The mayor and deputy mayor are elected from the group of councilors, and both are selected from the councilors themselves. The mayor and other councilors represent the legislative wing and the town clerk or council secretary represent the executive wing. The council has the authority and mandate to plan and approve local policies and developmental activities in their district, and they are also responsible for providing all social amenities to their constituents: public health, water and sanitation, construction and maintenance of the road network, etc. Additionally, within districts at the community level there are Area Development Committees (ADC) or Residential Development Committees (RDC) as they are known in urban areas. The ADCs and RDCs are responsible for developing and coordinating activities for the betterment of the community. Prior to RDCs there were Ward Development Committees, which were a political entity. This was during the one party system. The purpose of the RDCs is to bring together people with different cultural, political, social, and economic backgrounds to achieve a common goal – development of their community.

Also, at the district level there is the District Commissioner (DC). The DC's role is to monitor and supervise the performance of all other government institutions in the district. The DC is the Chairperson of the District Development Coordinating Committee (DDCC). This position is held by a civil servant who is a political appointee. Their function primarily is to monitor the government's activities in their particular district.

The DDCC is a technical advisory body that coordinates the implementation of all district development programs and is composed of all senior representatives from the government line ministries, district council, and NGOs. The DDCC has various standing committees among them the District Disaster Management Committee (DDMC), the District AIDS Task Force (DATFs), and the District Welfare Assistance Committee (DWAC).

The linkages between the DDCC and the council are not very well defined. The DC's position falls under the auspices of the Office of the President. There has been an ongoing debate as to the purpose and roles of the DC since they have no legal mandate to manage or supervise other ministry or government personnel. Although the DC chairs the DDCC, the town clerk or council secretary also participates in this process, and the final decision of any developmental activity rests with the council. Thus, the DC's position and its linkages within the district have caused confusion between the political leaders and the community at large.

At the provincial level, there is a Provincial Minister that is the political head of the province, and is assisted by the Permanent Secretary who is the head administrative officer. The Provincial Minister is a political appointee, while the Permanent Secretary is a civil servant.

At this level there is also a Provincial Development Coordinating Committee (PDCC) that is responsible for coordinating the planning, implementation, and monitoring of developmental activities of the province. The Permanent Secretary is the chairperson for the PDCC. Unlike the DDCC, the PDCC has some authority since its members report to the Permanent Secretary who is in charge of 29 departments or line ministries.

Traditional Leadership

The traditional leadership is another political system that exists at the district and community levels, although found primarily in the rural areas. This system is comprised of chiefs, village headmen, and groups of elders. Authority is passed on to the chiefs through lineages, depending on the group, and it follows either a patrilineal or matrilineal line; in Zambia there are over 72 different ethnic groups. Traditional rulers have their own set of rules, laws, and customs for governing their subjects.

The government has also recognized this system and has set up a House of Chiefs, which has the mandate to look at national issues through the traditional and customary law lens, and to advise accordingly. Most of the chieftaincies in Zambia have been marginalized and have very limited power except within their communities, with the exception of the Barotse Royal Establishment (BRE) of the Lozi's Group in Western Province.

During the colonial era, the BRE was considered a protectorate of the British Government, which allowed them to receive mineral royalties from the mines, and they also received tax from all subjects or people in Western Province. The Barotse Royal Establishment has a paramount chief in Mongu District and five Senior Chief's located the remaining five districts in the Western Province of Zambia. Within Western province there are approximately 15 different ethnic groups that have been subjugated by the BRE. The BRE has its own mini government, complete with *kuta* (Central Government), and each of the senior chiefs has their own *ngambela* (similar to a Prime Minister) and a decentralized governmental system.

In Western Province, there are definite conflicts between the traditional and national government structures. The government basically has to get permission from the BRE to establish developmental programs and projects, and the BRE are the real owners of the land in that area. Another issue with this particular system is that its citizens are taxed by both the traditional and national government. Furthermore, the government representatives from this area are for the most part members of the BRE. Although the area is ruled by the BRE, there are still tribal issues and some groups that are completely marginalized by this system.

Economic

Zambia is a rich country in terms of natural resources, but its citizens are very poor; Zambia ranks 12th amongst the most impoverished nations in the world according to UNDP 2005 report. Excluding emergency countries, Zambia is the poorest peaceful country in the world.

Economic growth in Zambia has declined sharply since independence in 1964, as the country lost its favorable trading conditions within the colonial system, and embarked on two successive radically different economic models: state socialism and the liberal economic model. Initially, the one party socialist state under President Kaunda created a massive state subsidized economy focused on the mining sector. Within this structure small scale agriculture was highly subsidized to produce the food requirements of the mining and urban sector. However, by the end of the 1980's, world copper prices had dropped significantly, the government had accumulated a significant level of debt, and with the end of the cold war, there was a radical shift in international consensus regarding economic development.

Within this context, the political opposition was able to move the country to a multiparty democracy, and when a new party came to power in 1991, it decided to shift the economy to the liberal economic model. Zambia embarked on a poverty reduction strategy that was ratified by the World Bank and the International Monetary Fund. Reforms focused on privatizing the majority of parastatals, removing existing price controls, allowing for private institutions such as the banking sector to play a more pivotal role in free market process, freeing up of the foreign exchange market; and reducing subsidies to bring fiscal spending in line and ensure debt repayment. Although in macroeconomic terms, the Zambian economy was able to stabilize, the reforms caused urban unemployment to rise significantly, social services to decreased with budget cuts, and rural development to stall as subsidies were cut. Since this period of radical change, successive governments have not increased social services to the levels that existed in the socialist state.

In 1999, Zambia also applied for debt relief under the World Bank and IMF Highly Indebted Poor Countries (HIPC) initiative, the goal of the initiative is to reduce the indebtedness of these poor countries and allow them to channel fiscal resources towards national development initiatives. Some of the conditions of this initiative include: good governance, control corruption, promote transparency and the rule of law and the establishment of institutions to monitor the progress of meeting these conditions. As mentioned above, through striving to meet the targets set forth by the HIPC initiative, governments have not been able to increase social services.

However, recently Zambia has reached the targets set forth by the HIPC initiative and as a consequence of this it has been granted debt relief in the excess of US\$3 billion from almost all of the highly industrialized countries. With debt relief the government now has funds to increase spending on social services and infrastructure development, but the recent budget for 2006 has not shown a corresponding increase in spending in these sectors. What remains to be seen is the willingness of the government to distribute these extra funds realized from the HIPC initiative towards the provisions of relevant services for its citizens in an equitable manner.

It should be noted that debt relief has diminished the government's demand for foreign currencies and this coupled with the recent gains in copper prices (Zambia's chief export) on the international market, currently at a twenty year high, has seen the Zambian Kwacha (ZMK)

appreciate by over 30 percent between May and October 2005, from ZMK 4,700/\$ to ZMK 3,280/\$. Though on paper more persons are earning more than \$1 a day, the reality is that the benefits of the Kwacha appreciation have not filtered down to poor Zambian HHs since prices have not reduced proportionally.

Agriculture

This sector falls under the authority of the Ministry of Agriculture and Cooperatives (MACO). MACO has offices at the national, provincial (PACO) and district (DACO) levels. MACO is responsible for agricultural policy formulation at the national level, ministry budget planning and allocation to provinces, as well as consolidating provincial/district agriculture data. The PACO supervises policy implementation at the provincial level with allocation of budget resources to its districts. The PACO also consolidates data and organizes trainings. Direct implementation occurs at the district level through the DACO: extension services; cooperative development support; fertilizer and input assistance; seed quality control; plant and animal disease management; fisheries development; and the collection, analysis and dissemination of crop forecasting and market information data.

The Food Reserve Agency (FRA) through the MACO and farmer cooperative structures, at the district and community levels, facilitates grain marketing. Input provision by government and private companies is also channeled to the small-scale producers through these systems and structures. Membership to a farmer group or cooperative is the determinant for access. Because of this loose cooperative and farmer group development system, outsiders like politicians find it easy to group farmers in cooperatives that are politically motivated and for the purposes of political mileage. Bourgeois/briefcase grain dealers (middlemen) also find it easy to exploit small-scale farmers due to the loose farmer groupings.

At each level there is a coordinator who oversees operations at that level, supported by specialized officers.

The Provincial Agriculture Coordinator (PACO) heads the province with the following heads of departments/units reporting to him: Provincial Veterinary Officer, Senior Marketing and Economic Officer , Provincial Agriculture Information Officer (PAIO), and Chief Agriculture Research Officer .

At the district level the District Agriculture Coordinator is supported by a: Senior Agriculture Officer who heads the Field Services Department, District Veterinary Officer, District Fisheries Officer, District Agriculture Information Officer (DAIO), District Marketing officer, Crop Husbandry Officer, Women and Youth Officer, Technical Services Branch – responsible for irrigation and land use planning; and District Livestock Officer.

The PAIOs and DAIOs are responsible for data collection, analysis and reporting.

At the community level MACO works in the following structure:

- **Block**: consists of a number of camps. The Block Extension Officer (BEO) heads the agriculture block. The BEO mans a number of camps. Sometimes a BEO would also directly man one of the camps. BEO reports to the CHO.
- **Camp:** consists of a number of villages. A Camp Extension Officer (CEO) mans a camp. The CEO reports to the BEO.
- **Contact farmer**: Each lead farmer mans a village in a camp. A contact farmer is the link between the camp extension officer and the farmers in the village. He/she is trained to help the CEO train fellow farmers in a particular village. Contact farmers supervise fellow farmers in Farmer Field Schools.
- **Farmer Field Schools**: Farmers meet in Farmer Field Schools (FFS), which is a collection of five to ten farm families. These farm families meet regularly to discuss issues pertaining to agriculture production and marketing management. Issues that need further attention are then given to the Contact Farmer who refers them to the CEO and up the extension ladder.

The reality at the community level is that DACO extension services and input services are extremely erratic due to insufficient resources (financial and transport) and lack of personnel. Because of this the DACO has difficulty in enforcing regulations, improving production for poor small-scale farmers, and collecting accurate crop production data. In the last instance, the crop assessment data is usually not accurate and highly subjective since it is composed of the DACO's estimates made from the office vantage point.

In urban areas like the Copperbelt, erratic extension services are even more pronounced due to the fact that almost all CEOs and BEOs live in the towns and travel to the farming blocks to provide extension services. Most of the extension staff site lack of housing infrastructure within the farming communities as reason for staying in towns. This coupled with very limited government transport resources leads to severe lack in extension services at the community level.

Environment and Natural Resources

On the Copperbelt, natural environmental and natural resource management structures extend from formal government supported to loose traditional arrangements aimed at safeguarding the interests of the state and traditional authorities. In the mining sector for example, the Copperbelt is endowed with several precious and semi precious stones including emeralds, diamonds, amethyst, quartz, aquamarine and tourmalines, among others. The management and administration of the mining of these stones is not clear since the government has not established regulations and structures. Even following the support from the European Union towards the Copperbelt Diversification Program that included support towards small-scale gem stone mining industry development, access, ownership and control of small scale mines still remain in the hands of a very few obscure individuals - most of whom are foreigners from West and North Africa. These foreign 'owners' usually use Zambian fronts for ownership, but they are the sole controllers of the industry.

Traditional rulers in the chiefdoms where these mines are located would usually receive tokens in exchange for mining rights. Ordinary members of the chiefdoms usually do not benefit from these resources and only work as poorly paid casual laborers. On the other hand, the government imposes a loyalty tax (about 10 percent) on bigger mining companies, though the small-scale miners due to their secretive operations do not remit a similar levy to the government. The loyalty tax was meant to benefit the ordinary members in the chiefdoms where the minerals are mined through investing in local development projects. The reality is that the tax proceeds go straight into the government's national revenue coffers and almost never return to these chiefdoms. Local people are therefore left out and as a result are usually antagonistic to these structures and systems.

Forest reserves, both natural (hard wood) and soft wood plantations, are another major natural resource for both the Western and Copperbelt provinces. On the Copperbelt, management of these resources is again hazy due to conflicts between government structures and local systems. Under the Community Environment Management Program (CEMP) of the Ministry of Environment and Natural Resources, several community based environmental management structures were set up to establish participatory environmental management committees. However, the activities of these committees were dependant on the availability of donor funds (CEMP has been supported by Nordic Development Fund since 1999 and was piloted on two provinces, Northern and Copperbelt) for the implementation of livelihoods based natural resource management projects. Once the donor funds/project was over, these committees became defunct.

The local councils and municipalities have departments that work hand-in-hand with the forestry department to allocate licenses for charcoal burning and exploitation of forestry wood and non wood products at a fee. However, the same authorities do not have sufficient resources to enforce compliance. The unsustainable exploitation of natural resources still goes on. The CEMP committees link into the District and Provincial environmental management committees that have linkages to similar structures at the national level.

In the two provinces, water and water resources are directly under the control of the Ministry of Environment Natural Resources (MENR). At the provincial and district levels, the Water Affairs and Fisheries Department controls water development and fisheries related issues, respectively. Due to the top-down approach in the reinforcement of these systems and structures, for example fisheries' laws, the locals again perceive these as oppressive and would want to do everything possible to counter them. Fish bans (1 December–1 March) that are aimed at protecting the fish during the fish breeding season, for example, are usually not effective as there are no local structures at the community level that directly link into these national structures. Local people that mostly depend on fishing for their livelihood still find ways and means of getting access to the rivers and lakes for their fishing.

In places where game parks and reserves exist, the Zambia Wildlife Authority (ZAWA) is the government supported semi private structure entrusted with the management and administration of wildlife. Community based structures that link into ZAWA have been formed in some communities. These are called Wildlife Management Committees and undertake accompanied controls of the parks and reserves. However, illegal exploitation of game parks and reserves is equally rampant due to reasons of non-inclusion or weak community based structures in some areas. In Western Province where the local/ traditional leadership channels seem stronger and more effective than government systems, natural resources exploitation and management is done slightly different, with more involvement of traditional structures and systems. In other words, the role of traditional leaders becomes more pronounced and applicable.

Emergency Preparedness and Response

All emergency programs and surveillance comes under the authority of the Disaster Management and Mitigation Unit (DMMU) within the Office of the Vice President. This unit was established after the 2002/2003 drought at the request of the donor and NGO community to improve emergency preparedness and future coordination and emergency response. The DMMU supervises all vulnerability assessments through its VAC, and mobilizes government and donor resources to respond to emergency shocks such as droughts, floods, and livestock epidemics. The DMMU coordinates all relevant government ministries, the donors and all NGOs working to provide assistance through its Disaster Management Consultative Forum.

The DMMU does not have a provincial structure, and its next structural level is the District Disaster Management Committees (DDMC). The DDMCs are district level technical advisory committees intended to coordinate the implementation of disaster responses and provide early warning and policy guidelines to various actors at the district level. This committee also coordinates and conducts VAC assessments in their district, and provides a forum for dialogue and coordination of common emergency and development issues. These committees are supposed to meet quarterly in non-emergency situations and monthly or as needed in emergency situations. The DDMC is composed of all government district line departments, the district council and NGOs. The district commissioner chairs the DDMC.

The DMMU and its DDMCs have gained much experience in the latest series of emergencies, and were functional at the time of the assessment in Mongu and Sesheke, working to coordinate relief operations provided by the World Food Program and NGOs such as C-SAFE and OXFAM. The effectiveness of the DDMCs is highly dependent on the leadership of the District Commissioner who chairs and the commitment of the implementing NGOs. The District Commissioner is responsible for distributing food resources donated through the DMMU. Once again the efficiency of such distributions depends on the leadership of the DC, and it has been noted that this relief food tends to be distributed to communities who support the ruling party. The DMMU would like to provide training to all DDMCs in the near future to improve early warning capacity, targeting of vulnerable populations and coordinating relief operations.

Education

In Zambia, there are several key players in the provision of education, these include but are not limited to the government, communities, religious organizations and NGOs, and private individuals. One of the difficulties that have arisen since the economic structural reforms that were carried out in the early 1990s is that most education is no longer free for Zambians, and families are required to pay a fee to meet the educational needs of their children. Needless to say this has marginalized poor families from accessing education.

In the late 1990s, there were grassroots efforts carried out with some support from the government to establish community schools that would not have standard fees and would be more accessible to poor families. These schools were usually set up by the community itself and the community would file an application to the government or NGOs for additional support. The teachers who give classes at these schools are paid in kind through inputs or other foodstuffs or some might be paid a small stipend if it is supported by a local NGO. In real terms since the early 1990s, the government has not prioritized education and there has been little investment in rehabilitation of school infrastructure, construction of new schools, training of education managers, procurement of supplies and materials, and adequate pay for trained teachers to staff schools. Main gains have been in improving girl enrollment, and net enrollment of girls has improved by approximately 25 percent since 2000. Still, the HIV and AIDS pandemic has further exacerbated the situation, for instance in 1999 more teachers died from an AIDS related illness than passed through the teachers training schools. Moreover, at present it is estimated that there are approximately one million orphans in Zambia in need of education services.

In an effort to improve access to education, the government introduced free basic education initiatives for all Zambian children. The government promised to add 8,000 more teachers to take on this increase in service provision, and enrollment rates have increased to over two million enrolled. Still there are not enough teachers and schools to meet the demand, and considering that the children under 18 comprise over 50 percent of the population (estimated at 10 million), then there is a significant gap and most likely a high percentage of orphans are within the non-beneficiary category.

Some other issues with the current educational system are:

- Very few children and especially girls in the rural areas have the opportunity to go to secondary school; and
- There is much discrepancy between the educational system indicators/test results in the rural vs. urban areas.

Health

The national health system has a formal sector and an informal sector. The formal sector comprises government run services and private services. The private services include hospitals and clinics run by the mining conglomerate, Zambia Consolidated Copper Mines (ZCCM), as well as services run by missionaries ands private individuals. One of the main differences between the government run services and the private services is that government services are essentially free to the user while users have to pay the costs of all services in private set ups. However, there is now a move to encourage cost sharing between the service provider (government) and the user. In general the private services have better facilities than the government run services.

The government health services are organized and run under the Ministry of Health, which is headed by a minister and a deputy minister. The ministers are politicians/members of parliament who are accountable to the people of Zambia regarding issues of health services. Under the ministers is a permanent secretary who is a civil servant employed by the government. The main function of the ministry is policy making resource mobilization and monitoring and evaluation of the implementers of the health policies. The custodian of the provision of health of all Zambians is the Central Board of Health (CBoH). Under CBoH fall all the hospital boards. The hospitals are divided into different levels of health care under the referral system:

- 1. Tertiary care facilities with specialists
- 2. Second level hospitals (district/provincial) run by General Medical Officers
- 3. First level health centers/clinics (rural or urban) run mainly by paramedics.
- 4. Village Health posts/Community Health Workers/Traditional Birth Attendants

At the district level, the Ministry of Health's (MoH) offices are headed by the District Health Director supported by a District Health Management Team (DHMT). The district health team works with rural health centers (RHC) and Environmental Health Technicians who work as MoH extension workers supervising community health workers (CHW), who are volunteers from the communities.

HIV and AIDS programming comes under the supervision of the District HIV and AIDS Task Force (DHTF) which is a subcommittee of the DDCC. The DHTF serves as a policy advisory, and coordinating organ for the many HIV and AIDS initiatives at the district level. This task Force works in accordance with the National Strategic Framework for HIV and AIDS response. The DHTF is composed of members of the DHMT, all government departments and NGOs and is led by the DHMT. Nutrition issues and services come under the National Food and Nutrition Commission's (NFNC) authority at the national level. The NFNC operates under the supervision of the MoH. At the district level, nutrition programming comes under the authority of the DHMT. Each district is supposed to have a District Nutrition Officer who supervises growth-monitoring activities conducted through the RHCs, data collection and analysis, as well as appropriate supervising referral systems and nutritional assistance services (moderate or severe).

A recent assessment conducted by C-SAFE and VALID International found that there is a serious deficiency in existing Growth Monitoring (GM) data collection at the district level, such that it tends to greatly understate malnutrition levels. At present all RHCs are supposed to conduct GM activities for all the under five population in their catchment areas, and determine malnutrition rates for their areas. The reality is that only a small portion of this target population are going to RHCs to be measured, with those mostly going being the under one population. The mothers of children under one take their child to the RHC because, there, they will get the required vaccinations. The mothers bring the child at specified periods when the vaccinations are given; the child is measured and vaccinated at the same time. However, once the child has completed the series of vaccinations at one year of age, mothers no longer see the need to bring their child and visits stop. Thus existing malnutrition data at the district level is highly biased to children under one year of age, and does not capture the other 80 percent of the target group – children ages 2–5.

A second problem with current GM activities is that they are passive, in that they are dependent on mothers seeking out assistance at the RHCs. When mothers do not see a benefit from making the 20 km walk to the clinic – since the clinics do not have supplemental food to provide – then they do not participate.

Informal Sector

The informal sector comprises the following workers:

- Traditional healers
- Diviners
- Herbalists
- Others (e.g. bone setters)

The majority of Zambians use both of the above health systems. It is said that about 60–70 percent of the Zambian people use the informal health system as the first line of health service before they use the formal sector. The formal sector is generally available to most of the Zambian population.

Water and Sanitation

Communities are supposed to have Water Management Committees and Environment Health Management Committees that are responsible for managing water and sanitation issues at the community level. In turn, these committees should report to their Area Development Committees (ADC) or RDCs. In addition, at the community level, sanitation issues also fall under the management of Neighborhood Health Sub Committees which has links to their local health facilities, be it clinics and/or health centers. The supervisory RDC structure has problematic issues due to its heavy political affiliation/bias. RDCs are used as ruling party watch dogs at the community level, and any executive that seems to challenge ruling party officials would usually not complete their tenure in office.

On the Copperbelt, water and sanitation issues have been in private hands since the privatization of the mines in the 1990s. An asset holding company for the former mining conglomerate, Zambia Consolidated Copper Mines Investment Holdings (ZCCM – IH), has been managing water and sanitation issues under a company called Municipal Mining Services. Being a private entity, the company has allowed little or no involvement of the urban residents in the management of water and sanitation issues, and operates on a purely corporate/for profit basis.

In recent years, the World Bank, through the Zambian government, supported the development of private water and sanitation utility companies that saw the formation of Nkana Water and Sewage Company and Mulonga Water and Sewage Company on the Copperbelt; Western Water and Sewage Company in the Western Province; and similar private companies in other provinces. Interaction between these private companies and end users is limited only to the collection of water and sewage levies. There are structures at the community level that are formed as task forces when the need arises, such as during the rainy season and disease outbreaks. Where the communities have been supported with construction of water points (usually with World Bank support in recent years), committees are formed under RDCs to manage the collection of water levies and to ensure security of the facilities. These committees have informal linkages to the district systems through the local authorities/RDCs.

Community Welfare

The Ministry of Community Development and Social Services (MCDSS) deals with these services, and aims to provide and facilitate socio-economic empowerment of the poor and vulnerable. Unfortunately, the MCDSS receives neither consistent nor sufficient funding from the government and, at the district level, its activities are only known to those who have received the erratic support previously.

At the district level, the MCDSS has a DWAC, which is a subcommittee of the DDCC and under the Department of Social Welfare. The DWAC works with a voluntary network of welfare committees at the community level to administer the Public Welfare Assistance Scheme (PWAS). PWAS is a community led welfare scheme that targets the destitute and provides appropriate means of supporting them through monetary and material assistance, when available (not often). The more useful entities in this system have been the volunteer social welfare workers themselves and their community welfare committees. Many HIV and AIDS programs have used these actors and committees as entry points into community programming.

VI. ASSESTS, WEALTH RANKINGS AND COPING STRATEGIES

A. Natural Assets

Land

Land in Zambia is allocated through three mechanisms: 1) government - managed by the town or district councils; 2) the market - managed by individuals and/or companies; and 3) traditional – managed by traditional leaders. In urban areas, the main mechanisms are the government and market; in the rural areas, it is primarily the traditional structure; and in the peri-



urban areas, it is a combination of all three with more governmental influence than through traditional leaders.

Land ownership as perceived by the community is not an issue in Sesheke and Mongu communities because traditional leaders allocate land and supply is plentiful. Officially the chiefs hold the land on behalf of the Barotse Royal Establishment. Families are allocated land to establish villages and farms. This ownership is inherited by other family members upon the death of the head of the family. People do not hold title to land as it is traditionally held in trust. Landholders can apply to the government for title deeds after seeking authorization from the BRE, but do not know they can do this because they lack information. They feel it is insubordination to the traditional authority, and feel the government procedures are cumbersome and expensive. The chief can withdraw ownership if the landholder is not conforming to community expectations and norms. It was noted that in certain instances land has been confiscated by the Chief from people who have been identified as practicing witchcraft. In Sesheke both communities expressed that their land was very fertile and they do not believe in fertilizer because it quickly sinks and burns the roots of plants. In addition, it is not cost effective in large areas. Communities did highlight that soil fertility is declining over time due to overuse; moreover it is difficult to find virgin land except by intruding in cleared forest areas. Communities in Sesheke feel strongly that they should have the right to move into forest areas when land has lost its agricultural production capacity.

In Mongu, soil quality is an issue and fertile lands are in high demand. The Kalahari sands generally characterize the soil in the upland areas, where the dominant crop grown is cassava. In the lowlands there are *dambo* soils (alluvial), and the dominant crops grown are rice and maize. The more urgent issue for rural communities was access to fertile lands. In Mongu, communities complained that the most fertile land in the flood plains has already been allocated to families of influence for an extended period of time. Because of this, poorer families could only get access to land in the upland areas.

Pastures for livestock are readily available for the participating rural communities in Sesheke and Mongu and communal grazing is a practice. On the other hand, pasturelands in Ndola are extremely limited due to lack of access to land in the assessed communities because they are urban and peri-urban and land is scarce.

In the Munkulungwe community in Ndola, residential and farmland is relatively scarce, and both communities reported that it was becoming overpopulated. Overpopulation was cited by the community due to retirees and retrenchees from the industries in Ndola settling in the community, and thereby creating more pressure on land allocation. Generally, fields are located within the village. The village headmen manage land distribution on behalf of the chief. Each headman collects a contribution of K1,000 from community members who use land in their area, on behalf of the chief. Community members with three to four hectares of land pay more. People in the rich and medium wealth categories, with larger plots of land, rent them out and this becomes an income generating activity. Residential and agricultural land is even scarcer in Nkwazi since it is a peri-urban community. Residents farm by renting land from the nearby Minsundu farm block and pay between K30,000 to K80,000 per *lima* (250 square meters). Poor people generally cannot afford this and resort to illegal farming in the nearby prohibited forest area. Only a few people have title deeds to land.

Water

All communities in Sesheke suffer from a lack of access to clean drinking water: in Limpupu, five out of 20 proposed boreholes have been constructed with funds from the Rural Investment (funded through the government by the World Bank); in Silolo there is only one borehole established by the cooperative. The 2004/2005 drought has put further strains on water resources, and in Limpupu the Luanja stream has dried up, which is a major source of water for the community for consumption, farming and livestock. Key informants said that the river could be drying up due to cutting of trees, which resulted in a reduced water retention capacity. Participants in Limpupu noted a need to construct a canal from the Zambezi River, about 40 km away, to their community in order to provide a better water source.

The two Sesheke communities represent different fishing livelihood areas: Limpupu is located on the east bank of the Zambezi on the uplands and thus fishing is limited to two fish farms. The fish farms are a government initiative to diversify livelihoods in the upland areas. Silolo is on the west bank and has direct fishing access in the river.

Both assessed communities in Mongu obtain their water from river sources, improvised unprotected shallow wells and numerous ponds/ gullies. All of these sources have problems of contamination since all sources are shared by residents and livestock, as well as the fact that people obtain drinking water from the same sources in which they bathe. Fishing is also done in the same ponds when the water levels are very low.

The ponds/gullies that surround Siwito and Muilwe were reported as one of the main sources/causes of waterborne diseases in the area such as diarrhea, since the waters are stagnant. Water and sanitation practices were reported to be very poor, leading to high levels of mortality and
morbidity among children. According to the district director of health, 30 to 40 percent of the reported deaths in children is contributed by water related diseases due to poor sanitation, amongst other reasons.

The Zambezi River and its floodplain are crucial to the survival of the inhabitants of the Siwito community and many areas along the Zambezi River. From about December–January, the plain is flooded until March–April, in normal years. The livelihood patterns in Siwito are concentrated around this natural annual flooding phenomenon. The people living close to the river and those engulfed by the floodplains take advantage of the flood by catching the fish it brings while in turn the flood exposes crops and residences to damage. The river is also a source of reeds; the fish and the reeds are normally sold in Mongu town, which is the main market in the district. The river and its tributaries also act as a mode of transport especially during the flood season/period when the road is completely cut off from Mongu and Kalabo.

Fishing is mostly done throughout the year except from January through March when a fish ban is put into effect by MACO. The annual fish ban is put in effect to protect the breeding fish to restock. However, the fish ban has implications on the livelihood of the fishermen, as it is hinges not only on their income but also on the food availability thus major source protein intake of communities. As such, despite knowledge of the ban the fishermen still continue with fishing and selling. During the period of the fish ban, the fisheries staff and the police set up checkpoints to conduct searches and undertake both water and roadblocks to ensure compliance.

The Munkulungwe community in Ndola district has several water sources: a river that runs through the community on the eastern side, communal wells, a borehole and a tap at the Tug Argan barracks. Respondents complained that the river water is polluted with oil from the mining machinery that pumps water onto the road to settle the dust. As a result people draw water before 5:00 a.m. before the machine is switched on, but all the same the water is still contaminated. The oil also limits the productivity of vegetable gardens along the river, as well as fish. The community stated that ground water is abundant, but most wells are hand dug and are not deep enough to provide water all year round. When wells dry up people access deeper wells, the stream and the Tug Argan barrack. People who cannot collect water for themselves have to pay others K500 to collect a 20 liter container of water.

In Nkwazi (Ndola district), community members express that they have problems accessing water and that it was contaminated. National Water and Sanitation Company (NWASCO) gave Kafubu Water and Sewerage Company money to erect water kiosks to improve access to clean water. There are 17 operational kiosks and two that are not opened yet. Residents pay K20.00 for 20 liters of water, and kiosk attendants are given 40 percent of the monthly takings as their monthly wages. The communities cited problems with the kiosk in that, although they are opened at 08:00 and closed at 18:00, attendants mostly report for work later than 08:00 and go home as early as 17:00 hours. This makes it impossible for people who work away from the community to access water from the kiosks. Additionally, children go to school without bathing when there is not enough water in the HH, increasing skin diseases.

Unfortunately not all HHs in Nkwazi can afford to buy the water from the water kiosks, and some HHs have dug water wells at their residences. This causes serious sanitation problems since many of these wells are dug next to the toilets (leading to increased incidence of diarrhea). Another sanitation problem in Nkwazi is waste disposal. Solid Waste Management is one of numerous organizations working in the community and is responsible for garbage collection. However residents dispose of garbage in any manner. They do not dispose at strategic places for collection. This has caused pollution to the environment, contributing to diseases.

Some HHs in Nkwazi have direct water access from the city water system, and use meter rates to pay directly to the council. There are also some standing pipes where water cards are used. A water card costs K2,500, and the monthly payment is K3,000.

Rainfall

In all areas, the rainy season begins in mid-November and continues through the end of March. There were concerns raised in Sesheke in regard to the poor rains during the last rainy season (2004/2005), and due to the low drought water tables. In Limpupu, the river that runs through the community has been drying up gradually over recent years, and was completely dry at the time of the assessment.

Forests

In both communities assessed in Sesheke forests resources were available; however the government limits access to those that pay levies to extract timber. The communities feel that the forests are their assets, but the government levy is beyond the capacities of poor community members. This situation leads to external exploitation of timber by merchants, with little local income generation. In addition, since the merchants are not residents they are not interested in reforestation and, because of this, reforestation efforts are not working well. The government wants to diminish encroachment and deforestation but lack resources to enforce the regulations. Hence they are open to working with communities to develop community based resource management systems.

In Sesheke, it was expressed that beehives are another natural asset and are present in protected forests, but local communities cannot access these areas due to government restrictions. Communities felt that there was a need for gaining access or developing beehives outside of the forests and for there to be training of local people in beekeeping and harvesting.

In Mongu's Siwito community, there are no forests, and community members have to cross the Zambezi River to Kalabo for forest products. In addition, there is limited access to reeds in Siwito. Near Mongu's Muilwe community there is one Miombo forest managed by the government under the Ministry of Environment and Tourism. This offers a variety of forestry products for both home consumption and sale. However, commercial exploitation of the forest and the forestry products is limited to wealthier categories that can afford permits. The community is allowed access to the forest resources if the collected products are for subsistence and not commercial. The community reported that deforestation was a problem.

In Ndola's Munkulungwe community, there is a forest on the northern side bordering Congo, and community members access the forest illegally for firewood and charcoal. The charcoal is marketed in the barracks and Ndola town. The poor people are the ones who practice this and can only manage to harvest a maximum of four to five 25kg bags of charcoal due to two main reasons:

- Their form of transport (bicycles) cannot carry more than five bags, and
- The practice is illegal

However, the market for charcoal is going down, since the Tug Argan barracks now has electricity. The forest department randomly checks for people who are accessing the forest illegally, and if caught the charcoal burner's products are confiscated and they are charged a fine.

In Nkwazi, there is a forest and pine plantation that is being used as a livelihoods resource. Those ranked as average and rich extract wood for timber or carpentry. A significant number of poorer class men also extract wood for charcoal production.

Mining

If any land has minerals on it, then the government assumes ownership of all mineral rights. The government then determines who has the right to mine the minerals. There is one exception in Western Province, where the Barotse Establishment can lay claim to the land and mineral rights based on past treaties.

In Sesheke's Silolo community, respondents discussed the presence of precious stones and a quarry mine. They stated that there have been three contractors who have operated on the quarry, but only the current contractor has assisted the community with using quarry dust to make an extension block for the school. A major concern is that very few members of the community have been employed in the mine, and people benefiting from the quarry are those from Livingstone and Sesheke *boma* (city). The contractors refused to assist the community to upgrade the feeder road although they are the main beneficiaries of the quarry. The community has stated that there is a lack of information concerning the precious stones, and whether it is a formal or informal sector that could be exploited for the benefit of the community. Overall, local people felt that they are not benefiting from mining activities, and the foreign miners are destroying local infrastructure and creating health hazards. Mining is one of the main industries in Ndola (copper). The Nkwazi area itself does not have mineral deposits. Munkulungwe is near to Bwana Mkubwa Mine (First Quantum Minerals Canada).

B. Physical Assets

Livestock

Communities in Mongu and Sesheke have extensive livestock resources, and ownership is an important indicator of wealth. It was found that livestock ownership is a gender issue in that women manage small ruminants, pigs and poultry, while men control cattle and other small livestock. The main livestock kept are cattle, goats, pigs, donkeys and chickens, and cattle is also used as draught power. In Sesheke, a government key informant highlighted that there were 54,000 animals in the district of which there are 3,000 donkies and three sheep. The same source expressed the need for livestock restocking.

One of the main concerns for livestock management is disease control. In Sesheke, it was mentioned that communities have found that communal grazing practices have led to increased transmission of animal diseases. Both communities in Sesheke also noted that there were inadequate veterinary services due to constraints such as transport and staff. In Sesheke, communities felt the government should put more effort in controlling Tsetse flies from game parks which are leading to increased disease amongst livestock.

In Ndola's Munkulungwe community, residents stated that they do use limited land to raise livestock – some cattle and many goats. It is the medium and rich families that rear these animals. Previously there were also large numbers of chickens raised by HHs, but the population has reduced significantly due to disease outbreaks. In both of Ndola's communities assessed, it was found that livestock are sometimes a source of conflict among community members because they destroy other farmers' crops due to limited grazing land.

Tools

In Sesheke and Mongu, communities stated that farming families have limited tools such as hoes and ploughs. It was noted that rich families possess the draught power and ploughs, while poorer families may only have hoes (most poor do not even have hoes). All communities in Sesheke and Mongu expressed that they have limited access to seeds and other farming inputs.

In Ndola's Munkulungwe community, about 64 percent of the community members are poor and depend on farming as their source of livelihood. The tools they own are hoes, axes and machetes. The hoes are used for land preparation and weeding, while axes and machetes are used for clearing the land and cutting trees for charcoal. Families that are either average or rich are able to afford and own ploughs, harrows and ox-carts because they own draft animals; a few even own tractors. Some of the rich also own vehicles that they use to ferry their products to the market and also hire them out.

Nkwazi is more urban, though farming HHs tend to have similar tools as the above poor farmers. A quantity of small agricultural tools are made locally by blacksmiths. These include hoes and axes, which are sold in the market. Other tools include slashers, sickles and picks. Because of low agricultural activities going on in the area, most of these tools are sold to hardware shops in town.

Roads

Roads to assessed communities in Mongu and Sesheke are dirt/sand roads and require 4X4 vehicles even in the dry season. The road to Limpupu leads to a timber extraction area, and is in poor condition. In Mongu's Siwito there is a newly reconstructed road that passes through the community, and it has improved access to other nearby areas.

In Ndola's Munkulungwe community, the company Bwana Mkubwa Mine (First Quantum Minerals Canada) has rehabilitated the feeder road that runs from Ndola-Kapiri road through the community to Congo DR. This road was once constructed because of Targan Barracks. Bwana Mkubwa often uses this main road and produces a lot of dust, which causes a lot of upper respiratory infections amongst the community members as well as an increase in traffic accidents. Respondents did clarify that the road is reported to be in good condition and connects this community to the Great North Road and external markets. The road does assist farmers to transport produce to the Main Masala Market in Ndola when their local market gets saturated with the same products or when there are higher prices to be obtained in the Main market.

Old Nkwazi does not have a road network because the compound was not planned and people are still constructing houses in between old ones. Nkwazi extension has a good road network because the area is managed by the council and has no illegal settlers.

Housing

Houses in rural villages are made by the resident families of grass/ reeds and mud walls and thatch roofs. In Ndola's Munkulungwe and Nkwazi communities, houses are made of adobe bricks and thatch roofs or used tin roofs (drums and other scrap metal).

In Nkwazi, the RDC under the settlement unit in the local council are responsible for residential land allocation. They only allocate housing plots approved by the council. The RDC have tried to lobby the council so that they can allocate farming land to Nkwazi community but this has not materialized yet. Those who have money to pay are the ones who own these plots. The poor category is concentrated in old Nkwazi where they build illegally and are not prosecuted because there are too many perpetrators. Also, the average and rich classes of people allocate these housing plots to themselves. They are able to find capital for land investment.

In Nkwazi compound there is some improvement in availability of housing for residents. Habitat for Humanity has built 40 houses so far and the project is still continuing. Fees used to be K250, 000 and have risen to K500, 000. They pay K50,000/month or buy a bag of cement as a contribution to the construction of the house. Also there is a Catholic Housing initiative in which community members make bricks and contribute some money (K15,000) monthly to build houses for their members. There is also a registration fee of K11,000.

Markets

In Sesheke's Silolo and Limpupu communities there are no established market places. There are only informal trading centers where farmers trade amongst themselves. Mongu's communities have only informal local community markets. In both Sesheke and Mongu, communities found that access to markets was a problem. Rural areas are distant from markets, and this forces farmers to sell food at low prices to middlemen. Most of the time farmers barter at the local market level. Poor infrastructure such as roads is another problem affecting markets, and Zambian phytosanitary restrictions affect cross border trade (Sesheke). Communities in Sesheke highlighted that there are markets for beef, but due to national cattle transport restrictions they cannot seek better markets outside of their district. In Sesheke, communities complained that there was no market for milk.

In Sesheke's Limpupu community, respondents stated that on occasion people from Livingstone or Sesheke come to their community to buy animals – mainly cattle and goats – and some community members take their animals to sell in other towns when necessary. However, this is not a regular activity and is considered more of a coping mechanism.

In Mongu's Muilwe community respondents stated that they can access Mongu's market to sell reed mats, fine grass and other forestry products. Some people go as far as Lusaka depending on their financial ability. Other market outlets include Kaoma, Ndola and Mumbwa. However, long distance markets are mainly accessible by well off HHs.

Another marketing problem highlighted, was that farmers are not sufficiently well organized to respond to increasing market demand in a timely manner. As discussed in the Social and Political Asset section, cooperatives and farmer groups do exist but they are not effective since they were established more for getting government inputs than for marketing. There are serious issues in regard to production grade quality that affect marketing opportunities. Market development is also constrained by limited access to credit by most entrepreneurs and cooperatives (see Financial Assets Section for more details).

In Ndola's Munkulungwe community, residents access the main markets in Ndola town including: Masala, Chifubu, Mushili and Kaloko markets. There is a village/community market, which is in a deplorable state. It has no toilet and water supply is erratic. In Munkulungwe, the participants related that poorer people lack the resources to bring their products to outside markets on a consistent basis, although when they do, they are generally able to get a higher price. Frequently local markets are flooded with the same products, such as tomatoes, resulting in lower prices or inability to sell. The village market is also largely dependent on the Tug Argan soldiers. People who live on the east side of the river have limited access since the bridge across the river is broken. The government provides little marketing and agriculture extension services as it also has limited resources, such as transport and accommodation to do community outreach. However, the government supports farmer cooperatives by subsidizing 50 percent of maize seed and fertilizer.

Participants described the resource flow of products as follows: vegetables, including tomatoes, onions, *impwa* (local egg plant), green maize, and okra are grown along the Munkulungwe stream, and then taken to the village market around Tug Argan. They are also sold in the main Masala market in Ndola if possible. Products from the Congo border include charcoal, *kasepa* (small fish), breams, cassava, sweet potatoes, *chikanda* (tuber used to make tofu like carbohydrate) and yams. These products are brought into Zambia and, due to their claimed high quality, they are easily sold on the Zambian market.

Products are first brought to the Tug Argan market, and then to the Main Masala market in Ndola as they flood the local market. Cattle and goats are mainly provided on credit to soldiers, and some are sold for cash at the community market. Cloths are also brought from town to the village market at Tug Argan and mainly bartered with farm products.

In Munkulungwe, the people also expressed that soldiers used to purchase produce and livestock from community members but this practice has declined over the past several years since soldiers are now paid via direct deposit through the local banks. The soldiers now purchase from the major retailers and shops (SHOPRITE).

Nkwazi has three markets (Nkwazi main, Riverside and overspill markets). The main food products found in the markets include vegetables, dry rations, such as beans, *kapenta*, fish, groundnuts, many

fruits, such as oranges, mangoes, bananas, avocados, fritters, buns and bread. Other products sold are charcoal, washing and bath soap and other groceries. Groceries are generally supplied from shops in town, while vegetables are supplied from nearby Chipulukusu compound. The poorest people are only able to access these products on a sporadic basis, when they get income from piecework, or through selling beer.

In Nkwazi, participants described the market resource flow as follows: Vegetables are obtained from Chipulukusu compound gardens (dambos) and sold in all three markets (Northrise, Pamodzi and Kasenshi), as well as door-to-door. Sweet and Irish potatoes are purchased from the main Masala market and sold locally in the Nkwazi market. Fish is purchased from Ndola Main Masala market and sold to the local community markets and local HHs. Bone meat and fat are purchased in town and sold in the Nkwazi main market as well as to individual HHs. Wood from pine and indigenous trees for charcoal production is obtained from the forest. Charcoal is produced on the Misundu farm block and along Ndola/Kabwe road and sold to all the community markets and local HHs. Chickens and eggs come from within Ndola and just outside (Luanshya) and are sold in all the markets. Black smith products are produced on the Chipulukusu compound and sold at all markets and at hardware stores in Ndola town. Sweet potatoes are obtained from Main Masala and sold at all markets.

Utilization of the markets in Nkwazi is not limited to residents only. A significant number of people from neighboring low-density areas such as Riverside, Northrise and Kalewa barracks own stalls at the markets because they have easy access to authority and are able to pay the service charges to the council. Although participants in Nkwazi appreciated having these markets since they are able to sell their produce and gain profits to support their families, the majority of the community is not benefiting from the market system in this area. They have difficulties in obtaining and selling products; transport costs are very high; selling vegetables is not profitable and produce perishes fast; funds for business investments are scarce; black smiths do not have proper rates; and there are no storage facilities in the market.

Crops/Agriculture

In Sesheke the principal crops grown include maize, millet, sorghum, groundnuts, beans, cowpeas, cassava, pumpkins, bambara nuts, sweet potatoes, potatoes and vegetables. In Mongu, the principle crops grown are maize, rice, millet, sorghum and cassava – rice is extensive in the lowlands such as Siwito. Ndola communities produce maize, sorghum, cassava, vegetables and sweet potatoes.

Both of Sesheke's communities depend extensively on farming for their livelihoods, and therefore the past and current droughts significantly impact everyone. In addition to the drought, people are experiencing soil fertility decline over time due to overuse. It is also difficult to find virgin land because farmers farm land for years until the soil is degraded, and then look for new land.

The community knows how to preserve food by making good grain storage bins; however in the recent past grains have become infested with the large grain borer (LGB) and weevils. The LGB is worse because it attacks all crops, whereas the weevils only attack the grains. Most people in the community cannot afford fumigation or pesticides. Advice was given not to use the same storage container for longer than one season; however it is also not easy to build new storage bins every year.

In Sesheke's Limpupu community, money to purchase seeds is available but the local market is unable to supply. In the other rural communities of Sesheke and Mongu, it was found that there was both a market supply and purchasing power problem.

In Mongu's Muilwe, where the infertile Kalahari sands generally characterize the soil, the dominant crop grown is cassava. Cassava is one of the major crops in the district and is grown and consumed all year round, whilst maize is the second most important crop. The production potential of maize in the uplands is severely constrained by the infertile, sandy soils.

The rainy season usually begins at the end of November and continues through March. During the winter period, maize is usually planted in the lower land, while in the upper lands during the summer period. Cassava, Millet and Sorghum are usually planted in the upper lands, while maize is plentiful in the plains.

The peak time for land preparation for most crops is between July and November whilst planting is usually between September and December, though this is largely dependant on the onset of rains. Green consumption of most crops usually begins as early as January up until late March/April, whilst the harvest of dry maize starts around March/April until June/July. This is the period when HHs have enough food from the harvest, though it only lasts for an average period of three months.

The main crop grown in the Siwito wetlands is maize, although rice is also grown as a cash crop. Lower lands/plains are *dambo* areas, which are more fertile than the upper lands because of the "external deposits" attributable to the flooding of the plains. However more than half of the crops are destroyed due to floods. Although people do not experience problems accessing land in the uplands, soils are generally poor. The plains are better in terms of soil fertility, but few people have access to these *dambos*.

In Munkulungwe, respondents stated that many residents were not fully benefiting from existing farming activities, because of insufficient productive land for everyone; insufficient money to buy certified seeds, pesticides, and other agriculture inputs; and lack of government extension officers to advise farmers on agricultural trends and markets.

In Nkwazi, the majority of people cultivate less than a hectare and this food does not last long. There is a fertile *dambo* area located in the nearby Chipulukusu compound that is used for vegetable gardening. Although people have access to this land, very few people are accessing it because of the distance and also because it is located in a different compound. The peak period for gardening is during the dry season, from April to October, but vegetables are grown during the wet season from November to April as well.

C. Human Assets

Labor

In Mongu and Sesheke, HH labor is a main asset for all communities assessed. Sesheke has migrant labor to Namibia and to lodges during the tourism season.

In Ndola, wage labor is the main activity, and HH labor capacity is a main asset. In all communities there was a clear recognition that HIV and AIDS has had a deteriorating effect on their HH labor capacity. In Munkulungwe, at the HH level, food consumption practices marginalize women and children. Generally speaking, men will eat first, then children and women. Men and women eat separately. Generally men have a bigger share than the rest of the family. In Nkwazi, the rich and average employ casual labor to cultivate the fields. Poor people work on these fields for mealie meal or money. To cultivate a line on a *lima* (approximately 25 meters) costs a *meda* (12.5 kg) of mealie meal.

Skills

In Sesheke and Mongu, assessed communities possessed primarily farming skills, as well as some fishing skills. In Sesheke's Limpupu community there are savings, lumberjack and wildlife conservation skills, and in both communities there was an expressed bias towards traditional agriculture practices. They had attempted conservation farming (potholing) but since it did not produce results with the sandy soil and was labor intensive, they returned to practicing traditional agriculture practices.

In Mongu, communities also highlighted reed weaving and bird trapping skills. Other skills are highly dependent on education levels and without access to high school education in their communities, only those with resources to send children to boarding school will be able to attain additional education for future development of the community.

In Ndola's sites, skill sets were more varied given the urban environment, including: mining, farming, house cleaning, carpentry, brick laying, stone crushing and blacksmithing. In Nkwazi there are some rich community members who are well educated and therefore have more skill sets.

Education

Basic education structures are available in all communities; however communities felt that there was a need to upgrade these basic schools to high school level. There is a common trend in all districts that increasing numbers of pupils are accessing schools, but there is no corresponding expansion in infrastructure, and there is a lack of finances to pay teachers. In rural areas, children start school at a later age, which increases dropouts in later years.

In Sesheke, Silolo has a basic school built in 1924. The community would like it to be upgraded to a high school and increase the number of classes to two per grade up to grade nine. There is only one high school in the district. The communities have expressed their willingness to put up the 25 percent community contribution requirement for upgrading their school, but the government has not been able to fund the 75 percent. Limpupu has three schools – one Basic (grades 1–9) and two primary (grades 1–7), with an average of 50 kids per school. The basic school's roof was ripped off and the government has asked the community to contribute 25 percent towards repair. The primary schools are thatched.

In Mongu, the Siwito area has two schools (a middle basic school and a primary school) and Muilwe has a middle basic school with a student teacher ratio of 43:1. There has been no additional infrastructure built to support the free basic education policy. In Mongu, it was noted that there is an increase in dropout rates in grades 8 and 9 for girls, possibly due to early marriages.

Munkulungwe has two schools, one basic and one high school, and respondents stated that there is a need for a community school for orphans.

Nkwazi has one government school called Nkwazi Basic School and one community school called Chichetekelo Community School. The Chichetekelo Community School, which is run by RDC, was built with support from RAINBOW. Most pupils at this school are orphans and children from the poor category. This is generally because the learning environment is poor, and mostly children who cannot afford government schools go there. The infrastructure in both schools is poor, and there is a lack of resources to make improvements. Chipulukusu and Kansenshi are the nearest high schools to the Nkwazi community. The only constraint is that they are largely accessible only by the average and rich categories because of the fees.

Most people in the poorest category can only afford school up to grade seven, at which time kids are 14 or 15 years old. Kids generally start at the age of 7–8. The general situation has improved as far as access to education for girls is concerned, but girls still tend to drop out more frequently. Even pregnant girls have the right to educational assistance from the government in order to keep them in school, or go back to school later. This is a national policy, of which most people are not aware. Another constraint cited to access education is that children have to pay K3,000 per month. Some families fail to pay the monthly fees and therefore attendance varies from month to month. The K3,000 is used to pay the two qualified teachers who are waiting for deployment in the government, which could happen anytime. If the teachers are deployed to another school, then the community school will remain without a teacher.

Nkwazi has a very high number of OVC due to HIV. These children, when left with a single parent or taken in by relatives, have found it difficult to access education. The death of the bread winner makes children more vulnerable and most times they stay away from school because they fail to pay school fees and buy school uniforms. The children may lack decent clothes to wear to school or they have to assist the family look for food and care for their siblings. Although orphans and vulnerable children are the ones mostly affected, there are some cases in the average and rich category HHs where orphans also stay away from school. This could be due to several reasons, but the community cited that the burden of sending children to school increases and people prefer to send their own children instead of spreading resources thinly as this has an effect on the type of school their children go to.

Health Care

In Sesheke's Limpupu community there is one RHC run by an environmental health technician. There are also two health posts managed by CHWs. The user fee is K500, which most people pay in kind with six cups of maize. People over 65 and children under five receive free care. The center receives a drug kit once per month. In the Silolo community there is only one health post staffed by CHWs. There is also a traditional birth attendant.

Each of Mongu's communities has an RHC that provides primary health care to the local communities. Access to these services is limited due to poor road network, distance and general poverty. People over 65 years and children under five receive free health care.

There are two clinics in Munkulungwe – Kambole and Tug Argan – but medicine stocks are inconsistent. The consultation fee is K1000 every time one goes to the clinic. If people cannot afford to pay in cash, they sometimes pay in kind with maize and other farm produce. There is one CHW affiliated with the clinics.

Nkwazi compound has one clinic with a catchment population of 42,000. It has a maternity wing that is not yet open, and the nearest maternity clinic is in Chipulukusu compound. Medicine stocks are not consistent.

Coverage in the assessed communities is poor, as individuals have to travel long distances to get basic medical care. Communication is a serious problem between the RHC and the district hospitals. RHCs are supposed to have communication radios, but they are not always operational (Limpupu).

Rural communities in Sesheke and Mongu felt that it would be best to upgrade Health Posts to Rural Health Centers, but the government has not been able to provide its 75 percent contribution. The cost of medical services inhibits the most vulnerable HH from accessing health services and they must use alternative sources such as traditional medicine. Even the barter system is limiting for food-insecure HHs.

In all assessed communities health services are limited including availability of drugs and laboratory services. The health structure exists but it is not functioning well, and there are problems with human resources due to reluctance in accepting rural postings and because HIV and AIDS has depleted the numbers of trained medical personnel. Finally, although on paper CHWs are identified and trained, they are not always available (Nkwazi). According to the government health structure, CHWs are supposed to receive in kind support from the community for their provision of services. This is not usually possible in poor communities.

In all communities assessed, emergency ambulance services are not readily available. In Silolo, when there is an emergency case one has to rush to Katima Mulilo the border town with Namibia for a taxi to take the patient to Sesheke District Hospital, which is about eight kilometers away. There is no regular communication between the local clinic and the district hospital. The charges for the ambulance from Sesheke are very expensive in the range of 150,000 and 200,000 kwacha. In Munkulungwe and Nkwazi, when a patient is too sick and referred to Ndola Central Hospital, villagers are offered the service of an ambulance, which normally has no fuel. By implication, the patient needs to provide fuel for the ambulance to go to the hospital and come back. If the patient is not admitted to the hospital, he/she will have to find an alternative form of transport.

D. Political and Social Assets

Political

The assessment noted a common trend for all communities surveyed in that they lacked political organization, be it traditional or government, and appropriate leadership to organize and direct their community's development. Community leaders also lack advocacy skills to solicit assistance from the government and NGOs, and they are unable to effectively influence activities in their areas to meet their development or relief needs. It was also apparent that groups exist primarily to allocate benefits to their members. This is a serious structural problem in that oftentimes the poorest of the poor are not able to influence these groups and run the risk of not receiving benefits.

All assessed communities in rural areas have ADCs that fall under the local government structure headed by the DC and relevant district line ministry offices: MACO, MoH, Ministry of Community Development and Social Welfare (MCDSW), and Ministry of Education (MoE). The ADCs work with the local counselors, members of parliament and council staff. The various smaller community clubs/ organizations forward their proposals to the ADC.

The ADCs in both communities in Sesheke were reported to be the biggest and most influential groups in the communities, but they do not have clear guidelines from the council. The ADCs in Sesheke had established Area Food Security Committees, but the communities felt that the ADCs were mostly ineffective. However, it was expressed that committee members always benefit from the relief assistance, which raises some concern because members are generally from the rich or average class. In addition, it was stated that the poor are marginalized and usually do not seek intervention of the councilors or *indunas*.

In Mongu, Muilwe expressed that their ADC was working in isolation and was not linked to either external organizations or the local community groups. Respondents also said there is no development plan for the area, and there was poor collaboration between the community groups due to poor leadership by the ADCs. ADC members also claimed that they did not know how to implement or plan projects.

In addition to the ADC, communities have government extension officers from MACO, MoH, MCDSW and MoE who are supposed to provide technical assistance to the communities. The government's line ministries exist in structure, but they do not have the resources to provide services. HIV and AIDS has depleted the MACO, MoH and MOE human resources further affecting services provided. Limpupu has one agriculture extension officer. Silolo had no agriculture extension officer. In Mongu, there are agriculture extension officers but they do not have resources to work in the communities assessed. In Ndola, Munkulungwe and Nkwazi do not have agriculture extension officers.

In Ndola, the principal local government officer is responsible for overall administration. Under the local government structure are ward councilors who are responsible for local operations of the ward/communities like Nkwazi. Responsibilities of this ministry include coordinating with and monitoring councils so that they follow government regulations. They also coordinate affairs of local chiefs. Another significant ministry in the area is the council. The town clerk governs the local council. The town clerk is a civil servant and is responsible for the overall administration of Ndola City. Under the town clerk are several heads of departments including the public health director who is responsible for municipal level water and waste management, etc. This department has several units including a settlement unit under which the RDCs fall. RDCs are the urban equivalent of rural ADCs. RDC members are community volunteers and they are not council employees. However they have been given the responsibility of land allocation, among others, but they only allocate land approved by the council.

Traditional

The assessed communities in Sesheke and Mongu fall under the traditional leadership of the Royal Barotse Establishment. The *Litunga* (king) resides in Mongu and he has authority over all of Western Province. Chiefs in each area assist the *Litunga*. Chiefs are assisted by Silalo *Indunas* who maintain traditional laws, solve area boundary conflicts, counsel marriages, and maintain village registers. Silalo *Indunas* supervise area *Indunas* and host the *kuta* (meeting) that functions as a court. The area *Indunas* are members of the ADCs. Sesheke is under the Senior Chief Inyambo Yeta who is based at Mwandi.

In the Sesheke and Mongu districts, it appeared from conversations with the communities that the government has less influence than the traditional leadership structure since it is unable to access the communities on a regular basis due to lack of resources.

Church

All communities have churches that provide spiritual support and assist with providing informal support and care to people living with HIV and AIDS. A list of churches per community is as follows:

Community	Churches
Limpupu	United Church of Zambia, Catholic Church and New Apostolic
Silolo	Seventh Day Adventists, Catholic Church and Jehovah Witness

Siwito	United Church of Zambia, New Apostolic, Seventh Day Adventist, Church of Barotse and Pentecost	
Muilwe	Information not gathered	
Munkulungwe	e United Church of Zambia, Catholic Church, Jehovah Witness and the Baptists	
Nkwazi	United Church of Zambia, Catholic Church, Seventh Day Adventists and Jehovah Witness	

Cooperatives and Farmer Groups

Existing cooperatives and farmer groups in Ndola, Mongu and Silolo (Sesheke) were formed primarily as a means for gaining access to inputs such as seeds and fertilizer, and they did not provide much value added in regards to marketing. Limpupu was the only community assessed that showed a more developed cooperative organization that focused on markets, although it primarily focused on link with the FRA for sale of maize.

Limpupu also has a seed multiplication group, the Lioyelo Women's Group and a Limpupu agricultural center that provides structures for training when available. The women's clubs were formed as a result of a lack of a local market. The group's activities include sewing and crocheting children's clothing. They purchase the materials in Sesheke, and generally sell what they can in the local community. With income earned, women start new clubs. During the rainy season there is ample grass in the community that could be used for making thatch roofing, particularly in tourist centers and lodges. The community expressed the need for a market analysis and to better understand the value chain for their potential products. People also make nice reed mats, baskets and other crafts, but again market linkages are weak.

In Mongu, there is no cooperative in Siwito. The Muilwe community has a farmer group that has accessed inputs from Program Against Malnutrition (PAM). The inputs supplied include beans, rice, maize, fertilizer, soya beans and sorghum seeds. The community stated that the farmer group assisted by PAM was not inclusive, and very few community members benefited from its activities.

In Munkulungwe (Ndola) there are a few cooperatives and participants stated that they should form more in order to better position themselves to bring produce to market. There is a National Marketing Board structure, which is very dilapidated, but could be used as a storage and market center if renovated. Occasionally, it is used by the FRA, and farmers sometimes use it to market their produce informally.

In Nkwazi some cooperatives were formed to focus primarily on acquisition of agricultural inputs through the government-funded fertilizer support program. This government initiative facilitates for small-scale farmers to have access to inputs. Farmers pay 50 percent of the total price of agricultural inputs and the government subsidizes the rest.

NGOs and Community Groups

In Sesheke, Limpupu has the following NGOs and community groups working in their community: PUSH, CARE, Peoples Participatory Service (PPS), Lioyelo Women's Groups, Social Solidarity Group, Youth Community Forestry and Game Scouts.

Silolo has the following: PAM, ZRCS, Dorcus Women's Group and Youth Groups (Adventist Church).

In Mongu, Siwito has various NGOs working in their area: PAM, Diocese of Mongu (DoM), World Vision Zambia, Young Women Christian Association (YWCA) and Zambian Red Cross Society (ZRCS). There are also various community groups working in the health sector within the community including: Neighborhood Health Committees (NHCs), Kuomboka Youth Group and HBC providers.

Muilwe has the following NGOs and community groups: PAM, Community Response to HIV and AIDS (CRAIDS), Diocese of Mongu (DoM), District Water and Sanitation Health Education (D-WASHE), Parental Health Care (PHC) and NHCs. In Ndola's Munkulungwe community, participants indicated a number of organizations that are active in their community: CRAIDS, CRS, Bridge International, Operation Christmas Child, Baptist Prison Fellowship Care Groups and United Church of Zambia (UCZ). The overall perception of the community was that NGOs and community groups are not highly effective. Most organizations are operating in separate villages, except for CRAIDS, which covers the entire community. Other programs are very small and have limited coverage and targeted areas. Most organizations did not consult the community before coming, and simply started implementing programs. Need assessments done had not involved the community. Some NGO programs, like C-SAFE, adequately inform and educate the community concerning the exit strategy, although they do not fully empower the community to be self-sufficient.

Nkwazi has the following organizations and community groups working in its community: CARE, CINDI, DoN, Solid Waste Management, Habitat for Humanity, Chichetekelo, Holy Family, Ministry of Health (MoH) and CRS.

Family Network

The family network is present in all assessed communities but respondents stated that this asset was strained by pervasive poverty levels and the increased needs caused by HIV and AIDS. Communities stated that more and more families were taking in orphans but were unable to provide for them as desired. In Ndola, the family network was failing to guide adolescents and there were reports in Nkwazi of female orphan adolescents practicing prostitution at *shabeens*(bars).

Communities did state that when vulnerable HHs affected by HIV and AIDS and or poverty can provide an incentive (beer or food), then communities are able to organize joint assistance for the family to assist with agriculture activities or conduct household repairs.

E. Financial Assets

In Mongu and Sesheke there is no access to credit for rural communities, although there are banks in the district capitals. The only community to mention they had a savings group was Limpupu with their Lioyelo Women's Group. Other communities did not mention group savings schemes. In the Sesheke communities, there were reports of remunerations being sent home from workers employed in lodges, cross border work and forestry work.

Credit access is available in Ndola, but conditions are stringent such that poor and average HHs cannot access (Pride Zambia, FINCA, CARE): loans are short-term, interest rates are high and loan repayments are nonflexible. Members of the community would prefer to get credit in terms of material, such as farm equipment, and repay the loan after harvesting their crops. Participants also reported that if they borrow cash, they are more inclined to spend it on alcohol, and not put it towards something productive. The rich and some average categories have money to invest in businesses. These include pensioners who own bank accounts and access capital for businesses from financial institutions.

In Munkulungwe, the participants expressed an interest in an activity where an institution will mobilize a farmer cooperative, and a loan is given in the form of animals or other assets (e.g. an out-growers scheme). A treasurer is designated and responsible for reporting back to the microfinance institution on behalf of the group.

In Nkwazi, some women have come up with *chilimba* where they borrow money and pay in a certain period, with other conditions. Some put resources together in order to purchase items for sale and share the proceeds. This is an informal savings and lending scheme organized by a small group of community members.

F. Wealth Ranking

The wealth ranking exercise discussions provided a rich source of information on the traits, characteristics and visible signs by which poverty is recognized in these communities, and a number of observations emerged. With extended probing, it became clear that there are recognized differences between categories: the poor, the average and the rich. It was also noted that even the HHs termed as rich, especially in the rural areas, were viewed as vulnerable and their future wellbeing uncertain, especially in regards to shocks such as drought, floods and outbreak of cattle diseases. A generalized condition of economic uncertainty and material scarcity prevails in these communities. There are relatively few surplus HHs with enough resources to hire poorer neighbors or provide them assistance in times of extreme need. The rich do occasionally offer a day's casual agricultural labor, paid for in food or in kind.

Characteristics of the (3) wealth categories

The Poor Household

In all the three districts, the percentage of poor HHs range from 63 to 76 percent. There was a strong commonality between the three districts in the defining characteristics of poverty. The table below presents these characteristics (and those of the average and the rich) by district. In summary, the very poor not only lack meager assets normally found in rural homes, they also lack some of the basic necessities of life. Food insecurity was mentioned as a primary criterion of extreme poverty in all three districts. The very poor are often unable to even eat the two meals a day typically consumed by the average HH. They have no stored grain and may be forced to go without meals for a full day or for days. In addition, they do not have adequate clothing and may possess no bedding. They live in huts (mud/grass/reeds) with thatch roofs. They are unable to educate their children due to inability to meet expenses such as books and school supplies, uniforms, and fees charged by the local parent-teacher association (PTA). In all the three districts assessed, ownership of livestock is an important criterion for separating the better off from the poor HHs. In the assessed communities, it was found that in some cases, the poor do not own any livestock and in some slightly better off communities, they are likely to own a single goat/pig or 2-3 chickens. They are likely to possess a hoe but rarely a plough. Reliance on hoe agriculture limits the amount of land the poor can cultivate. Those who are able to farm are considered to have a reliable source of income.

In all the three districts, the poor were said to have no identifiable source of income and most of them rely on sporadically available casual agricultural labor in the fields of the better off neighbors. They do provide labor to the fields of the rich neighbors with a shortage of agricultural labor. The very poor were identified as those who are always in search of daily casual work (piecework) and are normally paid in kind or with a day's supply of food. This kind of work is not a reliable source of income or food since it tends to be available only seasonally. Some of the very poor are unable to do piecework, as they are typically the labor deficient HHs headed by the elderly, the disabled, or abandoned or widowed women caring for small children. Such HHs are also often constrained when the only healthy adult is caring for a chronically ill family member.

The Average Household

In all three districts, the percentage of average HHs range from 18 to 29 percent. The average HHs were seen in all three districts to be basically food secure although they might experience occasional food shortages during the lean seasons. They are able to maintain an acceptable level of consumption. Their houses are also thatched with grass as the poor HHs. They possess as few assets in the form of livestock (usually smaller livestock such as goats and chickens) and basic farm implements.

The Rich/Better off Households

In all three districts, the percentage of wealthier (rich or better off) HHs range from 5 to 10 percent. The people in this group were usually the ones that owned cattle and luxury goods such as bicycles and radios. The rich/better off are food secure and can eat three meals per day. They are able to send their children to school since they can afford the school fees, uniforms and transport (occasionally boarding fees).

The rich possess livelihoods that are more reliable than those of the average and poor. They are likely to own ploughs and draught animals and therefore cultivate a larger area. The HHs in this category can afford to buy inputs and therefore produce enough maize to fill the granary and sell or trade surplus produce. They often operate a small shop in the village *kanteba*. Although a few average HHs can hire casual labor, it is the rich who usually employ members of other HHs to assist with planting, weeding and harvesting.

Importance of Livestock

There are two traits that distinguish the poor from the rich: basic food security and possession of livestock particularly cattle, pigs and goats. Domestic animals were described as both an indicator and a source of higher economic standing. The ability to plough using draught animals can dramatically increase a HH's productive capabilities. Cattle were therefore described as the most desirable livestock asset. Small livestock are a means of attempting to establish security and to cushion against shocks and shortfalls and consumption. A certain number of chickens and goats are produced each year in a HH with breeding animals; and these may be sold to pay school fees or buy medicines when a family member is afflicted by illness.

Ndola Wealth Ranking Findings

Proportional piling was used as a technique to focus the attention of the participants in Munkulungwe and Nkwazi communities on issues related to wealth and poverty and they identified three categories or classes as follows: Nkwazi Community indicated that the rich (*ababa bwino*) were 9 percent, the average (*ababa bwino panono*) were 24 percent and the poor (*banakalya*) were 67 percent. Munkulungwe community indicated that the rich were 66 percent, the average was 29 percent and the poor were 5 percent.

Munkulungwe Community – Rural Ndola		
<i>banakalya</i> (The poor) – 66% House is made of grass Beg for food Work for other people Children are on the road looking for food Eat once a day/nothing at all HH with OVC – resources	Inity – Rural Ndolaababa bwino panono(The average) – 29%Have maize for at leasthalf a yearOwn a bicycleOwn 2 lima of land tocultivateMay have a big piece ofland but have no fertilizerto have meaningful harvestHave a house with ironsheet but no food	<i>ababa bwino</i> (The rich) – 5% Have granary of maize 4+ cattle 5+ goats A pair of oxen House with iron roof Grinding mill Car for public hire
become overstretched Do not have blankets – sleep near fire Children do not go to school HH with elderly person as head, are widows	Have house with grass or tin roof Children do not reach	Car for public hire Children have reached grade 12/college Eat 3 meals a day Have 5+ Ha of land

Nkwazi Community – Peri-Urban Ndola		
<i>banakalya</i> (The poor) – 67%	<i>ababa bwino panono</i> (The average) – 24%	<i>ababa bwino</i> (The rich) – 9%
Eats once a day Eat anything available House is made of mud and roof is made of plastic Takes time to bury the dead because they rely on borrowing money Children drop out of school due to finances Have too many orphans they take care of, some of whom turn into thieves, prostitutes and begging Can not afford school shoes for children Can not afford medical expenses Can not afford mealie meal They are left out of relief programs Have no access to treated water Have no farming land Do not have food and adherence is difficult e.g. Anti-retrovirals	Has a habitable house Eats twice a day Pensioners Has small taverns (tunnels) Send children to government schools Can afford to buy agricultural inputs Have land for farming Can afford to pay casual workers Has an old car that is mobile Can afford medical expenses Can afford to buy a coffin, food and transport easily when there is a funeral Majority of this group are pensioners.	Have capital business Have good shelter with electricity and water House has a lot of furniture Has one or more cars (trucks, saloons, vans etc.) Has a farm, livestock (50–100 goats) Own a tavern (drinking place) Children go to private schools They go to private clinics when sick Make decisions on other people's behalf Eat many times a day (more than 3 times)

Mongu Wealth Ranking findings

Generally there are three (3) major wealth groups identified by the two assessed communities in the Mongu district: very rich (*mufumi*), average (*babotana*) and the poor (*njebwe*). Wealth status has huge implications in terms of access to food and income. Using the proportional pilling bean method, participants in Muilwe estimated that 72 percent of the community was falling in the poor category, 18 percent average and the rich 10 percent. The community in Siwito estimated that 61 percent of the community is poor, 29 percent is average, and 10 percent is rich. The table below categorizes the characteristics the communities listed for each wealth group.

Muilwe Community – Rural Mongu		
njebwe	babotana	<i>mufumi</i>
(The poor) – 72%	(The average) – 18%	(The rich) – 10%
Cattle – 0 to 1	Cattle – 1 to 4	Cattle – 9 to 15
Ox cart – None	Ox cart – 1	Ox cart – 1
Ploughs – None	Ploughs – None	Ploughs – 1
Hoes – 0 to 1	Hoes – 1 to 2	Hoes – 3 to 5
Land size/Cultivated :	Land size/Cultivated: 1	Land size/Cultivated: 2
0.25 to 0.5 Ha	to 2 Ha	to 3 Ha
Bicycle – None	Bicycle – Yes	Bicycle – Yes
Radio – None	Radio – Yes	Radio – Yes
Furniture – None	Furniture – Yes	Furniture – Yes
Shop/ <i>kantemba</i> – None	Shop/ <i>kantemba</i> – Yes	Shop/ <i>kantemba</i> – Yes
Type of House – Grass	Type of House – Iron	Type of House – Iron
Food Availability – 0 to	roof/Grass	Roof/Grass
4 mo	Food Availability – 2 to	Food Availability – 4 to

Siwito Community – Rural Mongu		
njebwe (The poor) – 67% Cattle – 0 to 3	<i>babotana</i> (The average) – 24%	<i>mufumi</i> (The rich) – 9%
Pigs – 0 to 4 Chickens – 0 to 2 Fishing Nets – 0 to 2 Axe – 0 to 1 Sickle – 0 to 1 Panga – 0 to 1 Canoe – 0 to 2 Fishing spear – 0 to 2 Traditional fishing basket – 0 to 1 Fishing hooks – 0 to 1 Land size/Cultivated – 0.25 Ha Bicycle – None Health Status – Poor Shop/kantemba – None Type of house – temporal makeshift Clothing – # of Meals/day – 0 to 1	Cattle – 4 to 10 Pigs – 4 to 6 Chickens – 3 Ducks – 4 to 5 Canoe – Yes Fishing Nets – Yes Land size/Cultivated – 0.25 to 0.5 Ha Bicycle – None Health Status – Average Shop/ <i>kantemba</i> – None Clothing – # of Meals/day – 1 to 2	Cattle – 7 to 50 Pigs – 3 to 5 Chickens – 0 Canoe – Yes Fishing Nets – Yes Land size/Cultivated – 0.5 to 1.5 Ha Bicycle – Yes Health Status – Good Shop/ <i>kantemba</i> – Yes Clothing – # of Meals/day – 3

Sesheke Wealth Ranking findings

The two communities in Sesheke identified three wealth categories namely: the rich (*baikonel*i,) 9 percent, the average (*babalikalika*) 21 percent and the poor (*babotama*) 70 percent. These percentages are the averages of both communities. Both communities discussed a fourth category, the very rich (*bafumi*), but the communities pointed out that no one in their community met the characteristics.

Limpupu Community – Rural Sesheke		
babotama (The poor) – 63%	babalikalika (The average) – 25%	<i>baikoneli</i> (The rich) – 12%
Can't afford salt Own no cattle Lack money to pay for labor Provide labor at peak time of cultivation Children do not go beyond grade 7 Unable pay medical fee Have more children Eat once a day May have 1 to 2 chickens Very poor harvest Provide casual labor in Namibia (housemaids, construction) Higher proportion of widows and women	Might have a plough Own 1 cow Do not own other livestock May have a radio Cultivate 1 Ha Might have a hoe Children only able to attend school up to grade 9 Eat 1 to 2 meals per day Have 1 to 10 chickens Provide casual labor in Namibia (housemaids, construction) Engage in cross border trading (smuggling)	Own a Bicycle Capable of buying food Own 5 or more cattle Have some farm implements (1 or 2 ploughs) 12 to 20 acres of farm land cultivated Might have solar power Have a radio Have a TV Children attend school and have shoes and uniforms Children are able to attend school through grade 12 Eat 2 meals per day Engage in cross border trading (smuggling) Can afford to hire labor They can afford dowry Practice conservation farming Receive support from children living in town Might have an Ox-Cart

Silolo Community – Rural Sesheke		
babotama (The poor) – 76%	babalikalika (The average) – 18%	<i>baikoneli</i> (The rich) – 6% Are formally employed
Eat once a day/nothing at all Have only one blanket Children do not go to school High proportion of women and widows Are Poorly Dressed Cultivate 2 to 6 Acres	Eat two meals per day They provide hired labor Can afford some farm implements (e.g. plough) Cultivate 6 to 10 acres of land Own 2 to 4 cattle Have 13 to 15 goats Have house with grass or tin roof Able to pay medical fees Children go to school	Have vegetable gardens Run a <i>kantemba</i> Own a Bicycle Capable of buying food Own 7 to 10 cattle Have 10 to 30 goats Have some farm implements Have an average of 25 chickens 12 to 20 acres of farm land cultivated Children attend school and have shoes and uniforms Eat 3 meals per day Can afford to hire labor Own a plough

The categories and composition of the various levels of wealth in all of the communities surveyed were very similar. The majority of HHs were categorized as poor.

G. Coping Strategies

Adverse shocks are more likely to occur among the poor than the rich and, overall, the impact of these shocks is greater on the well being of the poor. The majority of the communities assessed were chronically poor and are exposed to a variety of shocks/emergencies and unexpected setbacks that threaten to throw them even further into destitution. The poor have smaller stocks of resources and assets and any shock or setback is likely to absorb a larger share of these resources and assets. In a worst case scenario, a poor HH may enter a vicious cycle in which food shortage caused by a catastrophic loss results in severe malnutrition and this leads to a second shock, illness and its related costs. Once such an HH has become destitute, it is very difficult to



regain basic economic security. From the discussions with the assessed communities, it was found that they are well aware of the risks they face (e.g. recurrent droughts, floods, disease, crop destruction by pests and wild animals, death of a bread winner in the family) and they have, over time, employed different strategies to cope with the risks they face.

Coping strategies depend upon the nature and duration of the setback HHs/communities are experiencing. The communities assessed had many similar shocks such as crop failure, illnesses that result in loss of labor and cost of treatment, loss of livestock through disease and loss of a breadwinner. The rural HHs assessed by the teams described a range of risk reduction and risk coping strategies they employ.

Selling of Assets

In all the communities visited, selling of assets was cited as one of the coping strategies employed especially by the better off HHs to cushion a shock. Livestock was mentioned by all the better off HHs as the asset they sell during a crisis. While all HHs are forced at times to sell assets, the poorest HHs may be forced to sell assets that are more difficult to regain, such as household items, bicycles or breeding livestock in order to obtain food, send children to school, buy medicine for a sick family member or buy other basic necessities.

Engaging in Casual Labor/Piecework

The poor HHs mentioned engaging in piecework, as a coping strategy they employ. After a shock, these HHs are often forced into a position where meeting immediate needs undermines their future security. An example is the fact that when such individuals engage in piecework in order to acquire the day's food, they are then unable to cultivate their own fields or to produce food for the year ahead.

Livelihoods Diversification

One of the coping strategies discussed by communities visited was diversifying their livelihoods. Although the poor possess few skills, many engage in different livelihood strategies. The livelihood strategies between the average and the poor were not that different from each other. The following were the strategies highlighted:

Poor	Average
Piecework – agriculture labor	
Brewing and sale of illicit beer	Brewing and sale of illicit beer
Farming	Farming
Fiber selling (Mongu)	Fiber selling (Mongu)
Hoe/Axe handles – sales (Mongu)	Hoe/axe handles – sales (Mongu)
Grass selling (Mongu)	Sale of reeds, firewood and grass (Mongu)
Basket making and selling (Mongu)	Thatching houses (Mongu)
Selling of wild fruits, mushrooms	Selling of forest non-wood products
Fish selling (Mongu)	Gardening/vegetable production, all districts
Herding cattle for the rich	Petty trade, sale of mangoes
	Carpentry
Selling molasses (Ndola district)	Selling molasses (Ndola)
Force children into early marriage (Ndola)	
Girl children resort to prostitution (Ndola)	

Seeking Assistance/Remittances

Communities cited borrowing from relatives and neighbors. In the Ndola district, in addition to borrowing, the communities cited using money from remittances and relatives to buy maize meal and continue eating three times a day. In addition, the communities in Ndola stated that they seek help from the Catholic Church. Coping strategies for average community members in Ndola included: storing harvest for home consumption, making plans and budgets for expenditures (one member said they are "task achievers"), their children and relatives assisting them financially and raising income from small businesses that they own.

Hiring Out Land

The rich communities in Ndola cited hiring out land to other community members for cultivation.

Foraging

Communities in Sesheke cited foraging as a livelihood strategy. HHs near forests/game reserves may hunt for wild animals and collect honey (legally or illegally) when they experience food shortages. A variety of wild plant foods are also eaten in emergencies and these are available seasonally.

Reducing consumption

All the poor HHs in the six communities visited cited reducing consumption of meals as a coping strategy, yet this is a negative coping strategy in terms of nutrition. In the Ndola district, the average HHs also use this as a coping strategy. Usually, fewer meals are eaten per day and some skip meals for an entire day.

Crop failure may be caused by several events (e.g. droughts, floods, insect pests, damage by wild animals, etc.). The assessed communities frequently cited drought and floods as the cause. HHs attempt to cope with crop failure through a variety of mechanisms and among them are: crop diversification where HHs, in addition to planting conventional crops such as maize, also plant vegetable gardens (particularly those with access to *dambo* fields). In this way, if one crop is water logged or dries up, then the other may produce either for food or saleable commodity. HHs also employ risk mitigation strategies after a crop failure with healthy adults offering their services as agricultural laborers in the fields of other HHs.

Some of the most common coping strategies mentioned by the communities are damaging in the long-term. During times of drought and crop failure, the poor turn to common property resources like forests to fill the gap. Cutting of trees to expand on land under cultivation or cutting trees to burn charcoal (saleable commodity) is deforesting these common property areas. Communities in Mongu described selling reeds as a coping strategy they employ. Cutting reeds for matmaking can contribute to the problem of erosion and siltation of rivers. Communities in Sesheke mentioned that there are members of the communities who are using mosquito nets for fishing and this severely impacts the fish population.

VII. VULNERABILITY CONTEXT



The assessment has found that all communities covered have significant proportions of their population that live in a state of chronic poverty – between 63 to 76 percent. How is it possible for poverty to be so pervasive in all communities assessed?

The answer begins soon after independence when there was a tendency to subsidize a lot of basic services in the rural areas. In this system, the government provided free inputs to farmers, provided education and health services to rural and urban areas, facilitated market access and provided urban employment in the mine sector and services to support the mine sector. During President Kaunda's administration, a Zambian

could only live in the urban center if he or she had formal employment. This state system dominated all livelihood activities and traditional structures and systems were marginalized to some extent.

When the country changed from a one party state to a multiparty state and a new government came into office in the 1990s, the state structure was dismantled and replaced with a free market oriented economic model following the recommendations by the international community at that time. Almost overnight, all farmer subsidies ended and the markets failed to reach rural areas. In the mining sector, the drop in world copper prices forced most mines in the Copperbelt to close.

At the community level, the traditional leadership structures started to reemerge in the vacuum created by the state's withdrawal. However, they were unable to organize meaningful development initiatives without adequate fiscal resources and policy support. Communities continued to fall farther into poverty, and successive natural shocks eroded their asset base. In the 1990s, the HIV and AIDS pandemic began to take its gruesome toll. The livelihood assessment has highlighted that at the community level, structures and systems are not functioning effectively, be they traditional or governmental: health and education services, the provision of agriculture and marketing assistance, water and sanitation management, and natural resource exploitation. Government services exist on paper but they do not have the resources or personnel to fulfill their mission.

There are NGOs working in poor communities but they have been unable to enact significant impact in reducing poverty levels because they have limited resources and either they spread it too thin or they try to focus their activities on one particular programmatic intervention. For their part, local leaders and interest groups, such as area development committees, have oriented their participation in a more self serving focus aiming to secure benefits for their families rather than advocating for public good.

The livelihood assessment found that even in relief operations the relatively wealthier families complained that they needed assistance just as much as the poor, and not surprisingly in verification exercises, it was found that exclusion of poor families from assistance programs occurs as they are not able to influence the targeting lists made by the local leadership and ADCs. In the end, there is a continual pull towards the lowest common denominator of chronic poverty, since natural shocks and HIV and AIDS continue to make all community members more vulnerable and there is a lack of substantive and holistic development initiatives.

To more fully describe the dynamic forces at play in vulnerable communities and how they reinforce and increase levels of chronic poverty, it would be useful to use some poetic license to describe a hypothetical poor family – the Nyambe family – that falls down the poverty spectrum as they are ravished by shocks. We have used the findings of the assessment as the basis for describing this family's poor asset condition, its challenges in engaging with ineffective and unjust community structures and systems, and what the effect recurring shocks would have upon their chronic poverty condition.
THE NYAMBE FAMILY

The Nyambe family lives on Mongu's uplands in a reed and mud wall house, with a thatch roof. They have four living children: one adolescent girl, two in school and one infant. Two of their children have already passed away due to malaria and diarrhea. They also have taken in a school aged orphan from deceased relatives. The Nyambe family is a farming family and they depend on good rains for their agricultural production (maize, cassava and vegetables). They have access to large amounts of land from the traditional leaders, but it is composed of sandy soils that are not fertile and the family lacks seeds and tools. The family has a hoe and a few chickens, but no livestock.

In a normal year when rains are good, the Nyambes have difficulty growing enough for HH consumption, and oftentimes are forced to eat only one meal per day. They rarely have excess production that they can trade in the local community market for other foods. The father and mother illegally use the local forest resources for charcoal production to increase HH income. However, they have gotten into problems with the local authorities for using the forests but without paying the fee. They have a fine to pay but are unable. The parents also resort to working on other farmers' fields in exchange for wages paid in cereals. The father is not a member of the local cooperative, but this really does not matter since it has not been functioning for some time.

The adolescent girl does not attend the nearby primary school because she must take care of the other children. The children also assist the parents in foraging for wild foods whenever possible and in season. The children often get sick because they are malnourished, and they contract waterborne diseases that come from stagnant water nearby in ponds. There is a RHC that is 20 km away, managed by a CHW since the district health management team has not been able to assign a replacement for the previous worker who died from HIV and AIDS. Medicines are not readily available, and the Nyambes have a hard time meeting the minimal barter fee of six cups of maize meal for a consultation. The family has sought out the traditional healer in the past but even his fees are hard to pay. When the rains fail in the agriculture season, the Nyambes are unable to produce enough to meet their minimal food needs. The family further reduces the size of their meals as a coping mechanism and is forced to exchange its chickens and hoe for limited food. The parents and children increase foraging activities for wild foods and the parents increase charcoal and piecework activities. Because the crop failure is widespread, wild food sources are rapidly depleted, piecework opportunities disappear and there is an oversupply of charcoal, forcing down prices. Water sources dry up and the only remaining water source is used by both humans and animals, compounding the disease problem.

When an NGO initiates a relief food distribution program for the needy in the community, the father is able to register his family. The Nyambes receive a family ration that helps to stabilize their food needs temporarily. The father becomes ill and develops TB but is unable to obtain treatment because the RHC does not have TB medication, and he cannot travel to the district hospital that is 80 km away. The children become more malnourished because they are continually ill, and the infant dies of malaria that was not treated since they could not afford medicines. The family is unable to get help from their extended family network since they are just as poor and negatively affected by the drought. The Nyambes are helped greatly by the food ration assistance, but when the next planting season arrives, the family does not have seed stock and tools to plant. The family can only do piecework on other farmers' land. The father's TB gets worse and he develops pneumonia. The father dies and the wife is left a widow.

The Nyambe family is taken off the food distribution program after the father dies because the widow does not have the same influence on the community leadership. The widow is unable to get assistance from relatives and the orphan living with them remains. The family becomes increasingly food insecure, and the widow is forced to continually do piecework and charcoal production. The children also assist with foraging and charcoal production, but the adolescent girl becomes pregnant and the cycle continues. Through using the IHD framework and examining existing community and HH assets versus their relationship to structures and systems, the Livelihoods Assessment found issues/gaps in access to natural resources, input provision, behavior change needs, community organization and capacity building, advocacy issues and increasing access to government services and market structures. The following is a list of key issues/gaps by asset group:

Natural Resources

- 1. Infertile lands in Mongu uplands
- 2. Lack of access to land for farming in Ndola
- 3. Lack of clean water in all areas
- 4. Lack of water availability in Sesheke
- 5. Contaminated water sources in Ndola communities due to poor waste management
- 6. Lack of legal access to forest resources
- 7. Illegal deforestation without reforestation activities
- 8. Lack of community benefits from mines in areas

Physical

- 1. Lack of livestock restocking, including small ruminants
- 2. Lack of government veterinary service coverage
- 3. Poor livestock disease control
- 4. Lack of farming inputs and tools
- 5. Lack of improved seed varieties
- 6. Lack of crop diversification
- 7. Lack of draught power
- 8. Poor roads in rural areas
- 9. Lack of market access for rural communities
- 10. Lack of value added processing

Human Resources

- 1. Lack of business skills;
- 2. Lack of adoption of conservation farming techniques;
- 3. Lack of access to education, especially for orphans;
- 4. Lack of government education services;
- 5. Lack of RHCs to meet coverage needs;
- 6. Lack of government health services; and
- 7. Communities must address malaria prevention.

Political and Social

- 1. Lack of local leadership's vision, organizational capacity and advocate skills
- 2. Lack of effective cooperatives and farming groups
- 3. Weakened family network due to chronic poverty and HIV and AIDS

Financial

- 1. Lack of access to credit
- 2. Lack of income generating activities
- 3. Lack of internal savings groups

It should be noted that there are numerous additional issues within each of these thirty key issues and gaps.

It seems essential that CRS work to inform communities of the IHD framework so that they can more fully comprehend their issues and gaps, as well as discover for themselves the appropriate responses. This will foster empowerment and local leadership capacity building. The Training for Transformation (TT) methodology could greatly assist in this process, and communities themselves must become the instigators and custodians of their community's development process.

IX. LIVELIHOOD STRATEGIES AND OPPORTUNITIES



Strategies

There are some variations in livelihood strategies between the different communities based on availability and access to natural resources, and whether they are urban, periurban or rural. In the rural and peri-urban communities, farming is a main livelihood strategy, while in the urban communities, formal and informal labor are more extensive and gardening is more common. Where there is access to water or forests, fishing and forest utilization respectively are other livelihood options, though there are legal restrictions based on whether or not communities have access permits. However,

when people are desperate, they will use whatever resources are available, regardless of whether they have permits.

Livestock rearing is more extensive in rural communities due to greater access to pastures, though it exists in peri-urban and urban communities, with small livestock being more viable. Urban areas assessed showed certain specialized and service oriented livelihoods such as blacksmithing, carpentry, stone crushers, masons, security guards, maids and gardeners.

Piecework is common in all communities especially amongst the poor segments, though rural communities have less option since informal work options are less than in urban areas. In the rural context, piecework usually entails working on another farmer's land or working for an external company to cut timber. In the urban context, piecework can be connected with land, though it is also related to construction, gardening, stone crushing and others. Urban areas also have negative informal livelihoods strategies such as crime, prostitution and begging.

In all locations, charcoal production and beer brewing are a common informal market activity. Weaving and pottery products are another source of potential income though access to markets is critical. Labor migration is a livelihood strategy in all areas, but it is more feasible in Sesheke where there are more employment opportunities offered in Namibia or at lodges. In Ndola, there are not many cross border employment options, and feedback from the villages indicates that it is the reverse situation, with Congolese benefiting from cross border work and trading opportunities.

Opportunities

There are opportunities for action on all of the key issues and gaps identified if communities and stakeholders are mobilized and additional resources are secured. There are specific issues that pertain more to the government, such as the provision of education and health services. The communities for their part can improve advocacy work at the district level and CRS can assist with advocacy at the national level in partnership with the CCD and the Zambian Episcopal Conference. The communities themselves selected which opportunities they felt were most important in their action plans.

The action plans put together by each community summarize how they would prioritize their needs based on what they feel can be achieved. Interestingly, their prioritization does not always connect other assessed communities or with how CRS staff would prioritize needs, and they emphasized long term services like education and police station access over short term needs such as clean water access, and improved income generation from market access.

These action plans should serve as the initial plan for assisting the communities to address their identified issues. However, CRS needs to use the IHD framework and community resiliency methodologies to work with target communities to develop more holistic development relief action plans. These plans will enable them to connect urgent issues with rapid response, as well as prepare community resources for longer term initiatives carried out in partnership with advocacy efforts.

There are some key plausible advocacy actions that could produce results in the short term, such as working with communities and district officials to improve the use of forestry resources in Sesheke. It seems that district officials want to conserve the forests yet allow for controlled use that brings in revenue. If the communities can be assisted to gain access and market timber, they can begin to pay government fees. Moreover, it is the communities themselves that will ensure reforestation activities.

Managing the multiple uses of water, including access, is also a crucial area in need of programming assistance. Once again the community needs to improve advocacy to local government to improve access to borehole drilling assistance as well as to control companies that pollute the water sources, especially in Ndola. Water must be connected with increased agriculture production activities through small-scale irrigation initiatives, and malaria prevention must be linked to water management, as well all other life threatening waterborne diseases.

X. CONCLUSION

The Livelihoods Assessment has captured a snapshot of the six communities assessed and their interpretation of their assets, structures and systems, challenges, risks and opportunities. The high levels of food insecurity and poverty found are alarming from a justice point of view. CRS needs to use the findings as guidance in ongoing program implementation in these areas as well as to properly inform the current SPP process. CRS has to work with the communities and other stakeholders to devise practical initiatives that address identified needs in a holistic manner, and which foster appropriate asset accumulation within just structures and systems.

In the short term, CRS does have a limited amount of funds available in FY06 that can be used to fund some of the feasible action points raised by the communities, and CRS must assist Diocesan partners to move forward with the proposed Training for Transformation (TT) activities. This TT will assist greatly with creating community empowerment to pull resources to address unjust and inefficient structures and systems. This will also help the community to prioritize and plan accordingly.

In regard to assessment design, methodology and application of the IHD framework, there were many lessons learned in the assessment process. More attention needs to be made to ensure that all teams understand the IHD approach to better capture all pertinent information. There were certain information gaps in different communities. It is also important to gauge more fully the various levels of poverty. With between 63 and 73 percent of the communities living in poverty, it is necessary to more fully understand the dimensions of this particular vulnerable group.

Appendix 1. CRS Conceptual Framework for Integral Human Development (IHD)



Appendix 2. Field Process Guide

This document serves as a guide for implementation of the Livelihoods Assessment with communities. It is to help with timing of the activities and ensuring that all of the relevant information is generated and analyzed with community participants. However, field teams will need to make adjustments as they go through the process with the different communities. Responsibility for the timing and implementation of field exercises lies with the team leaders, who should *use their own best judgment at all times.* Guidance on how to implement specific PLA techniques can be found in the hand-out from the CRS RRA-PRA Manual (read before implementation).

The primary information sought in this Participatory Livelihoods Assessment is an understanding of what the poor in communities see as *their biggest issues and constraints* in regards to Integral Human Development, what they see as their *greatest opportunities* for addressing these issues and constraints, and what they think would be *effective and appropriate approaches* for doing this.

With this background, the following approaches are suggested for interactions with each target community, and as guidelines for information to be discussed and analyzed at different stages in the process.

Date / Time	Activity/ Tool	Information sought, analyzed	Participants
Day 1: Morning	Introduction, background and overview of the PLA (1 hour)	 Introductions (Community members, PLA Team) Explain the purpose of the PLA and expected outputs (to inform the CRS SPP process and guide program development over next five years; internal analysis of issues by the community and development/strengthening of own Community Action Plans (CAP)). (Note: CRS promises to assist communities in generating project proposals based on CAPs, if desired. Explain the planned process for implementing the PLA. Discuss and agree on the process (and timing of activities) with the community Identify different community groups to participate in the various exercises, and the timing of the exercises Begin the Mapping and Wealth Ranking exercises with two different groups (non-participants free to disperse) 	Whole community
Day 1: Morning (Group 1)	Community Mapping Exercise (2-3 hours)	 First, ask community members to draw all landmarks that they feel are important on the map – keep asking for more until the map is fairly complete – photocopy the map at this point. Next, fill in the gaps with requests for information on any important topics not mentioned up to this point. Map should ultimately include: boundaries, natural resources (water, forests, grazing lands, farming lands, etc.), structures/services (schools, clinics, government offices, roads), living areas and areas where livelihood activities take place. Interview with map: Who has access to common-property resources, and how is access controlled (lands, forests, etc.)? What are the trends for important natural resources (e.g., soil fertility decline, depletion of fish stocks and forestry products)? What are the most important natural resource based livelihood activities in the community, and who relies on these activities? What are the under-exploited opportunities for generating income, and how could these be developed in an equitable manner? Closing: Summarize main conclusions, indicate how this is an important contribution, thank the group for their time and effort. 	10-20 people knowledgeable about the area (include both men and women)

Day 1: Morning (Group 2)	a) Wealth Ranking Use flip charts on a wall, one page per wealth category. (1 hour)	 Wealth Ranking: How does the community define: a wealthy household (HH); an average HH; and a poor HH? What are the main livelihood strategies for each category? Distribution of wealthy, average and poor HH in the community (e.g., out of 10 HH, how many rich, average, poor? Can use the "bean" method as a refresher exercise if appropriate). Start Venn Diagram exercise on local organizations and structures. 	15-25 people, men and women, generally representative of the community as a whole
Day 1: Morning (Group 2), continued	b) Venn Diagrams Local government structure, community groups, marginalized groups. (2 hours)	 First Venn Diagram: List all groups and organizations that are active <i>within</i> the community. Identify links between groups and organizations <i>within</i> the community. Show links to all organizations <i>outside</i> the community groups and organizations. Second Venn Diagram: Describe the local government structure within the community (both traditional and non-traditional structures). Show links between traditional and non-traditional leadership <i>within</i> the community, and with <i>external</i> structures. Interview with diagrams: How do groups within the community support each other? Are there areas of conflict? What relief or development programs are being implemented in the community; who has access to these programs; are the programs well targeted to the most needy? How much input has the community had in determining <i>what</i> relief/development programs are implemented? Are the relief/development programs effective, and can they be sustained once external support is removed? Does the community have their own development plans? If yes, how were these created – and do community members believe that they are likely to succeed? Are copies available? (Team to obtain a copy where possible) Closing: Summarize main conclusions, indicate how this is an important contribution, thank the group for their time and effort 	Continue with same group that did wealth ranking

Focus Group Discussions Focus Group Analysis of Analysis of Assets and Opportunities. (Record on Flip Charts) (Record on Flip Charts) Matrix Ranking As an ice- breaker or as a refresher, it may be useful • Ask participants to list all of the assets that would be owned by a "normal" family in this wealth category. Include assets to which they have access, even if these are not actually owned (e.g., farming, fishing or forest areas).
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Day 2: Morning 9-10.30 ?	Coping Strategy discussions with Wealth Groups Focus group discussion (1.5 hours)	 What are the main threats to livelihoods in this community (the Vulnerability Box). What are the main "coping strategies" for this group when these things happen (e.g., when HH food stores run out). What is the order in which these strategies are employed (e.g., first – eat reduced quantities at meal times, second – skip meals, third – start collecting wild fruits). Are any families in the community employing any of these coping strategies now? Which strategies? (NB: Check with key informants what other socially <i>unacceptable</i> coping mechanisms are also sometimes employed, and by whom.) Closing: Summarize main conclusions, indicate how this is an important contribution, thank the group for their time and effort. 	Same two groups that did the Asset Analysis
Day 2: Morning 11-12.30?	Markets: Mapping and Resource Flow diagram (1.5 hours)	 For an "average" HH, map where materials are obtained or produced (e.g., fish caught, crops grown, wood cut). Use arrows to show where those items are taken and used/consumed or prepared for sale. Use arrows to show where products are purchased and/or sold. Discussion How important are marketing activities for average HH? Do any/all HHs have access to credit? Are there any micro-finance programs or groups in the community? Are there groups in the community with interests in particular markets (if yes, do all HH have equal access)? What are the key constraints in the producing/ selling process? Identify the key opportunities for improving the chains in obtaining materials, production and marketing Closing: Summarize main conclusions, indicate how this is an important contribution, thank the group for their time and effort 	10-15 participants, men and women with knowledge of production and marketing of local products

Day 2: Afternoon	Discussion on HIV/AIDS Focus group discussion (3 hours)	 How does the community identify HIV/AIDS affected HH? What are the myths and misconceptions surrounding HIV/AIDS? Is HIV/AIDS the most important disease in the community? Are there other health problems of equal or greater concern? (If yes, what?) How does HIV/AIDS impact the community? What are the effects on the household? Women and children? What are the effects on the household? Women and children? What are the prevention and mitigation approaches utilized in the community (traditional and non-traditional)? What are the sources of food/nutrition for HIV/AIDS affected individuals/HHs? What are the sources of food/nutrition for HIV/AIDS affected individuals who are recovering from AIDS? What are their needs? What HIV/AIDS activities are done in this area by government, NGOs and others? Please list. Closing: Summarize main conclusions, indicate how this is an important contribution, thank the group for their time and effort 	Probably best to have separate groups of men and women. Participants should be primarily individuals with chronically ill HH members, or close relatives of families with chronically ill individuals
Day 3:	Consolidation Day	Team meets to synthesize findings and prepare "Report Back" for the community	Team

Day 4: Morning	Report Back Presentation to the community	 The PLA Team reports back to the community on the outcomes of the discussion and analysis: Present summary of findings (not every detail). Identify: Main livelihood strategies Main constraints identified by the community to achieving IHD (basic physical needs, social justice and human dignity) Main issues surrounding HIV/AIDS Main opportunities for improving lives and livelihoods Ask the community to confirm the conclusions, or modify/correct as necessary. Engage the community in discussing whether they have action plans to address the constraints and opportunities, or if they want to develop new or additional action plans (Note: CRS promises to assist the community to develop grant proposals but be clear that CRS will not necessarily fund these.) Check what grants might be available to communities and community groups to support their action plans. Plan a "Way Forward" for developing Community Action Plans (CAP), with timeframe and (local) persons responsible for the process. 	All community members invited
Day 4: Afternoon	Community Action Plans	 Use the afternoon to assist identified community members in initiating CAPs See "Tools and Techniques" handout for ideas Identify when the community will be ready for assistance in preparing grant proposals, and what types of sectoral assistance might be required Closing: Summarize main conclusions, indicate how this is an important contribution, thank the group for their time and effort. 	Persons identified in morning session

ISSUES	TOOLS
Governance and power issues	Venn diagrams, narratives/institutional histories, cause-effect and flow diagrams
Agric plains versus uplands	Asset surveys, resource maps, FDGs,
Land tenure issues	Venn diagrams, narratives/institutional histories, cause-effect and flow diagrams
Caste system	Venn diagrams, narratives/institutional histories,
Targeting - coverage	well being ranking, social maps,
Local biases	FGDs - Triangulation, secondary data review,
Assets	Asset surveys, seasonal calendars of assets, social net works and Venn diagrams
Activities	Livelihoods diagrams, resource maps,
Trend economic environment	Actor network analysis, market inventories, Venn diagrams
Coordination/involvement	Venn diagrams, actor network diagrams and power mapping
social justice - caste system	Venn diagrams, narratives/institutional histories, cause-effect and flow diagrams
HIV and AIDS KAP and Impact	KAP surveys, FDGs
AIDS Women and children	FDGs, SSI
Livelihood opportunities	Resource maps, market inventories, historical data, actor network analysis
Market availability and accessibility	Market inventories, price trends,
Resources - availability, access & changes	Livelihoods diagrams, resource maps,
Prioritization and flexibility	Ranking, seasonal calendars, stress calendars,
Impact of past responses and how to address	Social mapping, cause-effect and flow diagrams, historical archives
Community strengths	Ranking of income sources, migration maps, calendar of production, employment and income, savings history
Community participation & ownership	PRA tools
Inclusion/exclusion at community	Institutional histories from key informants, FGDs, fire model
Contextualize HIV prevalence	Interviews with RHC, ADC, VDCs
Vulnerability context	Met. Data, demographic data, historic archives (conflicts, market fluctuation)
Livelihood outcomes	Well being ranking, social maps, cause-effect diagrams, historical trend aerial photos

Main Issues identified by CRS-Zambia during the PLA planning process.



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