



## **Situational and Livelihoods Analysis Study in Nine Game Management Areas, surrounding Kafue National Park, Zambia**

Final Livelihood Analysis Report for Selected GMAs and Preliminary Recommendations for MCC Investment in GMAs (Deliverable No. 3)

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*The author's views expressed in this publication do not necessarily reflect the views of the Millennium Challenge Corporation or the United States Government.*



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This study was conducted by a team of consultants from Chemonics International Inc. The study team consisted of the following individuals:

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## ACRONYMS

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ADC	Area Development Committee
ADMADE	Administrative Management Design for Game Areas
AEWA	African-Eurasian Waterbird Agreement
AIDS	Acquired Immunodeficiency Syndrome
ALE	Adult Learning and Education
APU	Academic Production Unit.
ASC	Annual Schools Census
AWF	African Wildlife Foundation
CA	Conservation Agriculture
CA	Controlled Area
CBNRM	Community-Based Natural Resource Management
CBO	Community-based Organization
CCA	Community Conservation Areas
CCF	Christian Children’s Fund
CDC	Community Development Committee
CEEC	Citizens Economic Empowerment Commission
CFU	Conservation Farming Unit
CIA	Central Intelligence Agency World fact book
CMS	Convention for Migratory Species
COMACO	Community Markets for Conservation
CONASA	Community-Based Natural Resource Management and Sustainable Agriculture
COPASSA	Conservation Partnerships for Sustainability in Southern Africa
CRB	Community Resources Board
CS	Community School
CSEN	Children with Special Education Needs
CSO	Central Statistics Office - Lusaka
CYDF	Constituency Youth Development Fund
DACO	District Agriculture Coordinating Officer
DAI	Development Alternatives, Inc.
DANIDA	Danish International Development Agency
DC	District Council
DDCC	District Development Coordination Committee
DENRC	District Environment and Natural Resource Committee
DFO	District Forestry Officer
DODE	Directorate of Open and Distance Education.

DOF	Department of Fisheries
DSI	Development Services and Initiatives
EA	Environmental Audit
EA	Enumeration Area
ECZ	Environmental Council of Zambia
EPPCA	Environmental Protection & Pollution Control Act No. 12 of 1990
ERR	Economic Rate of Return
ESB	Educational Statistics Bulletin
EU	European Union
FBO	Faith-Based Organization
FD	Forestry Department
FGD	Focus Group Discussion
FISP	Farmer Input Support Program
FISRI	Farmer Input Support Response Initiative
FLIRD	Functional Literacy for Integrated Rural Development
FMC	Finance Management Committee
FNDP	Fifth National Development Plan
FRA	Food Reserve Agency
FRR	Financial Rate of Return
GEF	Global Environmental Facility
GER	Gross Enrolment Rates
GIS	Geographic Information System
GKNP	Greater Kafue National Park
GMA	Game Management Area
GMP	General Management Plan
GRZ	Government of the Republic of Zambia
GTZ	Deutsche Gesellschaft für Zusammenarbeit (German Development Agency)
HCA	Hunting Concession Agreement
HIV	Human Immunodeficiency Virus
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HWC	Human-wildlife Conflict
IDA	International Development Agency
IDEA	Informing Decision Makers to Act - Population Reference Bureau
IRDNC	Integrated Rural Development and Nature Conservation
IRI	Interactive Radio Instruction
IUCN	World Conservation Union
IWIMIS	Integrated Wildlife Management Information System
JFM	Joint Forest Management

JFMA	Joint Forest Management Area
JFMC	Joint Forest Management Committee
KAPOA	Kafue Private Operators Association
KI	Key Informant
KII	Key Informant Interview
KNP	Kafue National Park
LIRDP	Luangwa Integrated Resource Development Programme
MCA	Millennium Challenge Account – Zambia
MCC	Millennium Challenge Corporation
MCDSS	Ministry of Community Developments and Social Services
MDG	Millennium Development Goal
METT	Management Effectiveness Tracking Tool
METTPAZ	Management Effectiveness Tracking Tool for Protected Areas in Zambia
MOE	Ministry of Education
MoESP	Ministry of Education Strategic plan
MOMS	Management-Oriented Monitoring System
MOU	Memorandum of Understanding
MSE	Micro or Small-scale Enterprise
MSYC	Ministry of Sport, Youth and Child Development
MTENR	Ministry of Tourism, Environment and Natural Resources
NAP	National Agricultural Policy
NDCC	National Development Coordination Committee
NDVI	Normalized Difference Vegetation Index
NELMP	National Employment and Labour Market Policy
NGO	Non Governmental Organisation
NHCC	National Heritage Conservation Commission
NISTICOL	National In-service Training College
NP	National Park
NPE	National Policy on Environment
NPWS	National Parks and Wildlife Services
NRCF	Natural Resources Consultative Forum
NTFP	Non timber forest products
NWFP	Non-wood forest product
OCA	Ownership, Control, Access (participatory research exercise)
OPPAZ	Organic Producers and Processors Association of Zambia
OVC	Orphan and Vulnerable Children
PA	Protected Areas
PDCC	Provincial Development Coordination Committee

PPP	Public-Private Partnership
RDC	Rural District Council
REMNPAS	Reclassification and Effective Management of the National Protected Areas System Project
RMC	Resources Management Committee
SADC	Southern African Development Community
SEED	Support for Economic Expansion and Diversification
SHA	Safari Hunting Area
SI	Statutory Instrument
SIMAPB	Strategic Investment Management Action Plan and Budget
SLAMU	South Luangwa Area Management Unit
SME	Small or Medium-scale Enterprise
SNDP	Sixth National Development Plan
SNV	Netherlands Development Organisation
SPP	Strategic Planning Process
SWOT	Strengths, Weaknesses, Opportunities, and Threats Analysis
TCA	Tourism Concession Agreement
TEVET	Technical Educational Vocational and Entrepreneurship Training
TEVETA	Technical Educational Vocational and Entrepreneurship Training Authority
TFCA	Trans-frontier Conservation Area
THC	The Nature Conservancy
UNDP	United National Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
VAG	Village Action Group
VMC	Village Management Committee
VRMC	Village Resource Management Committee
WCRF	Wildlife Conservation Revolving Funds
WIA	Wildlife Impact Assessment
WMA	Wildlife Management Authority
WPO	Wildlife Police Officer
WWF	World Wildlife Fund
ZAWA	Zambia Wildlife Authority
ZDHS	Zambia Demographic and Health Survey
ZEMA	Zambia Environmental Management Agency
ZLA	Zambian Land Alliance
ZMC	Zonal Management Committee



ZNFU  
ZOCS

Zambia National Farmers' Union  
Zambian Open Community Schools



## SECTION I. INTRODUCTION

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### A. Background and Objectives

In December 2008, Zambia became eligible to receive compact funding from the Millennium Challenge Corporation (MCC). One of the projects selected for further investigation in this regard is a development project for the Kafue National Park. This is the “Greater Kafue National Park Economic Development Project (the “GKNP Project”). This project aims to promote sustainable economic growth and poverty reduction in the greater KNP area through increased nature-based tourism, improved park and wildlife management capacity, and greater participation in tourism and diversified livelihood activities by the rural communities in the surrounding Game Management Areas (GMAs).

In preparation for a Compact, the Government of the Republic of Zambia (GRZ) is conducting a project preparation study of the Game Management Areas (GMAs) adjacent to Kafue National Park (KNP). This Livelihood Analysis is part of this study. The basis for the GKNP project is a concept proposal made by the Government of Zambia, which in turn is based on a previously developed business plan and general management plan for the KNP (PMTC 2008, 2010).

Thus, the Livelihoods Analysis aims to promote economic development for the approximately 200,000 residents of the GMAs, potentially through increased involvement in consumptive and non-consumptive tourism, sustainable agricultural intensification, and other activities promoting livelihoods that provide alternatives to poaching and other unsustainable natural resource use practices. As the principal tourism attraction in KNP is wildlife viewing in natural settings, the viability and sustainability of the proposed Project depends largely on reduction of poaching through the promotion of community involvement in wildlife management, participation in tourism-derived benefits, and active involvement in other livelihood activities intended to generate revenue and take the pressure off of the natural resource base. Central to this is a proposal by the GRZ for development, where possible, of Community-Based Natural Resource Management (CBNRM) in the GMAs. CBNRM addresses property rights at community level and may contribute to the sustainability and viability of the Project.

Evidence suggests that farming and other livelihoods are more profitable and benefit more households than CBNRM, particularly when these livelihoods can exploit economies of scale, market linkages, and value addition at the community level. This implies a higher likelihood for success if CBNRM is combined and optimized with other non-conservation-related activities.

The Livelihoods Analysis follows a literature review and series of Lusaka-based key informant interviews where the GKNP GMAs were prioritized for potential development activities consistent with MCC requirements and the objectives of the KNP Project. Five GMAs (Kasonso Busanga, Mumbwa, Bilili Springs, Mulobezi and Mufunta) were selected by MCC for further study to carry out in-depth Livelihood Analysis, based on field work. It was decided to focus most effort in the Kasonso Busanga, Mumbwa, and Mulobezi GMAs.

The specific objective of the Livelihood Analysis is to carry out an in-depth analysis in the prioritized GMAs. Necessary data and information were gathered through field work, Focus Group Discussions (FGDs), Key Informant Interviews (KIIs), Participatory Rapid Appraisal

(PRA) exercises, and other means to develop a thorough understanding of the constraints to development and identify the most promising livelihood strategies that offer alternatives to unsustainable use of natural resources and increase incomes at the community and household level to help reduce poverty.

The analysis focuses on:

1. If and how existing livelihood strategies can be scaled up in a sustainable manner;
2. Whether other economic activities exist which are consistent with broader tourism development and wildlife conservation objectives;
3. How to ensure broad and equitable participation in benefits from tourism and other alternative livelihoods; and
4. What institutional support is needed to increase benefits to the community, enforce proper land use planning, and provide for more effective conservation of natural resources

The Livelihood Analysis considers the following:

1. Agricultural and non-timber forest products
2. Nature-based tourism
3. Fisheries, forestry, and other economically viable alternatives
4. Livelihood development at the community and household level

Since the original objectives were defined, MCC has modified them with additional guidance, and with the inclusion of preliminary recommendations along the lines below.

The preliminary recommendations should prioritize strategies for potential MCC activities that increase household incomes and reduce pressure on the natural resources essential for tourism in the GKNP ecosystem. These activities should also contribute to the additional objectives of MCC-enhanced gender equality, increased food security, and an improved skills and knowledge base for community members to participate in these activities.

The preliminary recommendations for potential MCC GMA activities shall consider the following:

1. Alternative Livelihoods
2. Institutional Support / Community Resource Boards (CRBs)
3. Skills Development
4. Alternative Approaches
5. Validation

The report below contains sections on:

- The setting of the study,
- Approach and methodologies,
- Current livelihood strategies of households,

- Current cross-cutting issues surrounding livelihood generation,
- Analysis of potential for change and enhancement of livelihoods in line with overall project objectives,
- Preliminary recommendations for change

## **B. The Setting**

The greater Kafue National Park (GKNP) is located in the centre of south-western Zambia. It covers an area of 68,000km<sup>2</sup>, of which approximately 45,400km<sup>2</sup> consist of the nine GMAs under study here. The protected area (the park and surrounding GMAs) have a gently undulating landscape in which the dominant features are the Kafue River, together with its tributaries. Mean annual rainfall varies between about 1,100 mm in the north and 700 mm in the south.

The GKNP protected area contains some 11 main vegetation types, mainly extensive floodplain and dambo grassland, thicket, extensive miombo woodlands, mopane woodland, Kalahari woodland, deciduous Teak forest and riparian thicket/woodland. It contains examples of 16 of the country's 24 natural habitats. It provides sanctuary for some 155 species of mammals; some 510 species of birds; some 70 species of reptiles; some 35 species of amphibians and about 60 species of fish. It is noted for having one of highest diversities of antelope species than any other protected area in Africa and it is also rated as one of Zambia's "Important Bird Areas".

Approximately 200,000 people reside in the GMAs around the Park working as traditional agriculturists, small-scale commercial farmers, and natural resources users. The GMAs are experiencing encroachment and settlement of people, which is causing widespread depletion of natural resources.

The chiefdoms that preside over the settlement and land use in the GMAs commonly also embrace land outside the GMAs, along with proportions of the communities that benefit from the GMAs. In some cases (Nkala and Sichifulo GMAs) all the GMA communities benefitting from land use in the GMAs live outside the borders of the GMAs. Thus reference to the communities in the GMAs should be understood to include those, within GMA chiefdoms with villages linked to the use GMA resources, which are settled both inside and outside the physical boundaries of the GMAs.

Land use in the GMAs consists of non-consumptive and consumptive wildlife utilization, forestry, fisheries, agriculture, non-timber forest product utilization, and mining. Land use plans, General Management Plans (GMPs) and zoning schemes are providing a platform for greater community-based natural resource management (CBNRM), improving governance and sustainable use of natural resources.

The GKNP is expected to become a major part of the Kavango-Zambezi Transfrontier Conservation Area (TFCA), linking it to a vast chain of conservation areas in the centre of southern Africa.

Control over land and resources in the GMAs falls under several agencies, but the Zambia Wildlife Authority (ZAWA) has the primary authority and a mandate to enhance the sustainable

conservation and management of the wildlife resources and ecosystems in the GMAs for the benefit on communities in and adjacent to them.

The GMAs under study were originally intended as buffer zones for the KNP. They were considered to be inherently well-suited to wildlife-based activities and less well suited to agricultural cropping or livestock.

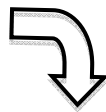
### C. Prioritization of the GMAs

This section provides a brief description of the process by which GMAs for the livelihoods study were prioritized. The full explanation is presented in the Situation Analysis report. The process of prioritization for the GMAs in the context of possible MCC investments, passed through four stages:

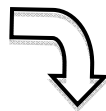
- A preliminary cascade-based assessment
- A detailed thematic assessment
- A clustering and refinement process
- A consultative process with MCC and MCA.

The cascade-based assessment involved a cascade of decisions on the importance of the contribution of individual GMAs to the GKNP project objectives. Three principal filters were applied:

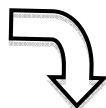
- **Biodiversity.** Does the GMA or any part of it constitute a valuable biodiversity source with implications either for securing a viable patchwork of biological continuity and/or consolidating the function of the national park through the protection of wildlife corridors, avian flyways, or aquatic systems?



- **Commercial Wildlife Value.** Does the GMA, or any part of it, have a competitive advantage for consumptive and/or non-consumptive tourism activities whether it is rich in biodiversity or not?



- **Other Land Uses.** Does the GMA, or any part of it, which is not important for biodiversity conservation, or the commercial utilization of wildlife, have other valuable natural resources or land use attributes?



## **C1. Comprehensive Thematic Assessment**

The initial cascade prioritization was followed by a thematic assessment to deal with the lack of natural resources and social data. The thematic assessment involved five main areas:

- Overall consistency with the Greater KNP Economic Development Project
- Linkages with tourism development
- Principal threats to biodiversity, wildlife and sustainable land use practices
- Suitability for the implementation of alternative livelihoods within a five-year period
- Potential for alternative livelihoods developments, particularly addressing food security, women, and marginalized groups.

More than 100 scoring criteria were applied across these five main assessment areas, which included best practice assessments of biodiversity, available consumptive and non-consumptive tourism, demographic and poverty data, and information on agricultural and other livelihoods as well information on government services.

## **C2. Clustering and Refinement Stage**

A clustering and refinement stage then followed to address these issues, considering the prioritization of core criteria:

1. At least one GMA where community structures and/or commitment have developed a functional system for implementation, or experience that will strengthen future MCC investment design;
2. One GMA with significant tourism potential (preferably both safari hunting and non-consumptive tourism and preferably correlating with tourism development initiatives identified during the Market Analysis stage of the GKNP Market Study);
3. One GMA with significant encroachment, or other biodiversity and sustainable use threats;
4. One GMA with high poverty status where opportunities for alternative livelihoods may have high impact;
5. One GMA with transfrontier, or regional conservation importance linked to the future ecological viability of the KNP;
6. Where possible selecting GMAs where several of the selection criteria exist together.

Consequently the following prioritization was agreed:

*1. Kasonso-Busanga GMA* - natural resource base, safari hunting contribution and non-consumptive tourism opportunities, existing community commitment, livelihoods opportunities (tourism, timber and non-timber forestry, fishing), environmental threats (mining, and charcoal production and timber extraction);

*2. Mumbwa GMA* – natural resource base, safari hunting and non-consumptive tourism contribution and opportunities, environmental threats (mining, charcoal production, settlement and land degradation and timber extraction), previous NGO involvement records, strategic

conservation contribution (KNP eastern boundary), livelihoods opportunities (tourism, agriculture and timber and non-timber forestry);

3. *Bilili Springs GMA* – poor natural resource base, strategic conservation contribution (protecting the south-eastern boundary of the KNP), livelihoods opportunities (community JV game ranching and related tourism, agricultural market linkages), high poverty base but also high level of school investments, significant NGO presence;

4. *Mulobezi GMA* - strategic conservation contribution (KAZA regional/transfrontier conservation area and corridor strategy), environmental threats (fragile populations of Zambezi Teak (*Baikiaea plurijuga*) and Rosewood (*Guibourtia coleosperma*), charcoal production, settlement and land degradation and timber extraction), safari hunting contribution and non-consumptive tourism opportunities, natural resource base (forestry and livestock), livelihoods opportunities (tourism, livestock and timber and non-timber forestry), but low literacy levels.

### **C3. Consultative Processes with MCC and MCA**

A detailed consultative process with MCC and MCA then followed and the four GMAs were adopted as priorities. However, given the high potential for implementing projects in Mufunta GMA and its improving wildlife status it was decided to include Mufunta as a fifth priority GMA:

Kasonso Busanga  
Mumbwa  
Bilili Springs  
Mulobezi  
Mufunta

Further examination of the workload required and the time frame available then resulted in a final GMA prioritization of three GMAs for detailed livelihood research, especially at the community and household level:

Kasonso Busanga  
Mumbwa  
Mulobezi

With limited livelihood research in:

Bilili Springs  
Mufunta



## SECTION II. APPROACH AND METHODOLOGY

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### A. Research Approach

Given the short time frame to conduct the Livelihoods Analysis the Chemonics team planned a one week Reconnaissance Trip into the GMAs and solicited the support of the ZAWA Extension officers under the Western Region Division to help set up meetings with the chiefs and other traditional leaders, CRB members, and relevant district officers prior to the reconnaissance. The Reconnaissance Trip took place during 19-26 June, 2011, while the fieldwork was divided into two field trips – 27 June to 2 July covering Bilili Springs and Mumbwa GMAs and 8-16 July covering Kasonso Busanga, Mufunta and Mulobezi GMAs (see Annex A: Field Research Schedule). In between these two trips, the Chemonics team and the Rural Net Research Assistants (RAs) met in Lusaka to discuss any necessary changes to the research program and methodology, key findings, and recommendations as ascertained during the field visits to Bilili Springs and Mumbwa GMAs.

The purpose of the Reconnaissance Trip was threefold:

1. For the Chemonics team to familiarize themselves with the GMAs, while at the same time making some specific field-based observations on the environment, wildlife, agricultural activities and other land use, cultural and social activities, along with road conditions, travel times, and other travel constraints.
2. To provide an opportunity for the team members, who would be returning to conduct research, to meet the key players (e.g. ZAWA Extension Officers, chiefs and other traditional authorities, CRB members, district government officials), and to provide these key players with information on MCC and MCA-Zambia and the proposed Greater Kafue National Park Economic Development Project and the objectives of the Livelihoods Analysis study.
3. To introduce the proposed fieldwork research program and to solicit support from the CRB members in setting up the required meetings and from community groups for conducting the Focus Group Discussions (FGDs) and other participatory research exercises.

The research approach utilized during the two weeks of fieldwork entailed having the Chemonics team members facilitate various FGDs and participatory research exercises, while the Rural Net RAs acted as translators and/or note-takers. Because we were working in five different GMAs with different languages used in the communities, the Chemonics team was provided with different Rural Net teams having the necessary language(s) for each GMA: Ila and Tonga for Bilili Springs and Mumbwa, Kaonde for Kasonso Busanga, and Nkoya, Lozi and Tonga for Mufunta and Mulobezi. Ideally we needed four RAs per trip with people fluent in each language to be able to conduct two FGDs/participatory exercises concurrently, having one RA translating for the Chemonics team member facilitating the exercise and one RA taking notes. While we trained a sufficient number of RAs during a three-day research training workshop (15-17 June) held in Lusaka, a few had to drop out before the fieldwork commenced for personal reasons.

Once in the field we supplemented the need for more translators by hiring translators from the local communities on a daily basis.

The Chemonics team comprised the following specialists:

- Dr. Jonathan Barnes, Team Leader/Economist
- Dr. Beth Terry, Gender/Social Scientist
- Dr. Graham McCullough, Wildlife Biologist and Ecologist
- Ms Bethel Nakaponda, Institutional Specialist
- Mr. Herbert Mwanza, Land Use Specialist
- Mr. Chanda Besa, Forester and Natural Resources Specialist
- Mr. John Aves, Education Specialist
- Mr. John Fynn, Agriculturalist

We would like to acknowledge and express our appreciation to the following people who contributed to the successful planning and implementation of fieldwork study: Mr. James Milanzi, ZAWA Western Region Regional Manager, the three ZAWA Extension Officers (Ms Lucy Tembo, Mr. Francis Sakala and Mr. Austin Mwakifwamba), the staff of MCA-Zambia (Ms Pamela Bwalya, Mr. Andrew Chilufya, Ms. Lizzie Tigere, and Mr. Julius Daka), all the Chiefs and other traditional leaders who allowed us to enter their chiefdoms and meet with their subjects, the various District Commissioners and other District Officers, the members of the CRBs, and the community members of the GMAs who very graciously gave their time, information and ideas in the various FGDs, participatory exercises and individual household interviews. Mr. Dennis Chiwele and Ms Angela Mwale of Rural Net are also gratefully thanked, for they provided us with excellent RAs and translators on very short notice, as are the RAs for their tireless and skillful work under harsh conditions and long days.

## **B. Qualitative Research Methodology**

### **B1. Participatory Research Methodology in the GMA Communities**

The research team adopted Participatory Rural Appraisal (PRA) methods to collect the necessary information for the Livelihoods Analysis. The specific research instruments were developed prior to the research training workshop and refined before going into the field. Qualitative research methodology was utilized throughout, even when collecting quantitative data. This allowed for open-ended questioning, informal discussions and gathering of opinions. Table 1 below describes the topics under discussion and the specific research instruments used. In addition a detailed ‘Program of Research’ can be found in Annex B, indicating dates, location, category of research participants, and specific research methods used per research exercise. Annex B also provides a list of KIs interviewed on other dates outside of the research exercises in the communities.

**Table 1. Research Topics and Methodology Used in Fieldwork in GMAs**

Key Topics of Research	Methodology Used
Institutional issues/links/problems (discussions with Community Resource Board (CRB) members, traditional authorities, Village Action Group (VAG) members, female and male community members), along with constraints women might have to actively participate in these decision-making bodies.	<ul style="list-style-type: none"> <li>• Focus Group Discussions (FGDs)</li> <li>• Venn Diagram</li> </ul>
Household income and expenditure, and constraints to access livelihood opportunities (discussions with women and men, crop and livestock farmers, natural resource users, entrepreneurs, youth, and women-headed households).	<ul style="list-style-type: none"> <li>• FGDs</li> <li>• Preference and Matrix Ranking for Livelihood Analysis,</li> <li>• Daily Task Analysis</li> <li>• Seasonal Calendars</li> <li>• Household Case Study Interviews</li> </ul>
Product amounts/volumes produced, labor time spent in production, and prices if sold, or in-kind value if not sold (discussions with female and male farmers, female and male craft producers, collectors-users and sellers of natural resources such as wild food, firewood, honey, charcoal, timber, bush/game meat, fish).	<ul style="list-style-type: none"> <li>• FGDs</li> <li>• Preference and Matrix Ranking for Livelihood Analysis</li> <li>• Daily Task Analysis</li> <li>• Seasonal Calendars</li> <li>• Household Case Study Interviews</li> </ul>
Status and access to resources (natural resources, land, and other material resources, human, financial) and ownership of resources used in livelihood activities.	<ul style="list-style-type: none"> <li>• Seasonal Calendars</li> <li>• Transect Walks (from 1.5km to 4km)</li> <li>• Resource Mapping</li> <li>• Resource Trend Analysis</li> <li>• Ownership, Control, Access of Resources</li> </ul>
Constraints and successes that women, youth and other vulnerable groups have to access income and employment opportunities.	<ul style="list-style-type: none"> <li>• Ownership, Control, Access of Resources</li> <li>• Daily Task Analysis</li> <li>• Story with a Gap: Access to Livelihood Opportunities</li> </ul>
Land use and land ownership practices and trends including details of various aspects of land uses linked to livelihood issues (discussions with traditional authorities, the elderly, youth, men and women).	<ul style="list-style-type: none"> <li>• FGDs</li> <li>• Transect Walks (from 1.5km to 4km)</li> <li>• Resource Mapping</li> <li>• Resource Trend Analysis</li> <li>• Ownership, Control, Access of Resources</li> </ul>
Human-wildlife conflict issues affecting women and men, crop and livestock farmers (discussions with female and male farmers, collectors of natural resources, CRB and VAG members, ZAWA staff).	<ul style="list-style-type: none"> <li>• Human Wildlife Conflict (HWC) Analysis</li> <li>• Key Informant Interviews (KIIs)</li> <li>• Household Case Study Interviews</li> </ul>
Cultural practices of women and men that could be linked to tourism ventures or income-generating opportunities in the tourism sector (crafts, dancing, music, ceremonies) (discussions with traditional authorities, the elderly, and craft producers).	<ul style="list-style-type: none"> <li>• FGDs</li> <li>• Observations and photo documentation of craft products found in various homesteads</li> </ul>
Constraints to staying in school until completion for girls and boys (discussions with parents, teaching staff, and individual households).	<ul style="list-style-type: none"> <li>• FGDs</li> <li>• KIIs</li> <li>• Household Case Study Interviews</li> </ul>

## B2. Additional Key Informant Interviews

During and outside of the fieldwork weeks in the GMAs, additional Key Informant Interviews (KIIs) were conducted in the GMAs, at district headquarters, with ZAWA staff and in Lusaka with other Key Informants (KIs). For example, in addition to FGDs on institutional aspects, KIIs were held at the national and district level with government and other key informants. KIIs were also conducted with three District Agriculture Coordinating Officer (DACOs) to obtain data on agricultural activities, but only one of these (from Mufunta) submitted the promised detailed

numerical information from their records.<sup>1</sup> In addition to the natural resource participatory exercises with the CRBs, VAGs, and different community groups, some KIIs were conducted with tourism operators, village scouts and ZAWA staff in each GMA to establish the extent and trends in the wildlife and other natural and heritage resources along with the viability or potential for tourism. It was possible to interview only a few safari hunting operators owing to the active hunting season and their inaccessibility in the hunting concessions. See Annex B for a list of the KIIs interviewed.

## **C. Analysis Methodology**

### **C1. Financial and Economic Analysis**

Environmental and resource economics typically uses a typology of values described in the Total Economic Value concept. The Total Economic Value of an ecosystem comprises Direct Use, Indirect Use, and Non-Use values. Direct use values may be generated as income through the consumptive use of resources (e.g. hunting, gathering) or non-consumptive use (e.g. photographic tourism, bird watching). Indirect use values are values generated by outputs from ecosystems that form inputs into production by other sectors of the economy, or that contribute to net economic outputs elsewhere in the economy by saving on costs. These outputs are derived from ecosystem functioning such as carbon sequestration, flow regulation, and provision of wildlife refuge. Non-use values include the value of having the option to use the resources in the future, as well as the value of knowing that they are conserved.

The present project is concerned almost exclusively with direct use values as reflected in livelihoods and other income generated in the GMAs. The other values are relevant to this study only where they can be captured as income, for example possibly through carbon markets or as donations aimed at species conservation.

The approach to be applied in this project in measuring livelihood value needs to be compatible with the MCC Guidelines for Economic and Beneficiary Analysis as revised in 2009 (MCC 2009). The MCC investment in the Greater Kafue National Park Economic Development Project (the project) will be dependent on the investment having a positive economic rate of return where economic benefits will be the direct value added to the national income or the economic income resulting from the project investment. The other major condition for MCC investment is that it should contribute to poverty reduction.

The livelihood values to be measured in the KNP GMAs are cash and in-kind, private household and community incomes. These are made up of net incomes from household and community enterprises, salaries and wages, rentals and royalties from joint venture enterprises, and grants, payments, and subsidies received from donors, government and NGOs. In as much as growth in livelihood values, resulting from the project, impact on the poor, these values have a direct effect on poverty. Livelihood values thus have importance in the MCC project beneficiary analysis.

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<sup>1</sup> Because of this, the agricultural data included in this report, other than for Mufunta GMA, is not specific to the GMAs since it was collected by Central Statistics Office (CSO) by district, and the districts are not the same areas as the GMAs. Population densities, land use patterns, infrastructure and administrative services are not distributed evenly between GMA and non-GMA areas of the districts, so apportioning data items to GMAs according to the proportion of districts that they cover is not a reliable means of estimating GMA based activities.

Livelihood values are part of the national income which is made up of all income accruing to all stakeholders or factors of production in the economy. Thus in addition to private household and community livelihood values, the national income embraces the private profits accruing to other investors or owners of capital, taxes and fees accruing to government (net of subsidies), salaries and wages accruing to other employees, rents accruing to landholders, and interest and loan repayments accruing to lenders.

In looking at livelihood generating activities in the GMAs, we made use of a system of private and economic enterprise or activity models, which have been developed and used widely in Botswana and Namibia. As they value livelihood and its components as well as value added to the national income and all its components, they have been found eminently suitable for the economic and beneficiary analyses conducted for the MCA-Namibia investment in tourism and conservation, currently underway.

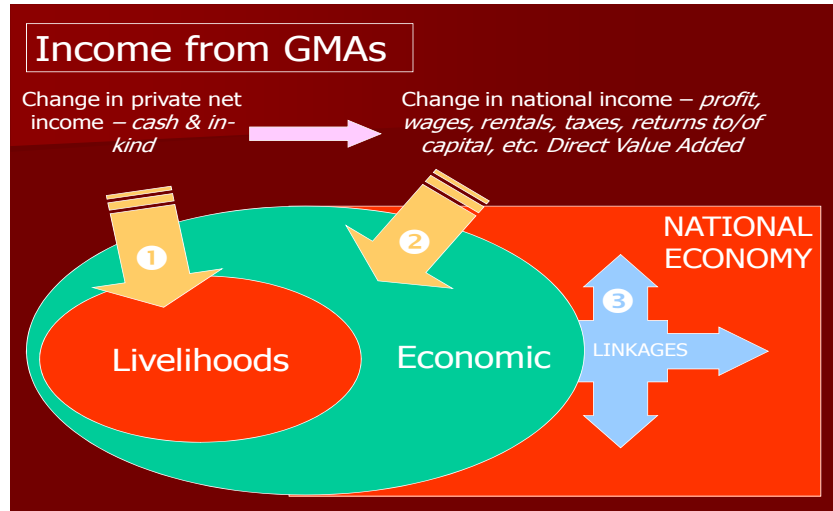
The private and economic enterprise/activity models are detailed budget/cost-benefit spreadsheet models which are empirically based but which are constructed to represent typical or average examples of particular enterprise or activities. They are constructed for small-scale household activities, such as crop production or fuel wood harvesting, for medium and large-scale commercial enterprises such as tourism lodges, saw-timber production, or for more complex investments in CBNRM such as CRBs in GMAs. In measuring private returns as well as economic ones in a cost-benefit analysis framework, they can be directly applicable to the larger project cost-benefit and beneficiary analysis needed for the MCC project appraisals.

The livelihood and private values are based on financial prices, while the national income values are measured in economic prices. Empirical financial price data are converted, where needed through a process of shadow pricing, to reflect incremental change in national income at the opportunity cost to society.

The economic models compute the direct contribution that activities or enterprises make to the national income. In some cases these activities have linkages which need to be taken into account. Thus, for example, tourists drawn to accommodation in the GMAs also spend elsewhere in the economy on travel and shopping (direct lateral linkages). Similarly the accommodation establishments hosting them are induced to spend in other sectors for supplies such as fuel and food (indirect backward linkages). The indirect value added through these multiplier effects can be estimated using input-output models. In line with MCC policy, only the direct values and direct lateral linkages will be included. Figure 1 below depicts the values discussed below conceptually.

**Figure 1: Depiction of GMA livelihood and economic values**

1=Direct contributions to local livelihoods, 2=Direct contributions to the national income, and 3=Further induced indirect contributions to the broader economy via backward linkages



The present study provided the opportunity to collect and assemble data from the literature and the field that were used to develop enterprise models. In some cases, empirical evidence from similar situations in neighboring countries was used to fill gaps. In other key data were collected in the field as part of the Livelihood Analysis of Phase 3, especially from the participatory Livelihood Ranking exercises and the Household Case Studies.

Furthermore, information was obtained from past detailed quantitative household surveys in GMAs and surrounds, such as through the Central Statistics Office/World Bank 'Impact of Game Management Areas on Household Welfare' (IGMAW) survey of 2006, to supplement the data collected during the fieldwork. The GMA-level, community-level, and household-level exercises in the field were used, as mentioned above, to acquire parameters for enterprise models (e.g. volumes, prices, costs, market data, employment). Such data collection was also used to acquire qualitative information on social characteristics. The information obtained during these exercises was solicited and disaggregated according to gender, age, ethnicity, interest group, livelihood activities, and economic status, as appropriate and relevant to the data collection needs.

Data collected in the field work, as well as that from the literature and key informants elsewhere, were used to develop financial and economic spreadsheet models for selected enterprises in the GMAs. These models represent the more important livelihood activities, deemed to have promise for development, scaling up and contributing to project objectives. They are budget and cost-benefit models showing transactions from start up over 10 years. A number of useful measures of worth are estimated. Among these, the net private income (profit) or the net contribution made annually in kind and cash to livelihoods at stability is a key measure. Also key is the ten-year private rate of return and net present value of the investment.

Among economic measures in the model, the incremental net contribution made by the activity to the national income is an important measure. The economic rate of return is also important as a measure of viability.

To arrive at economic measures shadow pricing was applied to the private or financial values to arrive at the opportunity cost to the nation. Here adjustments were made to eliminate fiscal and policy distortions in market prices. Thus, wages were adjusted to take account of unemployment and tradable good are subjected to a foreign exchange premium to take account of excess demand for foreign exchange. Unskilled wages were adjusted. Transfers, which do not change national income, such as taxes and subsidies, were eliminated. The factor applied to unskilled labor was 0.3 and that for semi-skilled labor 0.6. All tradable goods prices were given a foreign exchange premium of 8 percent. The base discount rate used was 10% for both private and economic cost-benefit models.

The raw data-base from a 2006 household survey of national GMAs and surrounds, carried out by the CSO in collaboration with the World Bank (Simasiku et al 2008), was used to extract data useful for this livelihoods analysis. SPSS was used to analyze these data which were available from households surveyed in the northern and central KNP GMAs. In the south the only data available were from just outside the GMAs. Analyses were conducted to enable comparison between the main groups of KNP GMAs, the northern central and southern ones.

## **C2. Other Analysis Methodology**

Besides the key analysis methodology for the financial and economic analysis, as described above, the findings and analyses were supported with intensive review of literature and other available data. SPSS was used to analyze pertinent raw data from the 2006 national GMA quantitative household survey carried out by the World Bank and Central Statistical Office (CSO) (Simasiku et al. 2008). Other basic methodology was also utilized to compile, sort, and analyze the information obtained during the fieldwork. This included sorting and ranking data, transcribing community resource maps and other exercises documented on flipchart paper, the preparation of maps utilizing GIS and shape files, and a detailed analysis of wildlife and CBNRM-related policy, legislation and practice in Zambia along with an analysis of CBNRM programs implemented in neighboring countries.





## SECTION III. CURRENT LIVELIHOODS STRATEGIES

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In this chapter, current livelihood activities and strategies recorded for the GKNP GMAs are discussed.

### A. Agriculture

#### A1. Existing Agricultural Activities in the GMAs

Agricultural land use in the GMAs around KNP is broadly characterized by the following:

- Agricultural land use in communities in the northern GMAs is mostly characterized by hunting, honey collection, fishing and traditional (low input level) land use activities, such as practicing *chitemene*<sup>2</sup> to grow maize, millet, sorghum (cereals), cassava and sweet potatoes (root tubers), beans/cowpeas and groundnuts (legumes). Mangos and bananas are also commonly planted around homesteads in the Kasonso Busanga GMA. Cattle rearing is not common in these communities, largely due to tsetse fly densities, except in the Lalafuta area of the Kasonso Busanga GMA.
- Agricultural land use in the western GMAs is characterized by semi-permanent hoe and ox plow cultivation. Crops include cash crops such as Virginia tobacco, sweet potatoes and maize, and cassava, groundnuts, pearl millet and sorghum using the Kaoma land use system. Planting mangoes and bananas around homesteads and keeping cattle and other small livestock is also common practice in this area, resulting in potential encroachment to KNP as communities seek to expand farming areas and access forest products.
- Communities in the eastern (central) GMAs mostly practice semi-commercial agriculture. Crops principally include maize, cotton, Virginia tobacco and groundnuts. There is great demand to settle on this land because of its high agricultural potential.
- Communities in the southern GMAs practice semi-commercial ox or tractor cultivation. Primary crops include maize, groundnuts, sweet potatoes, soya beans, and green leafy vegetables. Livestock are also commonly maintained in these areas, including sheep, cattle, goats, chicken, pigs, rabbits, doves and ducks.
- Communities in the southwestern GMAs practice mainly subsistence agriculture and hunting. The communities also harbor migratory workers, a significant number working in the tourism industry in the Mulobezi GMA.

Agricultural activities in each GMA are discussed in brief here. Annex C provides a detailed list of agricultural activities in each GMA. In general, agricultural production in the GMAs is constrained by soil type, lack of infrastructure, distance from urban markets and limited agricultural skills within the communities. Cash crops are primarily cotton and tobacco (and formally paprika), which have a comparatively high value/weight ratio, while maize production that is surplus to household consumption is either sold locally or purchased by the Food Reserve Agency (FRA). FRA purchases maize at pan-territorial and pan-seasonal prices, which in remote areas such as much of the GMAs eliminates private sector competition. Subsistence agriculture

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<sup>2</sup> *Chitemene* is a type of “slash and burn” agriculture. It involves cutting trees (typically by coppicing or pollarding), stacking the cut trees and then burning in order to create a thick layer of ash.

focuses primarily on maize, sorghum, cassava, groundnuts, soya, beans, cowpeas, millet, sunflower, sweet potato and vegetables (mostly rape, cabbage, and tomatoes). Crops are mainly grown in the rainy season between November and April. However, in wetland areas the receding water table can allow for crop production in the dry season, between July and October. Gardening is done in small gardens situated close to water to allow hand watering of the crops. It is important to highlight that in addition to the agricultural activities noted some gathering of forest products takes place. These products include seasonal forest foods, and harvesting raw materials (such as wood) and wildlife, legally and illegally.

Detailed agricultural information specific for each GMAs (as opposed to that for the broader districts they may be a part of), is available only for Mufunta where the World Wildlife Fund (WWF) manages projects that include the collection of data. Mumbwa District is an active agricultural area with reasonable access to Lusaka markets and input suppliers. The bulk of production in Mumbwa District is not in the GMA, but in areas in the north and east of the district. Small scale semi-commercial crop production takes place on the eastern edge of the Mumbwa GMA and increasingly in area near the Nalusanga Gate. The settlement in the Nalusanga Gate area is encroaching west toward KNP and south towards Itezhi Tezhi. The Namwala GMA has experienced fairly significant level of settlement for crop production, notably in the Itezhi Tezhi area. The Nkala GMA is uninhabited and crop production in the Chiefdom that Nkala is a part of takes place outside the GMA.

The Bilili Springs (or “Bilili”) GMA has been the focus of resettlement of Tonga people by the Ministry of Agriculture which established a formal resettlement scheme in the GMA. Much of the Bilili GMA and the chiefdoms outside contain small scale semi-commercial agricultural settlements. In the past the Sichifulo GMA has experienced encroachment of livestock farmers and some limited cropping as people have moved into the GMA in pursuit of the water resources of that area. This movement followed the collapse of the wells, pumps, and small dams in the areas to the south and west of Sichifulo due to lack of maintenance. Farmers preferred the areas outside the GMA for their soils and grazing but were not able to remain there without access to surface water, which was available in the GMA. However, more recently during the development of the GMP for Sichifulo ZAWA has been successful in removing settlements from the area. The Mulobezi GMA has also suffered from encroachment. Agricultural conditions in the Mulobezi GMA are characterized by poor soils and relatively low rainfall making crop production risky and difficult. Land use in Mulobezi is largely focused on natural forest products. This in conjunction with an observed tendency for uncontrolled late burning is threatening sustainability of woodlands and regeneration of valuable timbers.

The northern region of Mufunta has been widely developed for small scale agricultural production, as it maintain rich soils and is relatively accessible by road. The extensive southern region of the GMA has little settlement, but small scale agriculture development has begun to move south.

Kasonso Busanga has patches of settlement and associated agriculture (crop-based) in the northeastern and eastern regions and in the southwest near the Mongu Road. Maize remains the main crop in these settlements. Most crop production, especially that in the northeast, is hand

tilled due to the lack of cattle. Lunga Luswishi has a concentration of settlements in the eastern region of the GMA, but much of the GMA remains uninhabited.

## A2. Data on Agricultural Production

Data from a national GMA household survey undertaken by the World Bank in conjunction with CSO in 2006 have been to determine the crop production in the GMAs surrounding KNP. Data were available for the northern GMAs (Kasonso Busanga and Lunga Luswishi) and the central GMAs (Mumbwa and Mufunta). However, data specific to GMAs south of the park (Bilili, Sichifulo and Mulobezi) were not available. Rather the data available for the area south of the park included areas outside of the GMAs (or “open” areas). For the purposes of this study — to gain a general understanding of the situation inside the GMAs — the data were used to describe the southern GMAs, but should be viewed with this caveat. Approximately 310 respondents participated in the World Bank/CSO study, and were spread evenly over the three zones. The key findings from the World Bank/CSO study in the context of agriculture production are illustrated in the exhibits below. Exhibit 1 illustrates that between 83 percent and 97 percent of households in or near the GMAs produce crops. Exhibit 2 shows present the general production of specific crops. Maize is clearly the most common crop, with use of hybrid maize more established in the central and southern GMAs. Cassava, sorghum, and sweet potatoes are also common, along with ground nuts and cotton. The latter is more prevalent in the central GMAs, which are located close to (or more accessible to) the Lusaka market.

### Exhibit 1: Household reporting on crop production (2004/5 season)

Household reported producing crops	Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Yes	91	83	97	91
No	9	17	3	9
Total	100	100	100	100

Source: Derived from World Bank 2006 household survey data-base (Simasiku et al. 2008)

### Exhibit 2: Household reporting on crop production by crop in KNP GMAs (2004/5 season)

Reported Crops Produced		Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Local Maize	Yes	83	54	38	65
	No	17	46	62	35
Total		100	100	100	100
Hybrid Maize	Yes	13	39	58	32
	No	87	61	42	68
Total		100	100	100	100
Cassava (flour)	Yes	23	12	0	13
	No	77	88	100	87
Total		100	100	100	100
Millet (threshed)	Yes	0	0	0	2
	No	100	100	100	98
Total		100	100	100	100

Reported Crops Produced		Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Sorghum	Yes	60	3	0	24
	No	40	97	100	76
Total		100	100	100	100
Mixed beans	Yes	2	2	6	3
	No	98	98	94	97
Total		100	100	100	100
Soya beans	Yes	2	7	0	2
	No	98	93	100	98
Total		100	100	100	100
Sweet Potatoes	Yes	32	10	38	24
	No	68	90	62	76
Total		100	100	100	100
Potatoes	Yes	1	0	1	1
	No	99	100	99	99
Total		100	100	100	100
Groundnuts (shelled)	Yes	18	15	62	24
	No	82	85	38	76
Total		100	100	100	100
Cotton	Yes	2	56	28	22
	No	98	44	72	78
Total		100	100	100	100
Tobacco	Yes	3	2	0	8
	No	97	98	100	92
Total		100	100	100	100
Sunflower	Yes	0	2	2	1
	No	100	98	98	99
Total		100	100	100	100

**Source:** Derived from World Bank 2006 household survey data-base (Simasiku et al. 2008)

Exhibit 3 depicts livestock ownership in the GMAs. Although many households owned chickens, other livestock ownership was less common. Cattle ownership is more significant in the southern GMAs.

**Exhibit 3: Household reporting on livestock ownership in KNP GMAs (2005)**

Reported livestock maintained		Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Cattle	Yes	11	17	43	19
	No	89	83	57	81
Total		100	100	100	100
Goats	Yes	21	7	27	16
	No	79	93	73	84
Total		100	100	100	100
Pigs	Yes	12	0	8	5
	No	88	100	92	95
Total		100	100	100	100
Chickens	Yes	67	63	74	65
	No	33	37	26	35
Total		100	100	100	100

**Source:** Derived from World Bank 2006 household survey data-base (Simasiku et al. 2008)

Generally, the results of the World Bank/CSO study confirm the findings of the qualitative field work conducted in this study and presented later in this report. The aim of World Bank/CSO study was to compare the welfare of residents of GMAs with that of residents in immediately surrounding areas. The study found that GMA residents are poorer than those outside. This may be expected considering the reliance on crops for livelihoods is high in the absence of meaningful income from wildlife and forests, and that areas outside GMAs are better placed for access to agricultural markets and services. As noted previously, aggregate data on production were only available for the Mufunta GMA. The data presented here further illustrate the general type and level of crop production that currently exists in the GMAs. Data on agricultural production in Mufunta are presented in Exhibits 4 to 7 below.

**Exhibit 4: Aggregate crop production figures for the Mufunta GMA in the 2010/11 season**

Crop	No. of Farmers	Hectares Cultivated	Expected Yield	Average Yield /Ha x 50kg Bags
Maize	2,200	1,480	59,200	40
Sorghum	226	75	375	5
Millet	20	10	66	6
Cassava	560	205	55,700	272
Groundnuts	1,200	225	5,625	25
Sweet potatoes	1,222	300	60,000	200
Tobacco	12,000	1,000	20,000	20

**Source:** Unpublished data provided by DACO, Kaoma

**Exhibit 5: Aggregate crop production and consumption in Mufunta**

Crop	Total Harvest 50kg Bags	Consumed 50 kg Bags	Marketed 50 kg Bags	Market Season	Market Location
Maize	59,200	14,800	44,400	June/Nov	FRA/Local
Sorghum	375	281.3	93.70	June/Sept	Local
Millet	66	50	16	May/Sept	Local
Cassava	55,700	28,000	27,700	March/Nov	Kaoma/Mongu
Groundnuts Beans	5,625	1,900	3,725	May/Oct	Kaoma
Sweet potatoes	60,000	20,000	40,000	April/Aug	Kaoma
Tobacco	20,000	0	20,000	April/Aug	Zamleaf
Vegetables	Assorted	33%	66%	March/Nov	Local/Kaoma

Source: Unpublished data provided by DACO, Kaoma

**Exhibit 6: Crop producer prices achieved in local markets in 2010 (ZMK'000)**

Maize	Soya	Groundnuts	Cotton	Cabbage
65 per 50kg bag	130 per 50kg bag	35 per 50 kg bag	3.2 per kg	1.5 per head

Source: Unpublished data provided by DACO, Kaoma

Note: US\$1.0 = ZK 5,000

**Exhibit 7: Livestock producer prices achieved in local markets in 2010 (ZMK'000)**

Cattle	Goats	Chickens
K 1,000 per head	50 to 120 per head	15 to 25 per bird

Source: Unpublished data provided by DACO, Kaoma

Note: US\$1.0 = ZK 5,000

**A3. Support Organizations in Finance, Marketing and Input Supply**

Numerous farmer organizations, input suppliers, buyers, and NGOs provide support to agriculture development in the GMAs surrounding KNP. This includes the WWF, CARE and World Vision among others. The Ministry of Agriculture and Cooperatives (MACO) also provides agricultural extension services in these areas. The Mumbwa, Mufunta, Bilili and Kasonso Busanga GMAs have a government extension presence, of varying permanence. NGOs often provide extension services that focus on conservation agriculture, but their assistance (in terms of level and continuity) has been sporadic. Community Markets for Conservation (COMACO) has also explored assisting communities in the GMAs in development of market chains for products.

Cotton and tobacco are grown through outgrower agreements with commercial companies. The cotton companies working through these agreements in the GMAs include Dunavant, Cargill, Alliance and Continental; the tobacco companies include Zambia Leaf and Alliance Tobacco. Dunavant is the most active company in the GMAs and has begun to purchase crops other than cotton, providing further services and income opportunities to farmers in cotton growing areas. In the livestock sector, ZAMBEEF has provided extension services (or technical assistance) on beef production in the GMAs. ZAMBEEF maintains two slaughterhouses in the vicinity of Mumbwa town. They also purchase animals in the Namwala, Sichifulo and Mulobezi.

Institutional support to the CRBs/VAGs includes WWF in Mufunta, CCF in Bilili and Mumbwa. Input supply is mainly from the government in the form of a fertilizer input support programme.

Most GMAs have financiers and the buyers in cotton and tobacco help with inputs into the growing, packaging, storage, and processing of the crop. Input from the government in the production of maize comes from the Food Reserve Agency (FRA), which buys excess maize from the farmers and subsidized prices.

#### **A4. Livelihood and Economic Contribution of Agriculture**

Financial and economic models were developed for typical examples of small scale crop enterprises observed in the GMAs, based on empirical data from the field work and other recent studies. Crops were selected due to either their being of particular importance to households, or having particular potential for scaling up in the context of the GKNP project. The models were made for maize with ox drawn tillage in the central and south eastern GMAs, maize with hand tillage in the northern GMAs and cotton in the central GMAs. The models are described in more detail below and in Annex D. The models generally show that private returns are moderately low. Private rates of return over ten years range between 13 and 15 percent. Economic rates of return are high ranging between 30 and 43 percent, suggesting that they are economically efficient, and that there is potential for financial support.

Given that agriculture is currently central to food security in the GMAs, and given that nearly all residents engage in crop production as their primary livelihood activity, these enterprises have importance in the GKNP context. Despite the relatively low private returns, the aggregate contribution to livelihoods is likely to be very high. Agriculture is currently the most important livelihood generator in the GMAs and associated surrounding chiefdom areas.

#### **A5. Gender Analysis Pertaining to Agriculture**

This section provides the key findings on gender in agriculture in the GMAs particularly as these relate to constraints and opportunities for women to participate in, and benefit from, agriculture-related livelihoods activities. The main conclusion from the research on agriculture was that both men and women participate actively and benefit from crop farming.

Household interviews and various FGDs showed that both men and women participate in agricultural production activities with little explicit division of labor. Invariably respondents,

##### **Women's Role in Crop Production**

Vegetable gardening was the number one livelihood activity for women in Lukanga Village Mumbwa GMA. Typically rape, tomatoes and onions were grown for cash. The sale of groundnuts was the third most productive activity and cotton the fourth. A non-agricultural activity (fatcake/fritter sales) was ranked second in importance. The women noted they would like to receive more inputs (e.g. pumps for irrigation) for gardening to increase yields.

*'Story with a Gap: Access to Livelihood Opportunities' exercise in Lukanga Village, Mumbwa GMA*

when asked if men or women undertook the tillage, planting, weeding, harvesting, transport and marketing activities, said, "We both do it together." Probing on the roles of men and women in crop production did show up some differences in emphasis. Here, women did most of the garden production and watering (see the text box on the left), most of the weeding, and most of the product processing such as threshing and hand milling. In terms of tillage, both men and women undertook hand tillage with hoes, while men did most of the plowing where ox drawn tillage was involved. A few exceptions were made to this statement, for example in

Bilili Springs among the Tonga, women reportedly used to plough their fields with oxen (before they all died of Corridor Disease).

In a few cases weeding is left entirely to the women of the household (sometimes done as a group activity with neighbors, as mentioned by FGD participants in Kasonso Busanga and Mulobezi GMAs). In cases where the man is engaged in employment, or a specialist activity such as carpentry, the harvesting and marketing may also be done by the women alone in this way. In Mumbwa, Nkoya participants in a Daily Task Analysis exercise noted that the husband and wife work together on the jointly owned field in the morning hours, typically cultivating cash crops such as cotton, maize, soy beans and tomatoes. In the afternoon, the man returns to the same fields, while the women go to their own fields where they tend to the growing of ground nuts, cow peas and sweet potatoes. These crops are usually used for home consumption, but any surplus is sold and women control their own earnings. Similarly in the cases of widowed or divorced women, most of the work is undertaken by the women themselves. Several elderly female respondents noted that they had to hire men to plow their fields because they were too old to do the heavy work anymore (Daily Task Analysis, Siamwanja Village, Mulobezi GMA).

The reasons for women's active involvement in crop farming were explained in several of the group discussions. In a FGD conducted in Mumbwa GMA with male and female Mulendema CRB members, the participants emphasized that "women are very involved in crop production because many are widows and/or are supporting many orphans and vulnerable children (OVC) and therefore need to produce food for the family and cash income to pay school fees." Other participants in the same discussion said, "60 percent of agricultural coop members are women because they want to improve their farming techniques and crop marketing potential." Similarly, in Kasempa CRB, Kasonso Busanga GMA, about 60 percent of the female farmers belong to one of the eight agricultural coops and/or one of the seven women's clubs found in their area. In the Kasempa area the agricultural coops tend to focus on maize production and marketing. Most of these cooperatives also have a secondary income-generating focus, such as vegetable gardening, poultry project, or support to trading enterprises. In one cooperative, women buy dried fish from Lufupa River fishermen at K5, 000 for three barbel, and then trade this fish for two 5 kg buckets of shelled maize, which they then sell to FRA getting K65, 000 for 50kg of maize, leading to a profit of K15, 000. In Bilili Spring (Tonga culture), one woman, who attended the introduction meeting at the home of Chief Siachitema was pointed out as being an advocate for women in agriculture. She is actively trying to link tobacco and maize farmers to government bodies that support agriculture inputs and marketing. In another participatory exercise in the same Siachitema community, women in a Daily Task Analysis noted that even though women in the community have very busy daily schedules, about 40 percent of the women in the community are active in farmers coops or a club run by the faith-based organization (FBO) World Hope International, which promotes improved maize cultivation, vegetable gardening, and piggeries. Despite their full schedule, two of the women in the group noted that they attend club meetings twice a week, saying, "We are getting skills and farm inputs, and gaining income from these projects." Similar busy schedules are found in the Kasempa area of Kasonso Busanga but the women still make time for their farming cooperative activities. Here they say they attend coop meetings twice in a month mostly meeting in the afternoon after they have returned from the fields. When the women were queried on how they managed to fit this in, they replied, "We just organize our time well with 'time-keeping'. We do more chores in the morning such as fetching



several buckets of water at the river instead of just one.” In contrast the men in the community tend to go to cooperative meetings in the morning hours, but like the women, consciously make time to attend these important meetings. In comparison, women in the Daily Task Analysis conducted in Siamwanja Village, Mulobezi GMA noted that there were no farming cooperatives or clubs in their area.

Care of livestock including tending pigs, goats and chickens was also reported to be carried out by both men and women. However in more cases, women were involved in chicken-raising enterprises to produce cash income (in Bilili Springs and Mulobezi GMAs for example). In one group discussion in Mulobezi, participants said, “While both men and women are involved in poultry production, a woman is much better at raising chickens for sale. She will carefully raise the chickens and use the money for household expenses or school fees, while the man will go out drinking beer, come home, and want to eat his chicken!” In one household case study with a married couple, very surprisingly, the wife was out herding cattle.

Although crop marketing can be done by either men or women or both, in certain cultures the cash receipts of sale of crops fall under the control of the man. One male KI mentioned that “It is said in traditional society that once a man has paid his lobola (bride price) the wife must do as she is told by the husband. Customary laws are not readily dropped in traditional society until education reaches a level where a new paradigm of lifestyle can be entrenched.” During the fieldwork this statement was found to be true to a certain extent in Bilili Springs and Kasonso Busanga GMAs, but not in other GMAs, so it appears that attitudes are changing. In the cases where there is gender-bias towards men in agriculture, this is typical due to culture-based inequalities around land and control of income. See the text box on gender bias in access to land on the next page. Among the Tonga in Bilili Springs, participants in an ‘Ownership, Control, and Access’ (OCA) exercise noted that in more cases than not the men keep the money earned from maize production from the man’s land, often buying alcohol and women. In Mumbwa in the Nkoya tradition, the men are said to control the money earned from selling surplus maize but that they typically use this to cover school-related expenses. However for the hectares given by the chief to the women (see Tonga example in text box on next page), the women are in full control of any income earned from their own fields. Women in the Tonga tradition in Bilili Springs and in the Nkoya culture in Mumbwa reported that they need to get permission from the man as head of household, to use the money. However in other GMAs the opposite was true. For example, in one OCA participatory exercise conducted in Lukena Village in Mulobezi GMA, male and female participants mentioned that typically in the Nkoya culture both the husband and wife are involved in the decisions on how to use the money, but the wife is in control of the money, saying that, “The cash is handed over to the wife, because she is much better at

#### **Gender-Bias in Access to Land**

Among the Tonga in Bilili Springs, land is for the community but allocated by the chief to both men and women (whether married or not), but men typically get more land. Even in the current days “where men now spend more time relaxing and the women are working the man’s land, the men still get more land from the chief because he is the head of the household.”

*OCA Exercise, Tonga culture, Bilili Springs*

In the Kaonde culture in Kasonso Busanga, a married woman is not allowed to go to the chief or headman to request land: “he will turn his back on her.” “The husband controls the land. The wife is just the ‘helper’. This is one way for the wife to show respect to the husband – to allow the husband to control the land.”

*OCA Exercise, Kaonde culture, Kasonso Busanga*

sticking to the household budgetary decisions. If it is agreed that this money will be spent on a bottle of cooking oil then that is how the woman will use the money, but a man will tend to divert from the budget and spend the money on a whim, typically on beer or other women.”

## B. Tourism

### B1. Tourism Activities in the GKNP

There are 30 operating, non-consumptive tourism operations in the GKNP area offering 610 tourist beds offering 164,310 total potential bed nights, in a combination of lodges, camps and campsites (see Exhibit 8). It is important to note that these numbers have increased slightly (608 beds to 610 beds) over that presented in the MCC-funded GKNP tourism market study. This is the result of incorporating additional information gathered during implementation of fieldwork for this livelihoods analysis. Non-consumptive tourism in 2009 contributed US\$359,255 to ZAWA’s regulatory revenues through park entry, fishing and similar fees, bed night levies and tourism concession fees.<sup>3</sup> The tourism operations are highly clustered in four principal nodes of the park area:

1. The northeast (7 lodges and camps)
2. The central Kafue Hook area (5 lodges)
3. The Itezhi Tezhi area (4 lodges)
4. The Busanga Plain (5 bush camps)

Other tourism entities are scattered through the northern area of KNP (5 lodges and camps), the Nanzhila Plain in the south (2 lodges) and along the Kafue River frontage between the Hook Bridge and Itezhi Tezhi (2 lodges). Sixteen of the 30 facilities are accessible year-round, but accessibility to game viewing areas is more seasonal, usually limited to 6 to 8 months of the dry season. Nineteen of the lodges are in KNP, 8 are in the surrounding GMAs:

Lunga Luswishi GMA (2 lodges), Mumbwa GMA (2 lodges), Namwala GMA (1 lodge) and Nkala GMA (3 lodges). There are three lodges in a private concession located between the northeastern region of KNP and the southern margin of the Lunga Luswishi GMA.

**Exhibit 8: Locations types and sizes of non-consumptive tourism lodges in the GKNP Area**

Location	Name	Type	Operating Season (months)	Size (Beds)*
<b>Busanga Plain</b>				
KNP - Busanga Plain	Busanga	Bush camp	5.5	8
	Kapinga-Ntemwa	Bush camp	5.5	8
	Musanza-Ntemwa	Bush camp	5.5	8
	Plains	Bush camp	5.5	8
	Shumba	Bush camp	5.5	14
<b>Sub-total</b>	<b>5</b>			<b>46</b>
<b>North East</b>				
KNP-North-East	Hippo	Lodge	12	16

<sup>3</sup> Tourism operators outside the KNP only contribute park entry fees where their clients and vehicles enter the park.

Location	Name	Type	Operating Season (months)	Size (Beds)*
	Lubungu/McBride's	Bush camp	9	12
Lunga Luswishi GMA	Kafue River	Lodge	8	8
	Leopard	Lodge	8	18
Mushingashi concession	Delai	Lodge/campsite	12	12+28
	Kalonga-Waloba	Campsite	12	28
	Kashikota	Lodge	12	12
<b>Sub-total</b>	<b>7</b>			<b>106+28</b>
<b>Center</b>				
KNP - Center	Chunga Safari	Lodge	12	10
	Makombo	Lodge	12	14
	Mayukweukwe	Lodge/campsite	12	8+20
	Zamlodge	Lodge/campsite	12	12+20
Mumbwa GMA	Mukambi	Lodge/campsite	12	36+20
<b>Sub-total</b>	<b>5</b>			<b>80+60</b>
<b>Itezhi Tezhi</b>				
KNP – Itezhi	Kankomoyo	Lodge	8	6
Nkala GMA	Chabila	Society camp	12	12
	Musungwa	Lodge	12	10
	New Kalala	Lodge/campsite	12	30+20
<b>Sub-total</b>	<b>4</b>			<b>58+20</b>
<b>Other</b>				
KNP North	Lufupa River	Lodge	12	18
	Lufupa Tented	Lodge	12	18
	Kafwala	Society camp	6	14
	Kafwala Rapids	Lodge	6	16
	Treetops	Educational camp	6	36
<b>Sub-total</b>	<b>5</b>			<b>102</b>
Namwala GMA	Kaingu	Lodge/campsite	12	12+20
Mumbwa GMA	Puku Pan	Lodge/campsite	12	18+20
<b>Sub-total</b>	<b>2</b>			<b>30+40</b>
KNP-South	Hornbill	Lodge	6	8
	Nanzhila Plains	Lodge/campsite	9	12+20
<b>Sub-total</b>	<b>2</b>			<b>20+20</b>
<b>Total KNP</b>	<b>19</b>			<b>246+60</b>
<b>Total GMAs</b>	<b>8</b>			<b>144+80</b>
<b>Total other</b>	<b>3</b>			<b>52+28</b>
<b>Grand Total</b>	<b>30</b>			<b>442+168</b>

\*Some facilities maintain both lodges and campsites. The number following the plus (+) symbol indicates the number of beds available on the campsite.

## B2. Non-consumptive and Hunting Tourism in the GMAs

Exhibit 9 presents all consumptive and non-consumptive tourism operations inside the GMAs. It shows those non-consumptive GMA lodges listed in Exhibit 8, as well as all the safari and recreational hunting concessions. There are eight non-consumptive lodges in the KNP GMAs, providing 224 beds (36.7 percent of the GKNP area tourism accommodation) and potentially 77,520 bed nights (47.2 percent of all bed nights). There are no non-consumptive tourism accommodations in the Kasonso Busanga, Bilili Springs, Sichifulo, Mulobezi or Mufunta GMAs.

Currently eight of the nine GMAs surrounding KNP provide hunting concessions with varying levels of revenue generation.<sup>4</sup> The Bilili GMA is now too heavily settled to permit effective safari hunting in all but a narrow part of the western margin. A safari hunting concession was recently established in the Mufunta GMA in 2011.

**Exhibit 9: Concessions, operators and camps/lodges in the GMAs**

<b>GMA</b>	<b>Camp/Lodge</b>	<b>Concession/Operator</b>
<b>Kasonso Busanga GMA</b>	<i>Kasonso Busanga hunting block</i>	
	Hunters and Guides	Hunting camp
	<i>Lunga Busanga hunting block</i>	
	Royal Zambezi Safaris	Lunga Cabins hunting camp
<b>Lunga Luswishi GMA</b>	<i>Kasempa Lunga Luswishi hunting block</i>	
	Prohunt Zambia	Mutapanda hunting camp Kaungashi hunting fly camp
	Kafue Adventure Tourism	Leopard Lodge (photographic)
	Mbizi Safaris	Kafue River Camp (photographic)
	<i>Upper Lunga Luswishi hunting block</i> None exist	
	<i>Lower Lunga Luswishi hunting block</i> None exist	
<b>Mumbwa GMA</b>	<i>Mumbwa East hunting block</i>	
	Swanapoel and Scandrol	Hunting camp
	<i>Mumbwa West hunting block</i>	
	Swanapoel and Scandrol	Hunting camp
<b>GMA</b>	<b>Camp/Lodge</b>	<b>Concession/Operator</b>
	Real Africa Safaris	Mukambi Safari Lodge (photographic)
	Amazing Zambia	Puku Pan Lodge (photographic)
<b>Namwala GMA</b>	Nsonga Safaris	Hunting camp
	Ukuduku Safaris	Kaingu Lodge (photographic)

<sup>4</sup> It should be noted that some of the larger and better stocked GMAs have been subdivided into two hunting blocks; for example Kasonso Busanga and Lunga-Busanga, Mulobezi and Mulobezi-Bilili, Mumbwa East and West, and Kasempa Lunga Luswishi (earmarked as a game reserve) and upper and lower Lunga Luswishi.

GMA	Camp/Lodge	Concession/Operator
<b>Nkala GMA</b>	Nsonga Safaris	Hunting camp
	Acacia Safaris	New Kalala Safari Lodge (photographic)
	Musungwa Safaris Wildlife and Environmental	Musungwa Lodge (photographic)
	Conservation Society of Zambia	Chabila Camp (Society enterprise)
<b>Billili Springs GMA</b>	None exist	
<b>Sichifulo GMA</b>	Alpha Recreation/South West Investment Safari Outfitters	Hunting camp
<b>Mulobezi GMA</b>	<i>Mulobezi Billili hunting block</i>	
	Mulobezi Safaris	Simamba hunting camp
	<i>Mulobezi hunting block</i>	
	Steel Fabrications	Liplanga hunting camp
<b>Mufunta GMA</b>	Mvu Safaris	Shimayomeka Safari Camp

Recreational hunting is permitted in Zambia between May and December. The hunting concessions concentrate their safaris (hunting) services between May and September. Resident and non-resident hunting is then permitted in the GMAs between September and December in order to reduce excessive removal of trophy animals at what are in effect highly subsidized resident and non-resident hunting license fee rates. Hunting license revenues and numbers of animals bagged in the GMAs between 2005 and 2010 are shown in Exhibits 10 and 11 below.

Of the GMAs presented in Exhibit 10, Mulobezi and Sichifulo have shown no overall growth in revenue and Sichifulo has demonstrated a dramatic decline in revenue since 2008. Overall, for all seven GMAs there has been a decline in real income since 2008 in a resource area extending over more than 3.5 million hectares. In 2008, the peak year for hunting license revenues, an average return of ZMK4,861,900 (or approximately US\$972) per hunted animal was realized, but the gross license and area concession revenues of ZMK4.5 billion was equivalent to a land rent of approximately ZMK1,300 (or US\$0.26) per hectare.

Lunga Luswishi (the largest in area) and Nkala (the smallest in area) GMAs have shown significant medium-term growth in revenue generation between 2005 and 2008, in an industry that is characterized by strong global demand. However, Lunga Luswishi and Nkala have shown declining revenues since 2008, while the Kasonso Busanga, Mulobezi and Mumbwa GMAs have demonstrated increases in revenue in 2009 and 2010. Further examination of quota utilization (combining safari and resident hunting) indicates that while GMAs like Nkala and Namwala show declining revenues in 2009 and 2010, their total number of hunted (or bagged) animals increased over the same period (although this may be partly explained by reduced lion hunts). Kasonso Busanga and Mulobezi GMAs had increasing revenues generated in 2009 and 2010, but declared reduced hunted quotas. Given the numerous factors involved and the complexities associated with the trends described it is not possible to meaningfully describe reasons for them. This would require a much more detailed analysis than is possible here.

**Exhibit 10: Kafue GMA hunting license revenues for safari and resident hunting 2005-2010**

GMA	Area (km <sup>2</sup> )	Revenue (ZMK in millions)						Change 2005-10
		2005	2006	2007	2008	2009	2010	
Kasonso Busanga	7,780	776.3	704.9	799.6	946.9	758.9	871.3	12.24%
Lunga Luswishi	13,340	432.3	358.2	558.5	695.7	621.2	615.2	42.31%
Mulobezi	3,420	663.7	224.9	530.0	655.8	589.6	655.4	-1.25%
Mumbwa	3,370	713.8	330.0	673.0	1,005.8	781.4	786.2	10.15%
Namwala	3,600	313.2	115.1	296.9	477.7	430.1	360.9	15.21%
Nkala	194	316.9	120.2	308.6	506.5	475.3	413.1	30.36%
Sichifulo	3,600	177.0	9.6	186.6	182.6	6.5	4.6	-16.23%
<b>Total</b>	<b>35,304</b>	<b>3,395.2</b>	<b>1,864.9</b>	<b>3,355.1</b>	<b>4,473.0</b>	<b>3,664.9</b>	<b>3,708.7</b>	<b>1.54%</b>

Source: Zambia Wildlife Authority, Chilanga, 2010

Note: US\$1.0 = ZMK 5,000

**Exhibit 11: Trends in the number of animals bagged in Kafue GMAs by safari and resident hunters 2005 – 2010**

GMA	Area (km <sup>2</sup> )	Number of Animals						Change 2005-10
		2005	2006	2007	2008	2009	2010	
Kasonso Busanga	7,780	155	106	239	223	190	156	0.65%
Lunga Luswishi	13,340	147	131	168	151	145	131	-10.88%
Mulobezi	3,420	68	98	146	130	124	123	80.88%
Mumbwa	3,370	195	113	213	233	221	235	20.51%
Namwala	3,600	31	3	32	39	41	49	58.06%
Nkala	194	63	46	81	105	106	123	95.24%
Sichifulo	3,600	39	29	53	39	20	12	-69.23%
<b>Total</b>	<b>35,304</b>	<b>698</b>	<b>526</b>	<b>932</b>	<b>920</b>	<b>847</b>	<b>829</b>	<b>18.77%</b>

Source: Zambia Wildlife Authority, Chilanga, 2010

The influence of non-resident (hunters living in Zambia but not resident in the GMAs) quotas may partially explain the trends observed, with Kasonso Busanga, Mumbwa West and Nkala hunting blocks all showing substantial increases in their non-resident hunting quotas in 2009 and 2010. Continuing with the example of the prime earning year (2008), non-resident hunters consumed more than 30 percent of the bagged hunting quota in the GMAs, but this only contributed approximately 4 percent of the total license revenues generated (see Exhibit 12).

**Exhibit 12: Breakdown of overall quota utilization and overall quota license revenues, in the active Kafue Game Management Areas in 2008**

Quota utilization	
KNP GMAs safari quota hunted	706
KNP GMAs non-resident quota hunted	214
Non-resident quota ratio	30.3%
Overall quota license revenues	
KNP GMAs safari hunting revenues	ZMK4,303,900,000
KNP GMAs non-resident hunting revenues	ZMK167,100,000
Non-resident revenue ratio	3.9%

Source: Zambia Wildlife Authority, Chilanga, 2010

Note: US\$1.0 = ZMK5,000

In the context of potential revenue generation for communities, if communities controlled their quotas and elected to allocate 100 percent of each GMA quota to safari hunting, and if communities were able to retain 100 percent of revenues, the total revenue received by communities (or the CRBs) would have equaled approximately ZMK5.6 billion (or US\$1.12 million). However, currently 45 percent of hunting license fees and 20 percent of area concession fees are stipulated for community resource boards (CRB). In simplistic terms, if ZAWA paid revenue to CRBs as stipulated, CRBs would have received approximately ZMK2.5 billion (or US\$500,000) in revenue (in 2008).<sup>5</sup>

Total income from consumptive tourism in the GMAs provides approximately 75 percent of the ZAWA Kafue Business Center's annual income (ZMK7.8 billion in 2009), with the non-consumptive sector contributing only 25 percent, or some ZMK1.8 billion (in 2009).

Consequently, the GMAs are of considerable importance to the GKNP area — or at least to its short- and medium-term operations. This should not hide the reality that Zambia's hunting sector is recognized to be one of the least productive in the East and Southern African region. Given the similarity in trophy and various hunting licenses fees, this suggests a more fundamental structural and regulatory problem with this sector in Zambia.

Four interlinked considerations will have considerable impact on future tourism opportunities in the GMAs:

1. Recent analyses of the structure and functions of Zambia's protected areas have suggested possible new initiatives in reclassifying these areas, particularly within the GMAs<sup>6</sup>. As part of this process five new classifications<sup>7</sup> have been proposed for incorporation into the Wildlife Act. This includes a Partnership Park, which is defined as an area identified by the local communities that is gazetted and reserved for non-consumptive tourism and educational activities. It also includes a Game Reserve, which

<sup>5</sup> The species allocation between the quotas is not the same and resident quotas are not allocated for predators, which earn prime fees.

<sup>6</sup> Ministry of Tourism, Environment and Natural Resources, 2010: Reclassification and Conservation Plan for the National System of Protected Areas in Zambia

<sup>7</sup> (1) National reserves; (2) nature parks; (3) partnership parks; (4) game reserves; (5) geoparks.

is defined as any area set aside and gazetted for sustained consumptive utilization of wildlife where there is no human habitation or cultivated areas.

2. The second consideration lies within the process of creating and implementing management plans for the GMAs, where more effective zoning, concession areas and regulation of tourism activities may support a more optimum use of GMAs — particularly where new GMA classification systems can be leveraged.
3. New approaches to the management and regulation of GMAs, particularly examining the manager-community-regulator models being proposed for KNP through joint management concessions (JMCs) (Moss 2007) and a significant restructuring of community based natural resources management.
4. The potential growth in tourism linkages between KNP and the GMAs. This linkage already exists for the Lunga Luswishi, Mumbwa, Namwala and Nkala GMAs with non-consumptive tourism accommodation located in these GMAs utilizing the park for wildlife and tourism activity purposes. In future, in event of park development it is expected that stronger tourism flows from the park to the GMAs will grow in response to cultural and ecotourism initiatives. Much will depend on tourist volumes to drive the development of new tourism products.

The protected area reclassification process has proposed the formation of a Kasonso Busanga Partnership Park to protect the extension of the Busanga Plain that extends into the Kasonso Busanga GMA. It has also recommended the western part of the Lunga Luswishi GMA and the whole Nkala GMA be reclassified as Game Reserves. These initiatives have yet to be legislated but offer opportunities for a more efficient array of management mechanisms in these GMAs that could optimize their consumptive and non-consumptive use through the preparation of integrated management plans incorporating both consumptive and non-consumptive uses.

The presence of functional and respected management plans in the KNP GMAs is central to any sustained use of these areas, to ensure that core hunting, community, photographic or activity tourism is not compromised by settlement or other conflicting land uses. However, without an effective management system for these GMAs, securing sustainable tourism-based activities and revenues for resident communities which are able to compete with agricultural, mining and other potentially more lucrative land uses remains problematic.

### **B3. Safari Hunting Outfitters**

Currently, hunting is the only viable tourism option in many of the GMAs; although some are rapidly losing the potential for consumptive tourism as a result of excessive encroachment and associated poaching (this is most evident in Bilili, Mufunta and Kasonso Busanga). Interviews conducted with hunting outfitters operating in the KNP GMAs during this study revealed that, generally, in the context of wildlife management they view their relationship with ZAWA and the CRBs as ineffective. Outfitters reported that the reason communities practice poaching and do not realize the benefits of wildlife management is because hunting revenue goes through ZAWA, where it is absorbed by high operational and staff costs before it reaches the communities. As a result, communities rarely receive the stipulated 50 percent share of hunting revenues. The outfitters reported that this has in some cases resulted in village scouts, for example, reverting to poaching in order to account for the income lost.



Operators further reported a preference to enter Public-Private Partnership (PPP) with the CRBs and exclude ZAWA from the agreement, and ZAWA's role shifting to a regulatory and monitoring body. A PPP would facilitate more interaction and communication with the community and greater benefits in terms of direct revenue as well as community development and capacity building. Additionally, operators reported longer lease terms to be important in ensuring private sector investment commitment and resource management, as well as community participation and benefit generation. Lease terms could include capacity building of CRBs, education and improved infrastructure and anti poaching activities. It was felt revisions to lease terms — length and content — could provide a platform on which to build a much more efficient partnership and achieve the level of natural resource management required in the GMAs.

The hunting outfitters interviewed also expressed concerns regarding the allocation of private land titles by chiefs in the GMAs, reporting that current practice often conflicts with viable land use. For example, private land titles are often allocated for photographic safari operations, which conflicts with (and mitigates) operations of hunting services. Further, outfitters reported that there is no responsibility among leasees to provide the community with direct revenue benefits. Rather, a private lease holder is required to pay a heavy levy to the council, not the community. For example, Mukambi Lodge reported paying a number of different levies — council rates, which are 2 percent of the value of the company annually, levies on the staff wages, a business license and a liquor license. The chief also gets some additional benefits on request, but there is no obligation to neither provide the CRBs with any revenue nor involve them in terms of operational capacity building and co-management of their area. Mukambi Lodge contributes to community benefits by generating approximately 50 jobs for both women and men, many of which are long term and have involved significant training/capacity building. They have also built and run a community school that currently houses approximately 70 children from the local communities. Their emphasis is on providing the appropriate infrastructure and teachers required for quality primary education.

Additionally, outfitters perceived effective land use planning to be essential to the future viability of the hunting blocks. Current land use zonation in the GMPs for each GMA was perceived to be inconsistent in some cases with development activities. Further, there is a general belief among outfitters and other tourism operators in and around the KNP that they could play a bigger role in the anti-poaching efforts. These measures could include anti-poaching patrols and employing village scouts, as well as capacity building and education activities with the communities and making sure communities actually benefit from the money that is received by their CRBs with improved transparency and accountability.

Currently, the success of consumptive tourism in the GMAs appears to rely heavily on the amount of effort and investment the hunting operator is willing to invest. This is also true for the relationship between the operator and the community, which varies depending on who the operator is and how much they are willing to support and contribute toward community participation and benefit. The existing hunting outfitters reported a desire to see the legislation and partnership agreement framework reflect longer-term partnerships with communities that would allow for appropriate investments and commitment from both parties and not depend on the personality and moral commitment of the individual operator. See Annexes E and F for some more opinions on these issues.

#### **B4. Non-consumptive Tourism Operators**

Interviews conducted with non-consumptive tourism operators in the KNP area suggested that there is currently little incentive or desire among these operators to work or partner with communities in the GMAs. Operators generally reported that they are struggling to maintain viable operations and view involvement of communities as an added challenge and cost or ‘tax’ to their operations. Some operators reported efforts to collaborate with CRBs to develop community-based tourism products, such as cultural tourism activities (e.g. Mukambi attempted to help their community to develop a cultural village). However, these efforts were largely reported to have failed as a result of inadequate capacity and commitment from the community and unrealistic expectations.

When asked about the potential to expand their operations in the future to include non-consumptive tourism activities inside the GMA, operators perceived lost potential as a result of poaching and inherent conflict with consumptive tourism operations. Operators reported they would need to invest considerably more to reduce poaching levels and work with the communities in order to create viable alternative activities. Further, operators cited a lack of communication and coordination between ZAWA and CRBs as a cause for concern in the development of future business partnerships with the community and suggested a third party arrangement may help facilitate and manage these relationships.

Operators interviewed did identify potential activities that could add value to the supply base of tourism activities in KNP. For example, Wilderness Safaris cited the seasonal fishing activities of the Kaonda in the Busanga Plains as providing an opportunity to showcase a cultural activity that is done sustainably.<sup>8</sup> Providing the community with additional economic benefit through such an activity would also promote and facilitate the monitoring and regulation of this activity. For example, increased poaching has been associated with such annual fishing excursions by the community into KNP. In addition, changing flood dynamics in the Busanga plains have been attributed to excessive construction of fishing weirs along channels that drain the plains, contributing to an extended flooding season, a delayed return game and a subsequent, reduced safari season (already only three months long in Busanga). Impacts such as these could be mitigated with improved collaboration and partnership.

Additionally, operators expressed a common concern about the level of poaching and its impact on the tourism potential of the park, particularly around the Kasonso Busanga plains area, where wildlife numbers have been dramatically reduced in recent years. As with consumptive operators, village scouts were frequently cited as a significant source of the poaching problem. One of the major challenges reported in addressing this issue is the lack of resources and adequate manpower at ZAWA to cope with rising poaching levels and infrastructural (e.g. road)

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<sup>8</sup> This idea of providing tourists with an opportunity to view traditional fishing activities was also raised in two FGDs when discussing traditional fishing drives and ways to link culture with the tourism sector for the benefit of both tourists and community members. FGDs were held in Siachitema CRB area, Bilili Springs on Tonga culture; Kabulwebulwe CRB, Mumbwa on Ila culture; Kahare CRB, Mufunta on Nkoya culture; Moomba CRB, Mulobezi on Nkoya culture. Given the amount and diversity of Nkoya fishing traditions in the Kahare CRB, Mufunta GMA, this area holds great promise for initiating a cultural tourism activity based on fishing traditions. Here tourists could view fishing drives with scoop seine and thrust baskets, plus fish trapping with valve baskets, *lilela* small circular fence traps, weirs, and also ‘broom’ fishing, and more modern hook and line fishing.

maintenance. The Kafue Private Operators Association (KAPOA) further expressed a desire for the ZAWA KNP Business Center to be strengthened and a willingness to assist with anti-poaching activities and road upkeep. Mukambi Lodge was one of the few operators that reported positive performance and is exploring establishing a third operation in KNP (at Moshi). The Mukambi Lodge operators believe there is potential to expand their market through diversification, such as CO2-free camps for the high end market. Operators also perceived potential opportunities in low-end, high volume markets, such as backpackers, that could spill over into the GMAs provided diversification in the supply base to include cultural activities. The local tourism market was also reported to be very important to the financial success of private camps and lodges in the GMAs (e.g. Mukambi and Puku Pan), providing year round revenue essential for sustainability. These considerations may be important in development of future tourism partnerships in the GMAs.

## **B5. Status of Cultural Tourism**

The following findings on current cultural tourism efforts were gleaned from the MCC Tourism Marketing Study:

- 3.9% of GKNP non-consumptive tourism operator revenue came from cultural tourism in 2010 (details were not provided).
- A targeted question on possible areas for improved tourism product delivery gave cultural tourism scores ranging from 0 to 3 out of 4, but most were 0.
- No responses to open-ended questions on possible improvements to services and products mentioned cultural tourism.
- There appears to be only four possible examples where tourism lodges have made some cultural linkages with GMA communities:
  - Wilderness Safaris, which maintains a children's environmental education trust function, creates limited cultural tourism linkages.
  - Mukambi Safaris is trying to support a cultural tourism centre at Nalusanga Gate, being promoted by SNV. However, the SNV tourism presence in Zambia and elsewhere is being withdrawn so this project may come to an end.
  - Nanzhila Plains Safaris lists cultural activities on their website, and their brochure indicates an optional tourism activity to take a trip to Shezongo Village to view/participate in cultural activities. However, it is assumed that this is not a major part of their operation.
  - Reportedly WWF are encouraging cultural/ecotourism opportunities in Mafunta GMA, no details were obtained on working products.

In KIIs during the Market Study, several respondents mentioned the need to diversify the tourism products base in the GKNP area and a couple mentioned cultural/ecotourism links between the private sector and communities in nearby GMAs. Lack of support facilities to develop these products, large distances between operations in the KNP and possible GMA enterprises, and relatively tourist short stay length in the KNP (2-5 days) militated against immediate progress with these products.

During the livelihoods study, four FGDs were held on cultural traditions and current or possible links to the tourism sector. In all three discussions craft products made in the local tradition were described (see Annex G.1). However, in all of the cases these crafts were being made for local use and not for resale to any tourism market. Again in all three discussions cultural ceremonies, rituals and celebrations were described along with any current links to the tourism sector. In two of the discussions there was mention that tourists were coming to the community/chiefdom to view and participate in some cultural celebrations (see Annex G.2).

Participants in the Kabulwebulwe FGD on Ila culture in Mumbwa GMA noted that tourists would be welcome to come and view/participate in the Chisungu ceremony to celebrate the girl initiates 'coming of age'. In fact, this is reportedly already happening, where tourists hear about this celebration and come to the village to observe and participate.

Similarly, participants in the FGD on Nkoya culture with members of the Kamakokwa community from the Kahare Chiefdom, Mufuntu GMA noted that visitors are already coming to the villages to observe and participate in various ceremonies, especially the Kazanga ceremony. These tourists are not charged to attend the ceremonies, but they still contribute to the local economy and help to promote local businesses by buying food, chickens, drinks, and sometimes crafts. Also according to the FGD participants, Professor Wim Bisberden from the Netherlands, who wrote a book in 1972 on the Nkoya culture, wants to return to the Kahare Chiefdom to build a museum on Nkoya culture near the site of the Kazanga ceremony.

## **B6. Livelihood Contributions of Tourism**

The 30 non-consumptive tourism lodges and camps in the GKNP area employ an average of 14 staff of which six are skilled and two are female (14 percent). In comparison, similar ratios exist in the South Luangwa and Lower Zambezi National Parks. However, operators in urban Livingstone and Kasane reported 40 percent of their staff was female.

Most staff employed by GKNP area tourism operators are reported to be recruited locally (the exceptions often being chefs, accountants and others with specialized skills). Applying the average staff levels to the 30 tourism enterprises in the GKNP area and discounting five percent as recruited elsewhere, suggests a total employment impact on the local GMAs (and surrounding "open" areas) of 420 people, of which approximately 60 are women. Extending the impact of this employment on an assumed dependent ratio of seven, suggests an employment-related financial impact on approximately 2,800 people. Applying a mean net salary of ZMK600,000<sup>9</sup> to the assumed 400 locally-recruited employees generates a projected, largely local, financial

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<sup>9</sup> Making provision for short season employment.

impact of ZMK240 million per annum from salary emoluments — mainly in the Lunga Luswishi, Mumbwa, Namwala and Nkala GMAs and open areas.

There is little information on the financial and employment characteristics of safari hunting establishments, but generally considering anecdotal evidence from key informant interviews are assumed to employ fewer staff than photographic tourism establishments because of the small client numbers. They are also thought to employ few women, and in most cases, no women at all, due to the idea that bringing women into a largely male camping operation “only causes trouble.” Several participants in a FGD held with Mushima-Mubabwe CRB members (Kasonso Busanga GMA) and some ZAWA staff stated that hunting operators have a ‘policy’ not to employ women because they have problems when women are in the field with male employees.

The seasonal profile of safari hunting camps is similar to remote bush camps, usually being limited to the months of May/June to October. However, there are only nine established safari hunting camps in the KNP GMAs (although several operations operate fly camps) with an average of six to eight beds.

Financial and economic models were developed for non-consumptive (wildlife viewing) and safari hunting operations based on empirical evidence gleaned from operators to be typical of the GKNP area. The detailed models are described below and presented in Annex D. A typical non-consumptive middle to high end market lodge is assumed to invest approximately ZMK5.8 billion (or US\$1.16 million) in capital, have an annual turnover of approximately ZMK6.4 billion (or US\$1.28 million) at full production, and generate an annual net income of approximately ZMK927 million (or US\$185,000). It would have a ten year private internal rate return of some 12 percent, after payment of maximum possible rent/royalties to landholders. The modeled, annual economic contribution to the national income is approximately ZMK2.7 billion (or US\$540,000) at full production. This would include approximately ZMK280 million in rentals paid to the landowner. The economic rate of return to the national income shows high efficiency with an economic rate of return over ten years of approximately 46 percent.

Based on anecdotal evidence from operators interviewed, it was assumed a typical safari hunting concession invests approximately ZMK2.3 billion (or US\$460,000), and generates an annual turnover of approximately ZMK4.9 billion (or US\$980,000) and an annual net income of approximately ZMK800 million (or US\$160,000). The modeled ten year private rate of return of an individual operation is approximately 14 percent if it generates the maximum amount of rent possible for the landholder. The modeled, annual economic contribution to the national income is approximately ZMK2.2 billion (or US\$440,000), including some ZMK800 million (or US\$160,000) in rentals paid to the landholder. The economic rate of return is very high at some 60 percent, showing that these activities are economically highly efficient.

While safari hunting appears to generate more rent than non-consumptive lodges, it is noteworthy that the area required for operations differs widely between the two. Thus the possible rental from a hunting operation per unit area is some ZMK7,000 per hectare, while that for a wildlife viewing lodge is ZMK12,000 per hectare. In the context of tourism development, where the conditions are suitable for lodges it may be important that they take priority over hunting. Nevertheless large parts of the GMAs are presently not suitable for lodge development

due to low game numbers. As a result, hunting is maintained as the best wildlife-based land use in these areas.

## **B7. Linkages between Tourism Enterprises and Communities**

The GRZ's proposed GKNP economic development project maintains the long term goals of environmental conservation of KNP and the surrounding GMAs and tourism development — the two goals being intrinsically linked and synergistic. However, currently wildlife densities in much of the park and in the GMAs are at levels that are not conducive to tourism development, and are further threatened by poaching.

The Wildlife Act No. 12 of 1998 provided for the establishment of the Zambia Wildlife Authority (ZAWA) as the principal institution to be responsible for the management of the country's protected areas. In addition, the Act provided for establishment of Community Resources Boards (CRBs) in GMAs as local, democratic institutions through which communities work with ZAWA to manage wildlife and natural resources. CRBs are responsible for promoting and developing an integrated approach for management of natural resources in GMAs and open areas within their jurisdiction. As part of their mandate, CRBs are expected to recruit Village Scouts to compliment ZAWA efforts of law enforcement in GMAs.

The main sources of revenue for CRBs are hunting and concession fees. Revenue from hunting is derived from fees for the hunting licenses, which vary in cost depending on animal type. Concession fees are based on the value of the hunting areas. Hunting concessions are granted to safari hunting operators through a tripartite agreement, made between ZAWA, the operator, and the relevant CRB(s). Concession fees are paid annually for the duration of the agreement — usually ranging from 10 to 15 years.

Local communities obtain and access social amenities from various rural development projects funded by revenues gained from wildlife resources. The projects cover a number of different development objectives including construction of water points, schools, clinics, and feeder roads, as well as crop damage counter-measures including solar and chili pepper fences. Wildlife revenue sharing arrangements are currently structured as follows (Nyirenda, 2010 and field work):

### **Animal trophy fees**

- 5 percent of the funds go to the CRB patron (traditional leader or chief)
- 45 percent of the funds go to the CRB in the form of community funds
- 50 percent of the funds go to ZAWA in the form of conservation funds

### **Concession fees**

- 5 percent of the funds go to the CRB patron (traditional leader or chief)
- 15 percent of the funds go to the CRB in the form of community funds
- 80 percent of the funds go to ZAWA in the form of conservation funds

### **Community use of funds**

- 45 percent of the funds go to wildlife management, including resource protection and escort services
- 35 percent of the funds go to community projects such as construction of clinics, roads, schools, and wells
- 20 percent of the funds go to administration of the CRBs

ZAWA is required to disburse the stipulated portion of hunting revenues collected to the CRBs every quarter. However, KIs interviewed in conducting this study reported that ZAWA has not been consistent with payment, both in terms of amounts and timing. Further, as noted previously, revenues from hunting have generally decreased since 2008, exacerbating the financial shortfalls of the CRBs (and ZAWA). As a result, community benefits and GMA management have suffered. For example, nearly all CRBs visited reported village scouts had salary arrears, ranging from 10 to 45 months (the exception was the Kahare CRB where those costs are met by the WWF).

### **B8. Gender**

This brief section provides the key findings on gender in the tourism sector in the GMAs particularly as these relate to constraints and opportunities for women to participate in, and benefit from, tourism-related livelihoods activities. The main conclusion from the research on tourism indicates that there are significant inequalities in opportunities for men and women to participate actively and benefit from the tourism sector.

The tourism sector in the GMAs and the KNP creates significant employment which, the field research revealed, impacts on certain villages in the GMAs. However, only a small percentage of tourism operations have a policy of employing women. In many cases only males are employed. Staff conflicts, resulting from having a mixed labor force in a remote camp, are cited as the reason for this policy. As stated above only about 14 percent of employees are women. Where women are employed, staff families are accommodated, and in one case in Mumbwa GMA (Mukambi Lodge) a school is run for staff children. Women are generally thus severely disadvantaged in tourism employment.

As indicated above, to date there have been no significant efforts to create links between photographic tourism activities or lodge operations and communities. Neither has there been much support (if any) to encourage communities in the GMAs to develop their own cultural tourism attractions, community-based cultural villages or campsites. Being the case, both men and women in the GMA communities have been disadvantaged in benefiting from community-based tourism activities.

## **C. Forestry, Non-Timber Forest Products (NTFPs), Fisheries, Wildlife, and Mining**

### **C1. Inventory and Summary of Natural Resource Uses**

The principal existing natural resources in the GMAs are land, water, wildlife, forestry, and non-timber forestry products such as honey, mushrooms, medicinal plants and bark, grass, reeds and minerals. Subsistence hunting of wildlife has always been a component of community livelihood strategies in the greater Kafue area, especially when food is in short supply. The Kaonde in

Kasonso Busanga, who traditionally do not maintain livestock, are strongly tied to this livelihood activity. Common livelihood activities also include harvesting and using timber and poles (*Pterocarpus angolensis*, *Pericopsis angolensis*, *Azelia quanzensis*, *Baikiaea plurijuga*, *Colophospermum mopane*, *Julbernardia spp.* *Brachystegia spp.*, and *Acacia spp.*). Timber is used for carpentry and poles are used for house construction. Natural resources harvested from local rivers and streams, include water, reeds and fish. Every GMA around KNP has access to waterways and practice fishing (at least seasonally). In addition, fish farming is conducted in the Mumbwa, Mufunta and Bilili GMAs on a small scale.

All GMAs households consume and use fruit from trees such as *Uapaca spp*, *Parinari curatellifolia*, and *Strychnos spp.* Bee hunting and modern bee keeping are other important livelihood activities, providing a contribution to both household diets and local revenue generation. Women use honey to make a popular beer called *mbote*. In all GMAs an important livelihood activity practiced primarily by women is collecting *munkoyo* root (*Rhynchosia spp*), from which they make and sell a sweet beverage called “munkoyo”. In the wet season women also collect mushrooms, which are consumed and sold. Thatching grass (*Hyparrhenia spp*, *Hyperthelia dissoluta*, *Loudetia sp.*, *Aristida sp.*) is collected for construction and annual household maintenance, as well as for selling locally for additional revenue. Collection of thatching grass is largely (if not solely) conducted by women. Reeds are collected for making baskets (by women) and sleeping mats by both men and women. Certain types of baskets made by women are constructed using *malala* palm (*Hyphaene petersiana*). Some respondents noted that this palm is becoming very hard to find or is far away from their homesteads (3km+). Because of this, fewer collecting/carrying baskets are being made and used for harvesting cereal crops. Traditional carrying baskets are being replaced with plastic containers. The northern part of the GKNP area contains minerals, mostly copper.

Additional details on the status (availability) of important natural resources used in livelihood activities are listed in Annex C ‘An Inventory of Livelihood Activities by GMA’. Besides noting availability, this inventory also provides an indication if the use of the natural resource ‘threatens’ or ‘supports’ conservation of biodiversity, as well as indicating the potential for scaling-up of each livelihood activity. Furthermore Annex C provides a breakdown of livelihoods by sex, including those activities using natural resources. Annex H provides a more detailed list of the key natural resources used to sustain livelihoods in the KNP GMAs. This list gives details on the scientific and local names of the resources used, location by GMA, part of resource used, and how the resource is used. Annex G.2 lists the type of craft products made in the GMAs and indicates which raw materials are used to make them.

An indication of the extent to which these individual natural resources are used and/or depleted was established by carrying out Resource Trend Analysis exercises in many of the villages visited during this study. The results of these analyses are presented below. What follows is a summary of the main natural resources uses per GMA and their status.

**Kasonso Busanga.** The communities in Kamimbi and Lunga villages reported a drastic decline in the numbers of wildlife in recent years – both in the GMA and the neighboring areas of KNP. Small game species such as duiker, warthog, and others are in decline owing to the pressure from subsistence hunting. Much of the blame for this decline was placed by residents on the village



scouts, who were reported to have not been paid for almost a year. This has led to hunting becoming generally less viable in the GMA — a concern reported by the Kasempa CRB and Village Action Group (VAG).

Fishing for bream, carbel and chitaka (*Alestes lateralis* – striped tailed robber) is conducted in the Lunga River and local waterways. Key informants also provided that outsiders from the Copperbelt fish on a large scale in the local waterways using nets and poisons, which is depleting the fish stocks (in the Lunga River in particular). Some members of the community have licenses from ZAWA to fish in KNP on the Busanga Plains, where they go during the wet season and fish using spears (when the water is shallow) and by building fishing weirs and basket traps on the main channels. These types of fishing techniques are used by men.

The woodland provides timber, including ndombe (*Pterocarpus angolensis*), mukusi (*Baikiaea plurijuga*), and mutobo (*Isobertia angolensis*), for construction (planks for making doors, tables and chairs, roofing and upright poles for huts) for subsistence and small scale local trade. Bamboo (*Oxytenanthera sp.*) is another important material, harvested from the woodland, which is used for making small containers, crop storage bins and huts.

The women collect thatching grass, clay (for making pots) and reeds (for making baskets) from the river bed. They also collect mushrooms and wild fruits from the woodland. Participants in a FGD with Mushima CRB members in Kasonso Busanga GMA mentioned that there has never been a problem with over-collection of mushrooms, because mushrooms grew seasonally in the summer months, and will continue to grow each season. Some community members also collect honey and are involved in beekeeping for making *mbote* (honey beer), which they sell locally as a source of revenue. Munkoyo is also important to the diet and revenue generation among households in the communities here. However, natural stocks of *munkoyo* are being depleted and the distances travelled for collection are becoming longer. A number of medicinal plants are found and used by the communities visited.

The Kasonso Busanga GMA contains copper deposits, and maintains three mining operations (one large scale, two small scale). The Chifumpa mine, owned and operated by a company based in the Copperbelt, is located in Lunga village. This large-scale copper mine in Lunga Village, Kasonso Busanga employs 120 staff, of which about 98 percent are from the local area. Of these 120 employees, 80 are hired on a permanent basis and the rest on a casual basis. Of the 80 permanent employees, two are women. Among the remaining casual employees, only five are women.

Please see Resource Map for Kasonso Busanga GMA in Annex I.

**Mufunta.** Key informants reported that the wildlife in northern and western region of Mufunta GMA has been depleted as a result of population encroachment and an increase in the number of maize and tobacco farms. ZAWA officers and village scouts working in this GMA reported areas in the southern region of Mufunta where good numbers of buffalo, various antelope species (eland, roan, hartebeest and waterbuck) and predators (lion, wild dog and leopard) are found. Numbers of game were also reported to be good in the far north of the GMA along the KNP border. As perhaps further evidence of these reported wildlife densities, Mvu Safaris is building

a hunting camp in the GMA and have been given a quota of 62 animals for 2011. Members of Lalafuta community fish in the Kamakokwe River during the rainy season, but it is not a major staple in their diet.

Please see Wildlife Distribution Sketch map for Mufunta GMA in Annex I.

A large resource of mukwa (*Pterocarpus angolensis*) is located to the southwest region of the GMA and communities reported they harvest trees every year to make planks and poles for construction and carpentry. However, it was also highlighted that local licenses are being exploited by illegal harvesters who buy timber from the local communities at low prices and transport it to Lusaka to sell to the commercial timber industry. *Mwanga* grass (*Hyparrhenia spp.*) and *munya* (*Loudetia sp.*) are both collected by women in the villages around Lalafuta. There is a large stock of grass in this area, which women collect and sell locally or in Lusaka (via trucks from Mongu).

Mushrooms (*mugololo* or *diluwe* (termite mushrooms) and *bushela* (small white mushrooms)) are plentiful in the wet season, as are wild fruits like *mubula* (*Uapaca kirkiana*). Honey is collected by some members of the community and some build hives from *Julbernardia* bark. In Mufunta, honey collection is done by men, while beekeeping is done by both men and women. Brewing beer is an important livelihood activity for the women of the area, with several different kinds of beer made for local sale. This includes *mbote* (honey beer), *sepesu* (sorghum beer with sugar, and if *munkoyo* is added it is called *mutate*), *kachasu* (spirit made from maize and *munkoyo*), a sweet beer made from *Parinari* fruit and maize, and “winee” (a potent spirit made from sugar and yeast). Community members interviewed also noted a large number of medicinal plants that are used by the community to cure illnesses and improve health (see Annex H). There are some traditional doctors in the area, and one of the most knowledgeable is a woman.

Please see Resource Map for Mufunta GMA in Annex I.

**Mulobezi.** Members of the Moomba CRB and ZAWA officers working in Mulobezi reported that wildlife populations are stable in the GMA, if not increasing. Good policing activities by ZAWA and the village scouts and a relatively low population in Mulobezi were highlighted as the reason for this trend. A large variety of antelope and other herbivores, as well as healthy populations of predators, including lion, leopard, wild dog and cheetah were reported in areas along main rivers and dambos throughout the GMA. Elephants were also reported to be increasing in number, migrating from both KNP and neighboring Namibia and Botswana to the south. Two hunting camps operate in the GMA which may provide further evidence of the wildlife densities reported.

Please see Wildlife Distribution Sketch map for Mulobezi GMA in Annex I.

Seasonal fishing and game meat (the latter provided by hunting outfitters) are important sources of protein for the villages of Mulobezi. Honey collected from the wild and from beehives is an important source of revenue through the sale of *mbote* (honey beer). Most community members both collect wild honey and make traditional hives from the bark of species of *Brachystegia* and *Julbernardia*. Beekeeping is done by both men and women in Mulobezi.

Other natural products that are important to the communities include *munkoyo* (*Rhynchosia sp.* root) for making a sweet maize porridge/drink, timber poles for house construction, and *Brachystegia spiciformis* for firewood and (the bark) to make rope. Grass (*Hyparrhenia hirta*, *H. filipendula*, and *Hyperthelia spp*) is collected for thatching every year and sold locally by women.

Timber, specifically Zambezi teak (*Baikiaea plurijuga*), is an important commercial product and has been exploited by the Zambezi Saw Mills (located in Mulobezi Town) since the early 1900s. The off-cuts from this sawmill are distributed to the Mulobezi community to provide valuable material for construction and firewood. Another smaller saw mill (Machila) located in this GMA has started up more recently. There has been a significant depletion of timber resources, and remaining resources are threatened by further commercial exploitation. In order to sustain timber resources in the Mulobezi GMA further protective measures may be needed, such as maintaining inventory, fire control, and possibly replanting.

Please see Resource Map for Mulobezi GMA in Annex I.

**Bilili Springs.** The Shezongo CRB reported wildlife has been severely depleted in Bilili, limiting the potential for hunting. However, the CRB also provided that they receive a share of commercial hunting revenues from the Nkala GMA. The Siachitema area was highlighted as an area where wildlife depletion has been most noted, although there are warthog, kudu and duiker that are still hunted in this area where private farms exist. Most animals are only found near the KNP boarder. The majority of village scouts were reported to be deployed in Sichifulo, in the Ketanda or Molanga hunting camp areas or KNP-based at Dundumwezi Camp. As a result there is little policing of the Bilili area.

A fairly small mukwa (*Pterocarpus angolensis*) resource is being harvested through pit sawing for use by carpenters to make furniture and other wood products for local market. There is one commercial harvesting license of mukwa inside the GMA, but the CRB does not get any revenue from it. Poles (e.g. mukwa and *mubanga* (*Pericopsis angolensis*)) are also collected from the GMAs woodland for construction. Firewood, which is collected by both men and women, is difficult to find near villages and requiring community member to walk for two hours to gather it each day. Charcoal burning is carried out by both men and women in some of the Bilili VAGs, for both subsistence and commercial use.

There is one fish farm in the area — at Simwanda Dam — where people can fish year round. In addition, subsistence fishing of barbel and bream is conducted in the nearby Nanzhila River. Reeds are collected from the river banks and are used by women to make baskets and by men to make mats. A large variety of wild fruits including *musuku* (*Uapaca kirkiana*), *maneko* and *mauii* are collected, typically by women, for food and to make of sweet porridge and beer. Hunting wild honey and beekeeping are also important to livelihoods in Bilili's communities.

Please see Resource Map for Bilili Springs GMA in Annex I.

**Mumbwa.** Members of the Kabulwebulwe CRB identified a number of waterways and associated dambos in the western region of the Mumbwa GMA that sustain good populations of

game species, including kachirako, namgoma, sala, and the mokaintu. However, in the eastern region of the Mumbwa GMA, wildlife populations were reported to have been depleted as a result of population encroachment and agricultural development. Members of the Tapula village fish in the Nalusanga and Lukanda Rivers and other smaller waterways, especially in the wet season. Fishing is for subsistence as the chief and CRB will not allow commercial fishing without a license. However, there are concerns regarding the use of plant poisons (see NR Table in Annex H) as a fishing method and efforts are being made to stop this practice.

Charcoal production from *Julbernardia paniculata* and *Brachystegia spp.* trees is an important livelihood activity for both men and women. There are people from outside, however, that are also exploiting the woodland to make charcoal and they are moving further and further into the GMA and KNP to do so. Participants in the Daily Task Analysis at Lukanga Village in Kabulwebulwe CRB, Mumbwa GMA named the trees that they used for firewood (see Annex H) and explained where they collected it. They said they collected the dead wood in the forests near their community, mentioning there was a lot more dead wood in the Park but that they would be arrested if found collecting firewood there. They reported that sometimes men do not only collect dead wood, but also cut these trees for firewood, as do honey hunters to reach the wild bee hives and honey.

A short ‘Trend Analysis’ was done on the most important tree for firewood and charcoal production: *mutondo* (*Julbernardia paniculata*). Participants noted that before 2003 (when the CRB started), there was more *mutondo* trees for firewood. Around 2003, more land was being cleared for agriculture so there was a decline in live *mutondo* trees but an increase in *mutondo* for firewood as people could use the cut trees. From about 2009 to the present (2011) less *mutondo* firewood is reported to be available as most of the wood has been collected from the cleared agricultural fields. The participants predicted that soon there would be no *mutondo* available locally and more people would go into the Park to start collecting dead *mutondo* wood, risking arrest.

The forest also provides mukwa, mupapa (*Azelia quanzensis*) and other tree species that are used by male wood carvers to make crafts for market. Five or six pit saws are located in the Tapula village, which also produces planks for furniture that is sold locally.

Wild fruits (e.g. *masuku* (*Uapaca kirkiana*), *mafumo*, *mauii*, and *mosomoso*) are collected seasonally as a dietary supplement. Honey from the forest also provides an important contribution to the local diet and is used to make *mbote* (honey beer). *Munkoyo* roots comprise both an important part of the local diet and a revenue source for communities, which sell them locally and in the region (up to ZMK20,000 per bundle). Communities also largely reported collecting their own construction materials from existing natural resources for building and making tools and karts. Grass (*Hyparrhenia spp.* and *Hyperthelia dissoluta*) is collected by women and sold to local and regional markets.

Please see Resource Map for Mumbwa GMA in Annex I.

## C2. Aggregate Data on Natural Resource Use in the GMAs

Data from the 2006 World Bank/CSO GMA household survey have been analyzed to determine the incidence of natural resource product use in the GMAs surrounding KNP. As noted earlier, data were available for the northern GMAs (Kasonso Busanga and Lunga Luswishi) the central GMAs (Mumbwa and Mufunta) and the open area outside the southern GMAs (Bilili, Sichifulo and Mulobezi). To reiterate, for the purposes of this study the data on the open area bordering the southern GMAs is used to describe natural resource use inside these GMAs.

**Exhibit 13: Household Reporting Use and/or Sale of Natural Forest Products (2005)**

Household Use of Natural Forest Products		Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Utilized	Yes	96	93	97	96
	No	4	7	3	4
Total		100	100	100	100
Consumed	Yes	96	93	94	95
	No	4	7	6	5
Total		100	100	100	100
Sold	Yes	13	1	12	8
	No	87	99	88	92
Total		100	100	100	100

Source: Derived from World Bank 2006 household survey database (Simasiku et al. 2008)

**Exhibit 14: Household Reporting Use of Natural Forest Products by Product (2005)**

Household Use of Natural Forest Products		Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Termites & caterpillars	Yes	1	10	0	5
	No	99	90	100	95
Total		100	100	100	100
Wild fruits	Yes	15	44	41	26
	No	85	56	59	74
Total		100	100	100	100
Wild honey	Yes	10	3	9	7
	No	90	97	91	93
Total		100	100	100	100
Mushrooms	Yes	29	44	34	32
	No	71	56	66	68
Total		100	100	100	100
Other edible products	Yes	1	26	4	8
	No	99	74	96	92
Total		100	100	100	100

Household Use of Natural Forest Products		Northern GMAs (%)	Central GMAs (%)	Southern GMAs (%)	Total (%)
Poles & Timber	Yes	26	36	78	32
	No	74	64	22	68
Total		100	100	100	100
Fuel wood	Yes	94	93	91	93
	No	6	7	9	7
Total		100	100	100	100
Charcoal	Yes	1	0	13	3
	No	99	100	87	97
Total		100	100	100	100

**Source:** Derived from World Bank 2006 household survey database (Simasiku et al. 2008)

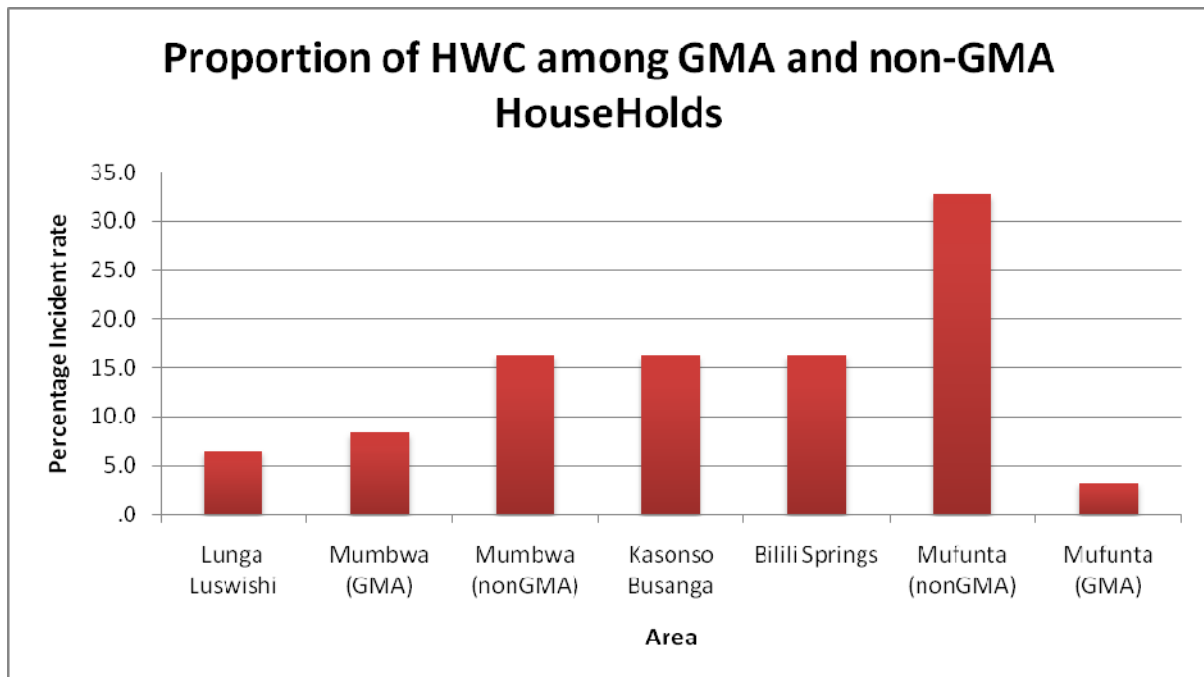
The findings in Exhibit 13 show that almost every household throughout the study area made use of natural forest products. Most was for home consumption, and less than 20% of households sold any of these products. Exhibit 14 illustrates use of specific resources. The use of fuel wood is ubiquitous, and the use of poles or timber, wild fruits and mushrooms is also common. Generally, these findings confirm the findings of the qualitative fieldwork presented earlier in this section and the sections that follow.

### C3. Human Wildlife Conflict

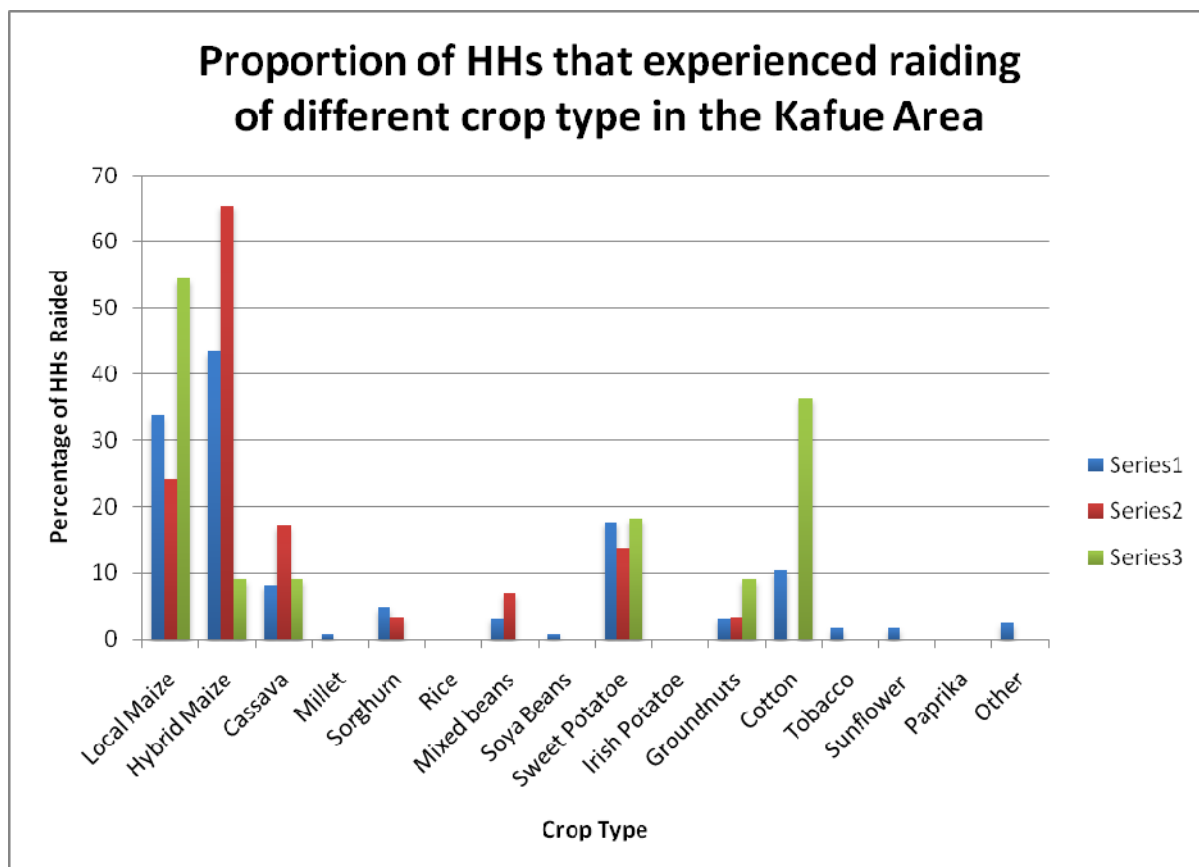
As one would expect, the extent of human wildlife conflict (HWC) frequency and intensity in the GMAs visited mirrors the extent of spatial overlap between human inhabitation and, in particular, their agricultural land use practices. As a result, those GMAs and the areas in the GMAs with the worst HWC are those where there is still large numbers of wildlife in and moving through an area with a large human inhabitation that practices agricultural over a large area (e.g. on large fields that area spatially disparate).

In the 2006 World Bank/CSO report comparing the livelihoods of people living inside GMAs with those living outside them (Simasiku et al. 2008), the household survey included data collection on crop damage incidents, crop type and the extent of crop intensity. Of 611 households surveyed in the study, 124 experienced crop raiding by various mammals. When the northern and central GMAs were clumped, the households in the northern GMAs experienced the largest proportion crop raiding incidents in the area surveyed (23%), followed by the Central GMAs (9%) (See Exhibit 15). However, when compared with a 52 percent incident rate among households outside the GMAs in the central region and 15 percent among households outside GMAs in the southern region, this indicates that households in the GMAs do not necessarily experience disproportional crop raiding simply as a result of their geographical location inside a designated wildlife protected area.

**Exhibit 15: Proportion of Crop Raiding Incidents among Households Interviewed during the World Bank 2006 Livelihood Study (Simasiku et al. 2008)**



**Exhibit 16: Percentage of Households that Experienced Crop Raiding of Per Crop Type for the Total Area, the Northern GMAs and the Central GMAs in the World Bank 2006, Livelihood Study (Simasiku et al. 2008)**



When the data for each crop type were analyzed, the households growing maize (local and hybrid) experienced the largest number of crop raids (Exhibit 16). Households growing cassava and sweet potatoes also experienced a relatively high percentage of raiding. Similarly, households growing cotton in the central GMAs experienced a high percentage of raiding of these crops.

With regard to household responses to queries about predation of livestock inside and outside the GMAs, only about 3 percent of respondents reported such conflict, suggesting that either predator populations are low in the GMAs or livestock and large predators are spatially well separated.

In contrast to the World Bank study, qualitative interviews we conducted with farmers suggested that Kasonso Busanga experienced considerably less crop raiding incidents compared with the central and southern GMAs. This could be attributed to the severe depletion of the wildlife resource in this GMA over the past few years. However, our findings did confirm that the crop type being most raided in all GMAs was maize (and cotton in the Mumbwa GMA). This is of some concern as maize is the primary crop for most communities. Since both men and women are involved in crop farming, both are similarly affected by damage to their fields from wild animals.



Similarly, the number of incidents reported by the farmers interviewed during the present study suggested very few cases of livestock predation, with only one incident reported of a cattle herder getting killed by a lion in Mulobezi. Bilili also experiences small stock loss to predation by hyena and leopard, and wild dog are always a threat owing to their large hunting ranges. However, given the low numbers of livestock and their importance to farmers, particularly oxen for plowing fields, measures to prevent predation is an important for CRBs.

#### **C4. Marketing and Support for Natural Resource Use**

All the natural resources used are consumed as the raw material or sold, often with some value addition occurring before selling. However, it is very difficult for communities to transport products to market provided poor road conditions in the GMAs and a lack of adequate transport. In Mulobezi GMA, the Zambezi Saw Mills Company buys timber from the forest department. The mill also buys timber from individual pit sawyers and Machila Sawmills. After making planks locally they transport the timber to South Africa where the company makes finished products. The finished products are then transported back to Zambia for sale. In Mufunta, a Chinese company buys raw timber from the licensed and unlicensed community members for low cost and then sells the timber to international companies. Kasonso Busanga's Chifumpa Mine mines the copper ore for a large copper smelting company, Joint Venture Civils (JVC) in Solwezi, who then processes it for sale internationally. Most of the resource products that come out of the GMAs are raw or, at best, have undergone a preliminary value-added process. However, most value-added processing occurs outside the GMA communities.

As previously indicated in Section A.3, significant institutional support for the agricultural sector is given to the CRBs/VAGs by government and NGOs such as WWF in Mufunta, and Christian Children Fund (CCF) in Bilili and Mumbwa. During this study, there was a resounding general complaint among farmers that, for non-timber forest products, there is little support for natural resource value-added in the GMAs and there are very few permanent buyers and/or established markets that hold potential for revenue generation.

#### **C5. Livelihood and Economic Contribution of Natural Resource Use**

Using data from the fieldwork, as well as information from other sources, financial and economic models were developed for three small-scale natural resource use livelihood activities in the GMAs, chosen for their importance or possible potential for further development. The models covered small scale fishing in Kasonso Busanga, small scale furniture making in Mulobezi and small to medium scale beekeeping in Mumbwa. The models are presented in Annex D. When modeled all of ventures make moderately good private net incomes, consistently higher than those for crops. The modeled private rates of return range between 20 and 30 percent, and economic rates between 30 to 60 percent.

Other natural resources uses not modeled are likely to have similar positive returns. However, many of them, by their small scale and supplementary nature, cannot be the main household livelihood strategy. Charcoal making is considered profitable by households and, despite being frowned on by authorities for being destructive to woodlands, it is clearly thriving in the GMAs closer to markets. *Munkoyo* collection and processing is also an economically viable activity with good local and urban markets, but it suffers to some extent from over exploitation of the

resource. In one Household Case Study conducted in Lukanga Village, Kabulwebulwe CRB in Mumbwa GMA, the couple undertook both enterprises to earn household income. They indicated that charcoal product was their second most important earner (after cotton sales), earning the family about ZMK1 million per annum, while *munoyo* root sales in Lusaka was the fourth best income earner, where they earned ZMK500,000 during the one month they undertook this activity (see Annex J Household Case Studies). Both charcoal and *munkoyo*, although not currently compatible with conservation objectives, could become so if subjected to appropriate community level management.

A model was also developed for a typical medium scale saw timber production enterprise in Mulobezi. This assumed use of a concession of 20,000 hectares, a capital investment of ZMK1.8 billion (or US\$360,000), and annual private net income of ZMK1.4 billion (or US\$280,000) at full production. The modeled private rate of return over ten years was approximately 19 percent, contributing ZMK4.3 billion (or US\$860,000) annually to the national income and ZMK800 million (or US\$160,000) in rent/royalties to the land holder.

## **C6. Gender**

Some findings on gender in natural resource use in the GMAs have been woven into this section above. In addition, Annex C presents information on which sex is involved in the various livelihood activities using natural resources. This sub-section will therefore summarize the findings on the collection and use of natural resources by gender and focus on gender aspects as they relate to the constraints of women to participate in, and benefit from, livelihoods activities using the various natural resources found in the GMAs.

Community members participating in group discussions and family members in Household Case Studies highlighted the fact that there was some traditionally-defined division of labor in natural resources use. The collection and processing of *munkoyo root*, for use and sale, is carried out almost entirely by women. They visit the forest in groups to collect and then process and market individually at their homesteads. Similarly women tend exclusively to cut and transport grass and reeds, for own use or sale, alone, or in groups. They also make baskets from plant products without men being involved. The collection of fruits, other food plants, mushrooms, medicinal plants is also done predominantly by women.

In comparison, men cut poles and timber, do carpentry, do metal work, make certain crafts (reed mats, wood carving) and hunt game to the exclusion of women. They also transport some of the heavier products by ox drawn sled or cart, or by hand. Men also hunt for honey, and undertake most of the beekeeping, and charcoal making, although some women are also involved in these latter two livelihood activities. Collection of caterpillars can be done by both sexes, but especially by men if it involves cutting down trees to get at the caterpillars.

Marketing of products is done by both sexes but the tendency is for products produced by women or men to be sold by women or men respectively. In most cases, the man or woman who makes the sale controls the money earned from that sale. In other cases the income is shared usually for household expenses or to pay school fees.

Because there is some traditionally-defined division of labor in natural resources use, both men and women tend to benefit from the natural resources found in the GMAs, and it does not appear that women are unfairly excluded from accessing these natural resource based livelihood opportunities. When comparing three types of livelihoods using natural resources – one which is done solely by men (carpentry) and two which are done more by men, but also by women (beekeeping and small-scale fishing), the financial and economic analysis results are similar and all show a financial profit (IRR). While no financial and economic model was conducted on *munkoyo* root collection and sales, which is an activity done almost exclusively by women; from all indications during the fieldwork this natural resource based activity for women is also quite profitable. One caveat should be mentioned when comparing skilled activities, whether by men such as carpentry, or by women such as basket-making to unskilled activities such as timber cutting by men and grass harvesting by women. Universally more members of society can engage in the unskilled activity while only a select few can earn a profit from a skilled activity. Thus, if the goal is to create income for the greatest number of people then activities such as *munkoyo* root and thatching grass collection should be emphasized for women. Contrarily if the goal is to create significant income for the talented few, more emphasis should be placed on the profitable skilled livelihood activities.

#### **D. Entrepreneurial Activities**

##### **D1. Description of Entrepreneurial Activities in the GMAs**

During the fieldwork we conducted in the GMAs a number of small scale entrepreneurial activities practiced by households were identified other than the craft production and carpentry already mentioned. Here, small scale entrepreneurial activities are defined as ways of contributing extra cash to households, enhancing livelihoods. These activities may be fairly widespread or may be confined to a few households, depending on the products and demand. In some cases they form primary activities for households that specialize in them, but in most they represent secondary activities supplementing the basic agricultural pursuits and natural resource uses.

Making and selling beverages (traditional beer and non-alcoholic drinks) is an important activity, which is fairly widespread. Households brew beer or make non-alcoholic drinks from maize, sorghum or millet and *munkoyo* roots for sale in the local community (see Annex J Household Case Studies). ‘Baking’ usually involves the production of fatcakes/fritters (deep fried bread dough) for local sale. Unusually, no one was found baking or selling bread, nor was any local bread ovens sighted, which is very common in neighboring countries.

Informal retailing of clothes and household goods (such as pots and other cookware and dinnerware) involves buying of goods in informal urban markets and selling these in local villages. Similarly, almost every village has small retail shops run by individual community members or families. These typically sell basic goods such as soap, cooking oil, sugar, flour, salt, etc. In some cases, even right near a small shop, women can be found sitting on the ground under a tree selling similar items, plus cabbages, onions, fatcakes, etc.. Surprisingly, there were no observations of people selling meat (raw or cooked; game or domestic) in a similar manner. Several FGDs mentioned the sales of illegal game meat, but we did not see any cases of game meat being sold. Possibly this type of meat was sold ‘in secret’ or taken to larger towns where sale prices could be higher.

Some wealthier households invest in hammer mills and engage in milling service for members of the local community. Others with oxen and plough offer a plowing service for the local farmers. Others provide transport services with ox carts. Some sightings of brick or block manufacturing were evident in the GMAs, but it was not clear if this was brick-making for own use or for sale. Surprisingly, there were no observations of the local tailor or dressmaker, as is again found in all the neighboring countries. Similarly, given the abundance of bicycles in most places throughout the GMAs, the only bicycle repair shops were sighted in the towns. There was no bicycle repairman (or woman) working under a tree for instance.

These activities tend to be spread through all the GMAs and no GMA specific inventories have been compiled. All these activities represent diversification of the local economy and provide forward and backward linkages, and as such provide potential for expansion.

## **D2. Gender Analysis of Entrepreneurial Activities**

Similar to agricultural activities and the use of natural resources, most of these entrepreneur activities are gender-based. Women typically engage in the ‘domestic’ activities of beverage-making and fatcake preparation. Almost exclusively, women were the ones seen engaged in informal and formal retail sales. Men typically were the hammer mill operators and the ones providing oxen for hire for plowing, and oxen and scotch carts for hire for transport.

Given the absence of typical activities such as bread-baking, sewing, and butcheries, an assumption can be made that both women and men face the same barriers to starting up small-scale enterprises. These would mainly include: lack of skills, lack of exposure to entrepreneurship and creative business ideas, no or limited availability of start-up capital, and lack of capacity in business management, bookkeeping, ability to prepare a business plan to submit for funding or credit. In addition, other constraints could include lack of access to markets and the limited buying power of community members in the local villages. In one area, given the statistics for rural areas in Zambia, women might be facing an added constraint compared to men: low levels of literacy and numeracy. During the participatory exercises, ‘Story with a Gap: Access to Livelihood Opportunities’, besides inputs for agriculture and skills training to improve crop production and livestock breeding, community members most often mentioned the need for skills training, tools and equipment, and credit for start-up capital in various artisanal activities, such as tailoring, sewing of school uniforms, and knitting (in Bilili Springs GMA); carpentry, tailoring, and sewing (in Mumbwa GMA); training in fish farming, the fighting of uncontrolled fires and fire prevention, and skills development in carpentry and “in various livelihood activities that we do not know how to do right now” (in Mulobezi GMA). Suggestions for support around accessing livelihood opportunities and entrepreneurial capacity building were very limited with no one thinking ‘out-of-the-box’ but rather coming up with a ‘wish-list’ of desired items, such as more clinics, tin sheeting for houses, feed pans for livestock, fertilizer and improved seeds, cattle for plowing and chickens, etc.

## **E. Employment and Remittances**

### **E1. Description of Employment as a Livelihood Strategy in the GMAs**

The degree of employment in communities varies considerably. Most villages visited reported very low levels of employment. Household members with sufficient education can sometimes find employment away from the village in urban centers where they work for government, civil society or the private sector. Households expect to receive remittances from these employed members.

A few villages in the GMAs, such as the Lunga VAG in Kasonso Busanga have household members employed both in tourism lodges in the KNP as well as at a local copper mine Chifumpa mine which employs some 120 people, of which about 98 percent are from the local area. Of these 120 employees, 80 are hired on a permanent basis and the rest on a casual basis. Of the 80 permanent employees, two are women. Among the remaining casual employees, only five are women. Mukunanshi village only some 40km away has almost no employment. Some other GMAs have people employed at the tourism lodges or hunting concessions. Most GMAs have male community members employed as village scouts, but as mentioned previously, many have not been paid in months by the CRBs because ZAWA has been behind on payments to the CRBs. One person in each CRB area is employed as a bookkeeper for each CRB, and at Kabulwebulwe CRB, two men were employed as security guards and one as a hammer mill operator.

The poor levels of education and limited skills and experience, as well as the lack of local job opportunities, make it difficult for community members to find employment but it is considered an important way of enhancing household livelihoods.

### **E2. Gender**

Because of the very low levels of employment opportunities in or near the GMAs, both men and women are faced with severe constraints regarding access to employment opportunities. Having said this, women seem to be even more disadvantaged than men because of prevailing attitudes about not wanting to hire women, lower levels of education and literacy among women, and seemingly lack of confidence where women do not even bother to apply for jobs.

In a discussion with Mushima-Mubabwe CRB members in Kasonso Busanga, participants were asked: “What prevents women from engaging in formal employment opportunities (at safari hunting, lodges, with CRBs as village scouts, at the copper mining, etc.)?”, the group replied:

- Lower education levels than men.
- Many women cannot read or write in English.
- Women are simply not going out to apply for these jobs (e.g. village scouts, copper mining jobs)
- Hunting operators have a ‘policy’ not to employ women – have problems when women are in the field with male employees.
- Not enough tourism opportunities to employ both men and women, so in most cases men are hired first.

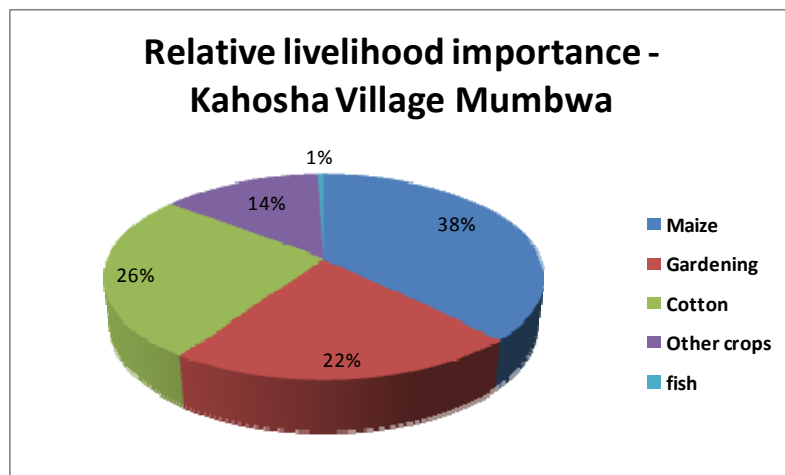
Until women in rural Zambia are further supported and given the necessary lifeskills, such as functional literacy and vocational training, plus some source of ‘empowerment’ and opportunities to receive on-the-job training via volunteer work or internships, they will continue to lack the experience and confidence to apply for any of the few jobs that are available. Until employers are ‘sensitized’ around the pervasive gender bias found in the rural area formal sector, it is unlikely that their negative attitudes towards hiring women will change any time in the near future.

## F. Livelihood Profiles in the GMAs

### F1. Village Livelihood Profiles in the GMAs

As a component of the participatory research conducted in the target GMAs focus groups were engaged in livelihood ranking exercises, and asked to rate the relative importance of their livelihood activities in terms of the contribution to their well being. Thus it was possible to determine relative contribution of an activity to livelihoods. The results of these are presented below in exhibits 17 to 18. The selection of villages was influenced by the desire to select representative sites, but it was also influenced by logistical constraints such as time and mobility. The results represent conditions in particular villages and provide examples only of the conditions prevailing in the broader GMA environment. Nevertheless they do provide valuable insights to the local economies.

**Exhibit 17: Mumbwa Village livelihoods profile — Kahosha**



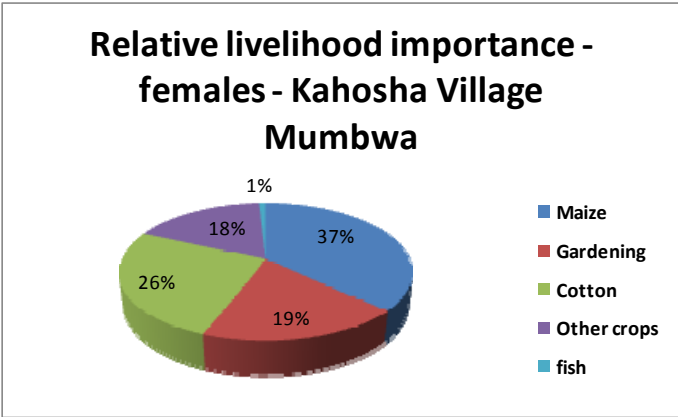
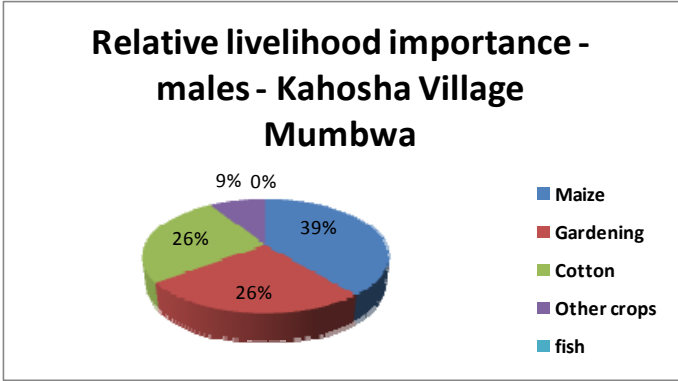


Exhibit 17 is a village profile for the Mumbwa GMA derived from FGDs in Kahosha village. It depicts the perceived relative importance for livelihoods among all different income earning activities. It is important to note the almost complete reliance in the village on crop production with maize, vegetable gardening, and cotton forming the main crops. This village is on the densely settled eastern edge of the GMA and has relatively poor access to other natural resources. However, it also reflects the fact that communities receive only negligible amounts of income from wildlife and forests. This may explain why communities in these areas have little interest in wildlife and forest conservation.

**Exhibit 18: Mufunta Village livelihoods profile — Kamakokwa**

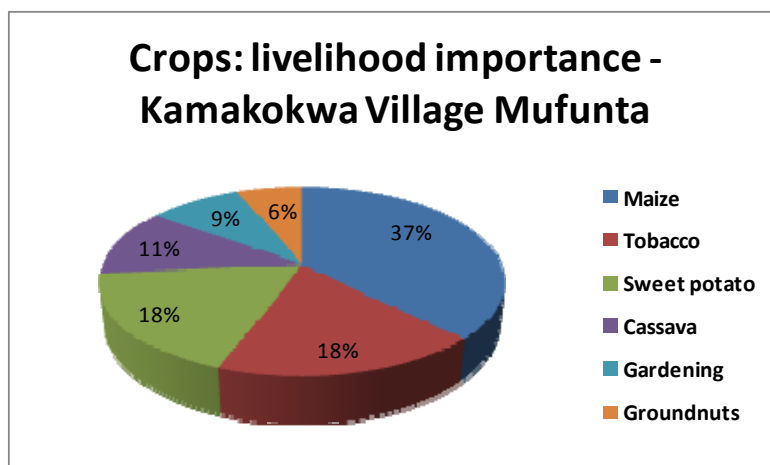
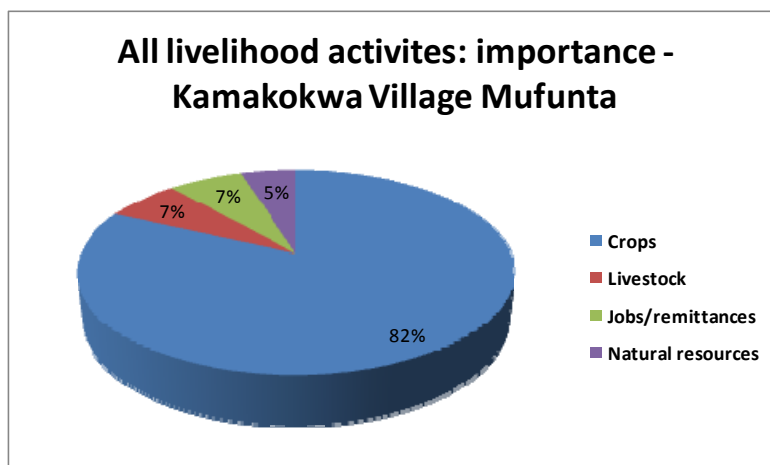
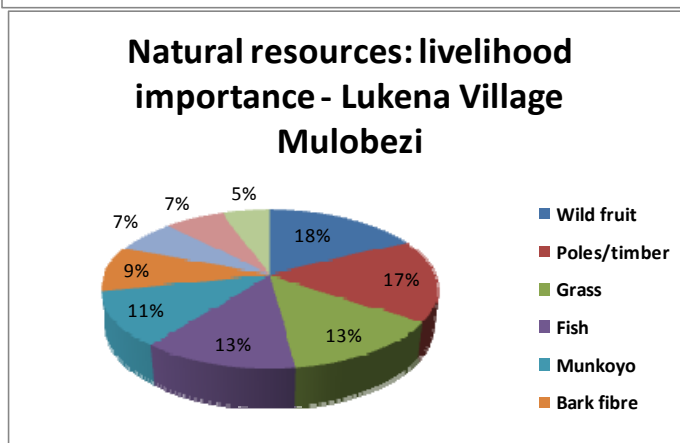
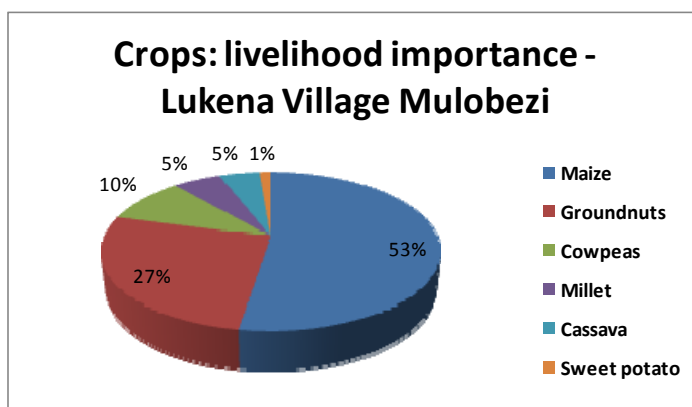
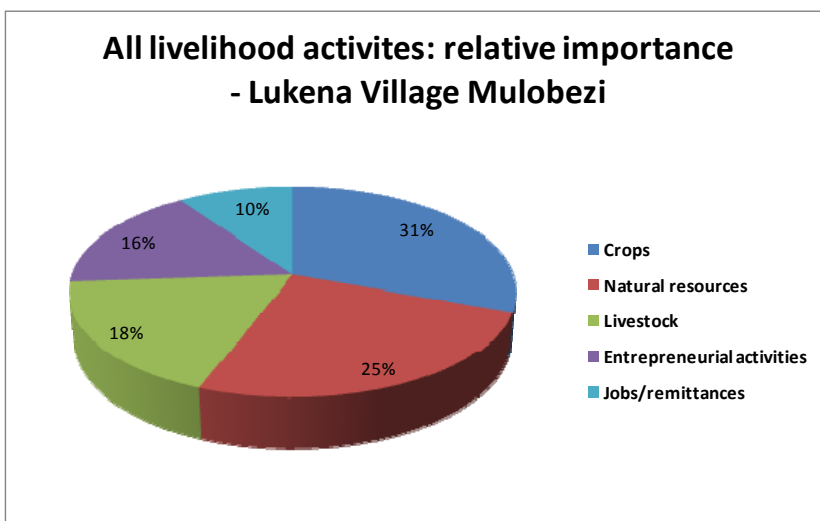


Exhibit 18 is a village profile for the Mufunta GMA derived from FGDs in Kamakokwa village. It depicts the perceived relative importance for livelihoods among all different income earning activities. As was the case in the Mumbwa example, there is almost complete reliance in the village on crop production. In this community a range of crops are produced and tobacco outgrowing is important are a result of local market access. Only 5 percent of the livelihoods are considered to be generated by natural products. Again this village is in the densely settled part of the GMA zoned for development, and incomes are not available from woodland and wildlife resources.



**Exhibit 19: Mulobezi village livelihoods profile — Lukena**



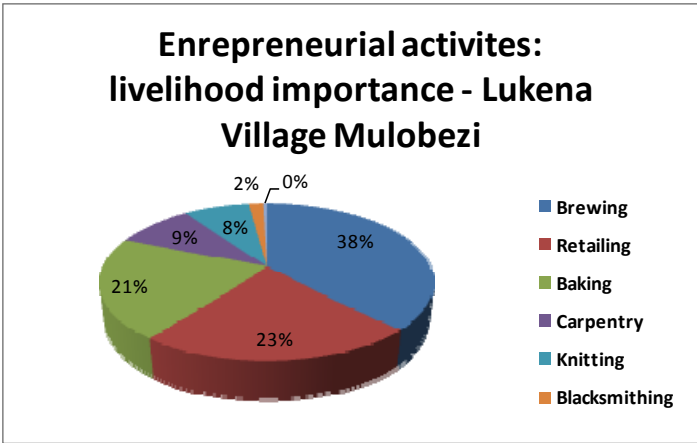
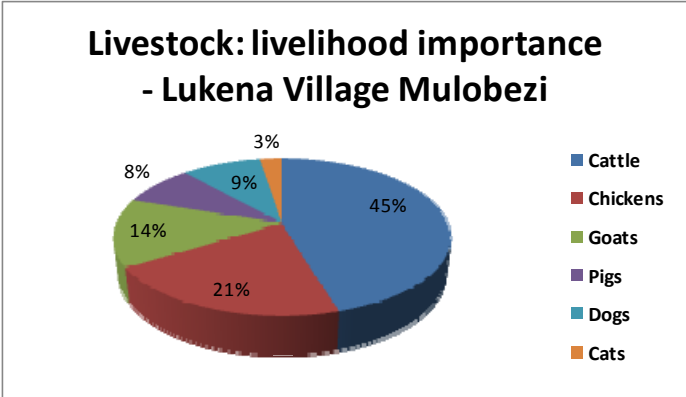


Exhibit 19 is a detailed village profile for the Mulobezi GMA, derived from FGDs in Lukena village. It depicts the perceived relative importance for livelihoods among all different income earning activities, first in general, and then according to the main groups. Here, with low rainfall and poor, sandy soils, the crop potential is low. Further, markets for crops are distant. Greater reliance is made on other livelihoods mechanisms, most notably consumptive use of natural resources. Livestock is also more important reflecting better conditions here for livestock than those prevailing in more northern GMAs. Cattle and chickens are seen to have the greatest importance among livestock. Various entrepreneurial activities also have significance, most notably brewing, baking, and retailing. Additionally, employment is important in this village with the main source of employment being the nearby commercial sawmill and a hunting tourism concession. However, generally poverty levels are high. Despite the presence of relatively valuable forest and wildlife resources, and the presence of commercial hunting and timber concession in the GMA, communities do not receive significant income from these sources.

**F2. Household Profiles in the GMA Villages**

Household profiles were examined through Household Case Study interviews in Kasonso Busanga, Mumbwa and Mulobezi GMAs. The results of these are documented in Annex J. Households were picked subjectively to enable specific data to be collected from male- and female-headed households, poor and richer households, general farming households and households with specialized livelihoods activities. Farming households showed that their livelihoods were dominantly derived from crop production activities, while others, while still

engaging in crop farming, derived important livelihoods from other activities such as charcoal production, sales of *munkoyo* roots, beverage making, carpentry, fishing, beekeeping, and other natural resources. The specialized households were relatively few in the broad community and did not represent the average situation.

In terms of expenses all households tended to have the same expenses. These were dominated by school fees for children, but also included health costs and expenditures on food, clothing and household utensils. Otherwise household costs related to inputs for livelihood activities. Nearly all households studied had problems meeting their obligatory expenses, and almost none generated any cash surpluses. When describing constraints, it was common to find that further development of their livelihood generating activities was constrained by lack of money to buy, for example, fertilizer, improved seed, tools and equipment. Poverty and food insecurity was significant. In many case some children were unable to attend school because of cash shortages. Informal use of wildlife for meat and use of forests for charcoal are frowned upon or illegal and consequently severely under-reported. However, physical evidence observed suggests that these clearly take place, and serve as outlets for struggling households.

### **F3. Gender**

Additional observations on gender during the Household Case Study Visits revealed a strong commitment from both men and women to provide education for their children – both boys and girls – despite having large extended families to support and having to struggle to meet high school fees and boarding costs. The families interviewed had only some small assets, and few had any large assets such as plows or cattle. Single female-headed households in particular lacked any significant assets. Based on interviews, couples work together in order to meet the financial needs of their households, and women take great pride in their efforts to provide for their children and homes, sometimes engaging in numerous and diverse livelihood activities as a strategy to spread the risks of failure. Even so most respondents reported having difficulties to cope during times of extra stress – drought, crop damage by wild or domestic animals, death of the head of household, and the inability of grown children to find jobs or other income opportunities. Single female-headed households seemed to be especially affected during these times. Whereas families with both the husband and wife earning income had more options to fall back on during times of additional stress.



## **SECTION IV. CURRENT CROSS-CUTTING FRAMEWORK FOR LIVELIHOODS**

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In this chapter, the livelihood activities described above are put into the context of cross cutting issues that affect the development of sustainable, equitable livelihoods activities. These issues include land use and land tenure, conservation and community based resource management practices, education and training, gender, and ecosystem services.

### **A. Land Use**

#### **A1. Land Tenure in the GMAs**

Commercial hunting and consumptive tourism in the GMAs constitute valuable sources of income that support CRB and ZAWA's activities particularly since these activities are not allowed in the KNP. Forestry is mostly carried out in the communities for local use and commercial harvesting. Timber logging is common in all GMAs and accompanied by illegal charcoal production in the GMAs that falls close to concentrated populations or along roads leading to urban areas. Collection of natural honey is becoming an important income generating activity. Other non-timber forest products obtained from the GMAs include fruits, fibers, medicines, dyes, mushrooms, thatch-grass and fuel-wood. All products have some commercial value and might justify further investment in sustainable production, processing and marketing with a percentage that could be paid to the state and community, broadening the income base. Small-scale fishing takes place in pools and on tributaries of the Kafue River, the Zambezi River, and on Lake Itezhi-Tezhi. With all these also come detrimental practices that cause deforestation, erosion, habitat destruction and land degradation as a consequence of human intervention.

Besides these natural resources, agriculture (both subsistence and commercial) characterizes human presence in the GMAs consisting mainly of maize, sorghum and vegetables as subsistence and maize, cotton, tobacco, and horticultural crops as commercial. Small-scale livestock farming such as rearing of chickens, pigs, goats and cattle occurs in most villages where trypanosomiasis is not prevalent. Traditional cattle-rearing is predominant in Bilili Springs and Mufunta GMAs. Extension of low production agriculture, often involving migrants, poses a threat to the environment but also offers opportunities for investment in improving agricultural production and conservation agriculture thus contributing directly to conservation as well as poverty reduction.

Settlement in most GMAs is expanding into wildlife habitats, causing disturbance, reductions in animal wildlife numbers, loss of forest resources and uncontrolled bush fires. This encroachment towards the KNP boundary is increasing, and likely to lead to increased HWC.

Other land use practices found in GMAs include mining. At present there is active mineral production and exploration by both large and small-scale mining companies in some of the GMAs, most notably the Lunga Luswishi and Kasonso Busanga GMAs.

In addition, establishment of Itezhi-Tezhi dam has resulted in creation of a new district, leading to increased social services that attract in-migration, and consequently, local population growth. There is already evidence of excessive demand for natural resources, land for cultivation, over-fishing and wood for construction and fuel.

## A2. Customary Land Tenure

During the reconnaissance trip and fieldwork, interviews on land aspects were held with five traditional chiefs and their representatives in the following chiefdoms: 1) Kasempa Chiefdom in Kasonso Busanga GMA (and also overlaps with Lunga Lushwishi GMA), 2) Kahare Chiefdom in Mufunta GMA, 3) Moomba Chiefdom in Mulobezi GMA, 4) Siachitema Chiefdom and Shezonga Chiefdom in Bilili Springs GMA, and 5) Kabulwebulwe Chiefdom in Mumbwa GMA (see Annexes A and B for listings of research schedule and interviews). From these discussions it was determined that customary land allocation procedures vary from chiefdom to chiefdom, except those of statutory nature. The latter follow a relatively uniform system, in part because they have been written into a variety of legislative frameworks such as the Lands Act (Cap 184) of 1995 and the Wildlife Act (Cap 201) of 1998, while customary allocations, under the authority of the chiefs, have not.

Chief Kasempa, of the Kaonde people, identifies two types of settlers in the Kasonso Busanga and Lunga Luswishi GMAs under his chiefdom:

1. *Bona fide* GMA residents who do not apply to settle in the GMA, and have authority to carry out any permitted activities to meet their livelihoods. Even when it comes to licensing, they enjoy reduced rates of payments; and
2. New settlers, where the applicant has to follow some procedure as prescribed in the Village Act (Cap 289) of 1971. In these cases the applicant must:
  - a) Be assessed by the responsible regional headman, who determines whether or not the applicant will stay permanently.
  - b) Upon satisfactory consideration, the applicant is registered on the appropriate village's register.
  - c) The regional headman (there are 12 in the chiefdom) then reports to the Chief.

No payments are prescribed under this land allocation system. Here, both female and male applicants are given equal opportunity, but none can be granted statutory leasehold title. When land disputes arise, these are amicably resolved at the palace after the matter has been investigated by headmen and, chief's retainers, depending on who raises the dispute. Land records are largely ineffective for a number of reasons including: proper records not being kept by village headmen, no reference to land carrying capacities, and no description/mapping of allocated land parcels. Chief Kasempa noted that the Kasonso Busanga General Management Plan (GMP) has not been given to him and has not been discussed in his Chiefdom.

At Njonjolo Palace, Chief Kahare, of the Nkoya people in Mufunta GMA, described the customary land acquisition procedure in Kaoma District:

- 1) An applicant approaches a respective Induna (village headman).
- 2) When land is identified the Induna inspects the land in the presence of the applicant, and at least three such places are inspected.
- 3) The Induna reports the results to the Chief.

- 4) The Chief sends a team of Induna to verify the land and assess the application, including measuring and demarcating the allocated land, and issuing the transfer letter.
- 5) Then the applicant is brought to the Chief for kushowelela where he or she is given guidelines on how the land can be used.
- 6) An acceptance land certificate is then issued showing hectares given and location (an example is provided in Box 1).

**Box 1: Sample Letter of Acceptance/Land Certificate**

<p>Emblem of an Eland Litoya Royal Establishment Address</p> <p><b>Acceptance Letter</b></p> <ul style="list-style-type: none"> <li>• To certify bearer.....NRC No.....</li> </ul> <p>Accepted to live in Chiefdom.</p> <ul style="list-style-type: none"> <li>• .....acres/ha of land allocated to man/woman.</li> </ul> <p>Land in question situated in ..... village headman at .....place or area near .....</p> <ul style="list-style-type: none"> <li>• Bearer fully paid K310,000 as royal salute (kushowelela/kukambilila).</li> <li>• See that this document shall be retired and be removed from land without any refund of salute. Document not valid to indisciplined person.</li> </ul> <p>Signed by Ngambela</p> <p>..... Receipt no.: .....</p> <p>Date stamp of Ngambela</p>
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The applicant pays ZMK200,000 for the demarcation, to be shared among the *Induna*. The applicant also pays a total of ZMK310,000, at the palace.

The Chiefdom does not recommend issues of statutory leasehold titles for farming or traditional settlement in GMAs because, as Chief Kasempa observed, these lands are supposed to be ‘animal kingdoms.’ GMPs have not been shared with Chiefs but only with CRBs.

At Nanzhila Village in the Bilili Springs GMA, representatives of Chief Shezongo from the Shezongo Chiefdom outlined the land acquisition procedures of the Ila people as follows:

- 1) Applicant meets with headman first.
- 2) Headman introduces applicant to Chief.
- 3) Applicant allowed to settle after Chief’s confirmation.
- 4) There is no documentation except a letter of introduction/transfer.

Chief Moomba of the Nkoya people in Mulobezi GMA follows these customary land allocation procedures:

- 1) Applicant meets with the nearest headman.
- 2) The applicant and headman, must meet with the Senior Headman.
- 3) The matter is then sent to the Chief for introduction and acknowledgement.

Chief Siachitema of the Tonga, in Bilili Springs GMA, outlined the following procedure:

- 1) Application is submitted to the respective headman.
- 2) The application is then assessed by the headman, who reviews applicant's personal standing/transfer details.
- 3) The application is sent to Chief for confirmation.
- 4) Once approved, applicant is put on probation for six months; during this time his/her character/conduct is observed.
- 5) The applicant is then registered in the village register.
- 6) The land is demarcated by the Sibbuku (headman), like elsewhere without use of any measuring tools.

Certain procedures emerged that would improve land management, particularly for Lozi system (Nkoya) of administration, such as issue of land certificates, use of efficient measuring tools for allocating land, recording of allocations descriptively and with maps, and maintenance of not just village registers but details of descriptions of land allocated, land remaining, and boundaries/details of land allocated to other uses like managed communal grazing or forest development. GMPs, as entry/starting points for improved land management, should lead to the development of relatively comprehensive, environmentally-friendly, community land use plans that would fit into district development land use plans. Issues of clarity between tribute and payments should be spelled out.

From the procedures outlined above on customary land, with the exception of *bona fide* residents, an applicant seeking land for settlement or agricultural purposes communicates with a village headman, who then in one way or another:

- 1) Assesses the applicant's worthiness to settle in the area, based on a letter of transfer or confirmation of relatives/friends that have recommended him or her.
- 2) Confirms or identifies a suitable piece of land with due consideration of, or in consultation with, affected residents or a village committee and sometimes with preliminary markings made.
- 3) Upon consent, introduces the applicant to the immediate superior authority for due consideration depending on the royal establishment hierarchy.
- 4) The matter either goes to the next level of headman or straight to the Chief who may appoint a team to confirm/mark boundaries or the status of the land.



- 5) When this has been ascertained, the Chief grants authority for the applicant to be approved either in writing or verbally; and the applicant is subsequently registered on the Village Register. Sometimes details of boundary descriptions/sizes allocated are also recorded.

Under the current system, there is no provision for recording rights except usufruct rights, where these apply over planted trees/perennial crops. When conflicts over land and rights arise, these are amicably resolved within the traditional hierarchy.

Presently, there are no land use plans, or capacity at community level, that guide land allocations except in pastoral communities where pastoral land is separated by homesteads from crop fields. An exception is burial grounds and *malendes* (ancestral shrines) as ‘no go’ areas for any other use. Community members are not actively engaged in the land allocation as a courtesy. Some payment may be made as tribute, or for survey fees to support the process.

Once declared a resident, an occupier enjoys the same privileges as fellow residents, like access to communal grazing if having livestock, communal domestic water use sources, non-timber forest products in prescribed areas, or timber products usually with permission from the village headman. Special fishing rights are given by the Chief on prescribed days/periods. No one can give wildlife, mining, non-domestic water abstraction rights besides the State under appropriate legal instruments.

### **A3. Statutory Leasehold Tenure**

The procedure for changing land tenure from customary to statutory leasehold for agricultural purposes in a GMA entails a ten step process by which written authority from the Village Headman and the Chief for the Department of Agriculture is obtained. Demarcation of the land is conducted by a land surveyor or other appropriate government staff, and approval by ZAWA is required. The application is considered by a sub-committee and full District Council, before being forwarded to the Commissioner of Lands for final consideration of all required documentation.

Discussions with the Chiefs during the fieldwork indicated an unwillingness to grant statutory rights to individuals in the GMAs, especially for farming. Chief Kasempa, remarked, “no farmer has been given title in Lunga Luswishi. We call it ‘animal kingdom’.” However, Chiefs are willing to give land for lodge development for 14-year statutory titles, but not the longer 99 year titles. They become agitated when they discover issuance of longer titles, or of any other titles that do not bear their consent. Converted statutory leasehold tenures in originally customary tenure lands have deprived local communities of ownership and access to communal resources.

Special statutory rights are granted to applicants for any mining or mining exploration, water abstraction or on-stream storage, wildlife hunting, or timber pit sawing extraction as prescribed under various legislation and regulations. Government prescribes these procedures from time to time. However, one of the Chiefs, Chief Kasempa was of the view that mining should be stopped due to its negative effects on wildlife.

#### **A4. Governance Issues Related to Land Tenure**

Many GMAs have poor, inadequately developed, land governance and allocation systems. The challenge of coordinating land allocations between Chiefs and ZAWA, is a matter that needs to be addressed to foster a process of consultation between communities and Chiefs. At the District Council (DC) level, submissions to the Commissioner of Lands are screened and some consented applications from Chiefs are rejected, as a control measure. For example, as reported by the Mumbwa DC, recently one application of 12,000 ha, which involved the relocation of 10 to 12 villages was rejected, noting further that Chiefs do not consult their subjects over land allocation. Inadequate documentation of land transactions at the Chiefdom level is another concern. Agreements, transactions, and documentation are not shared among key parties. The reluctance of Chiefs to share land allocation information with their subjects creates concern that Chiefs are selling land; that villages may need to be relocated due to large land transactions; and that there are ineffective controls at the DC level.

A number of the Chiefs interviewed during this study were not willing to convert their GMA land to statutory leasehold title holding and were only willing to grant short-term leases for development of lodges. Like any other conversion to statutory tenure, such land ceases to be under the Chief's administration and does not convert back at the end of the lease period.

However, with increased settlements and pressure exerted on the natural resources, a dependable, holistic, and integrated approach needs to be developed to link interests of ZAWA, other government actors, CRBs, and local Chiefs in order to ensure sustainable use and improved productivity. Business allocations of local resources (hunting licenses, timber concessions, mines, lodges) sometimes do not appear to have the consent of communities.

Written documentation and precise records need to be established and well archived starting at the Chief level. Greater participation in management of available natural resources should result in mutual tangible benefits that increase wealth and stimulate support of conservation of GMAs. A strengthened CRB system would include equal participation and input from investors, communities and local government, and would ensure that each party received benefit from increased tourism. Effective CRBs would foster mutual trust, encourage communities to invest in the land, and provide security of land tenure.

#### **A5. Land Use in the GMAs**

The current resource planning process attempts to delineate settled areas as development zones and align these with the GMP zoning to the extent possible. Where this has not been possible, people have been resettled accordingly, most notably in the Sichifulo and Namwala GMAs. Ongoing and consistent planning is lacking in the designated development zones, as the process of realigning designated land uses to appropriate zoning can be costly and time-consuming. For example, Mulobezi GMA is challenged by high timber extraction in the absence of effective resource exploitation survey mechanisms. Poaching threats facing Lunga-Luswishi GMA worry Chief Kasempa who proposed four management units for the GMA to cut down on the highest environmental threat in the area. With or without REMNPAS, local communities need to be empowered with necessary knowledge and skills to effectively participate in the implementation of developed GMPs. Zonation and settlement distribution maps for all GMAs, and accompanying comments where relevant, can be found in Annex K. Little information is

available regarding the geographic distribution of actual or planned resource use practices. Trends were only deduced from community derived resource maps and other participatory exercises. Significantly more time and resources are required to access, analyze and ground truth satellite imagery. Below, in Exhibit 20 is a composite categorization of the various land use zoning types planned in the GMAs. This exhibit indicates a number of desirables that require time to come to fruition. Additional resources would be required to enhance the implementation process and include a participatory approach.

**Exhibit 20: A composite categorization of the different GMA land use zoning, compiled from the approved General Management Plans for the GMAs**

Zoning Type	Characteristics		GMA
	Natural resources conservation	Limits of Acceptable Use	
1. Conservation-limited (important wild species/ Populations/ habitats; biodiversity); Natural preservation (Kasonso-Busanga, Mufunta) – preservation/restoration of natural resources /conditions and ecological processes	-consumptive and non-consumptive use; -construction infrastructure; camp/picnic sites; information centers; lodging; communication; -game viewing; game walks; bird watching; live capture fishing/angling; photographic tourism; safari and resident hunting; hunting trails; safari hunting camps; -management/game viewing loops; water points, wildlife camps; airstrips; fire guards; entry/exit gates; research and education; -honey collection; bee keeping	-new developments at least 50 m away from rivers; -no human settlements; no tarred roads; -no new hunting trails; -no livestock; no farming; no charcoal burning; no uncontrolled bush fires; -timber harvesting limited to 1 pit sawing and 1 commercial license; -2 resource protection camps; - no new mining;	Sichifulo, Mulobezi, Nkala, Namwala (no fishing), Kasonso-Busanga, Mufunta, Mumbwa
2. Restoration	Non-consumptive tourism; research; infrastructure such as roads, communications, wildlife camps, fire guards, game viewing loops	-No hunting; no human settlements; no farming;	Sichifulo
3. Protected Natural Area (Rich in wildlife and/or biodiversity); Wilderness (Mufunta)	- bird viewing; nature walks; research; 2 temporal camps; - management roads; game viewing loops; wildlife camps; fire breaks;	-No human settlements; no permanent structures; no tarred roads; no consumptive use	Sichifulo, Mufunta
4. Exclusive Conservation	-Protection of special habitats: wetland with abundant wildlife, breeding area -game viewing; bird watching; resident & safari hunting; research; hunting camps/trails/loops		Mulobezi
5. Buffer (transitional areas between human and wildlife)	-research & development, wildlife camps, communications infrastructure; hunting; heritage sites; roads; fires; -game viewing, controlled fishing	- no human settlements; no farming; no livestock; no hunting; no permanent/ tarred roads; -game ranching; no mining; no cutting of trees; no graves; no pollution; no bush fires; no honey harvesting	Mulobezi; Nkala (special use buffer), Kasonso Busanga, Namwala, Mufunta, Mumbwa

Zoning Type	Characteristics		GMA
	Natural resources conservation	Limits of Acceptable Use	
6. Heritage/Cultural Preservation	- Special sites of heritage and cultural nature		Nkala
7. Special Use	-fishing, recreation		Namwala; Kasonso-Busanga, Mumbwa
8. Tourism	-Non-consumptive uses: photo safaris; lodges; heritage sites; road signs;	-No hunting; no human settlements; no farming;	Namwala, Mumbwa
9. Development	-human settlements; social services; planned developments; sustainable resource use; farming; timber logging; fishing; mining; consumptive and non-consumptive tourism; lodging; grass harvesting	- no game ranching; no uncontrolled fires; no indiscriminate cutting of trees; no copper smelting; no hunting; no commercial farming; up to 4 small-scale mining	Mulobezi, Nkala, Namwala, Kasonso-Busanga, Mufunta, Mumbwa

Land use practices in the GMAs are diverse, both agricultural and non-agricultural, some complimentary and others non-complimentary to the co-existence of wildlife, biodiversity and human settlement. Land use practices of the visited GMAs are described below.

In Kasonso-Busanga GMA, community activities are characterized by low input and low risk. Households have very low ability to spend, with purchased inputs not more than ZMK50,000/ha/year, and have difficulty accessing inputs. They tend to be traditional land users practicing shifting axe and hoe block *chitemene* (clearing new fields every five to eight years) and growing maize and sorghum (cereals); cassava and sweet potatoes (root tubers); beans, cowpeas, and groundnuts (legumes); and planting mango and banana trees around homesteads. They are also honey hunters and collectors and fishers. Other livelihood activities include some charcoal burning, non-artisanal fishing, pig and goat rearing, selling of thatching grass and wild fruits when in season; and collecting honey from bee-hives in the woodlands. Cattle-rearing is not common due to prevalence of tsetse fly except in the Lalafuta area of the GMA. Current poaching is discreet, but important as a livelihood source, evidenced by large presence of dogs and shifting of families during the farming season to live close to the woodlands. Discussions with the CRBs and VAGs also reported significant non-traditional farming activities such as carpentry, basketry, and pottery, but also mining and safari hunting by ‘outsiders’. Transportation of inputs and produce for those who can afford it is by bicycle, otherwise on the head or shoulder (See Annex J Household Case Study for Kasonso Busanga GMA, Shifwaba Village).

In Mufunta GMA, community land use is more diverse. These are moderate (with ability to spend between ZMK50,000 - 500,000/ha and with access to agricultural extension and credit), to high (with ability to spend more – between ZMK500,000 to ZK1,000,000 per hectare on agricultural inputs, with access to credit and oxen or tractor) land users. These moderate to high land users are also surrounded by many low input land users who practice semi-permanent hoe and ox plough cultivation. The latter have taken up farming of cash crops such as Virginia tobacco, sweet potatoes and maize, as well as growing of cassava, groundnuts, millet, sorghum,

mangoes and bananas (around homesteads) and keeping cattle and other small livestock. They can be somewhat destructive to natural resources as they seek to expand their farming hectares, and access forest products. Rice could, potentially, be grown in some of the dambos, as could also soybeans, sunflower and beans on the upland. These communities, especially along the Lusaka-Mongu road, also engage in trading, characterized by many small shops, fat cake/fritter sellers and grinding mill dealers.

The Mumbwa GMA contains communities who practice systems similar to Mufunta and grow a range of crops such as maize, cotton, Virginia tobacco, groundnuts, and other crops for marketing, including assorted produce from gardening. There is great demand to settle on this land because of its relatively higher agricultural potential. Enterprising land users in this area also engage in general trading, some mushroom growing, carpentry, beekeeping, tailoring, and hammer mill activities in addition to farming. Charcoal burning and poaching are carried out discreetly, but are significant.

In the Bilili Springs GMA, communities practice semi-commercial ox/tractor cultivation at moderate to high input levels, growing maize, groundnuts, sweet potatoes, and soybeans, plus vegetable gardening. Pastoralism predominates in this GMA, which includes the keeping of cattle, goats, sheep, chicken, pigs, rabbits, doves, and ducks.

Communities in the south-west consist mainly of subsistence agriculturists, with very low inputs, and very low risk. They are also hunters, natural resource users, and migratory workers. A significant number are now taking up employment in tourism or saw timber production in Mulobezi GMA.

Exhibit 21, the environmental vulnerability map on the next page identifies GMAs facing particular problems with current land use practices. Of the five selected GMAs, the most threatened GMA is Bilili Springs, which scores highest almost in every aspect. Kasonso Busanga and Mumbwa GMAs follow. Critical problems in Kasonso Busanga are poaching, subsistence agriculture, illegal fishing, and human encroachment. In Mumbwa the threats involve human encroachment followed by deforestation, and then subsistence agriculture, charcoal burning, and uncontrolled fires. Mufunta and Mulobezi GMAs are the least vulnerable of the GMAs studied. In Mufunta, subsistence agriculture, deforestation, human encroachment and fire are problematic; while in Mulobezi uncontrolled fire, poaching, mining and deforestation are the more critical issues. Since this study typically centered on only one VAG and one village per GMA, it was difficult to probe activities elsewhere. However, information was captured at Mukunanshi Village in Kasonso Busanga GMA, at Siamwanja Village in Mulobezi GMA, and at Kamakokwa Village in Mufunta GMA.

## **B. Conservation and Community-Based Resource Management**

### **B.1 Status of conservation in the GMAs**

The responsibility of conservation and natural resource management activities in the GMAs lies with the CRBs, specifically the Resource Management Committees (RMCs). Conservation efforts in the GMAs are, however, generally poor and restricted to wildlife management through the employment by CRBs of village scouts in an attempt to curb poaching activities. Even with their appointment, there is little control or knowledge of these anti-poaching activities among the

RMCs, with the perception that ZAWA is responsible and has the resources to coordinate and manage the village scouts.

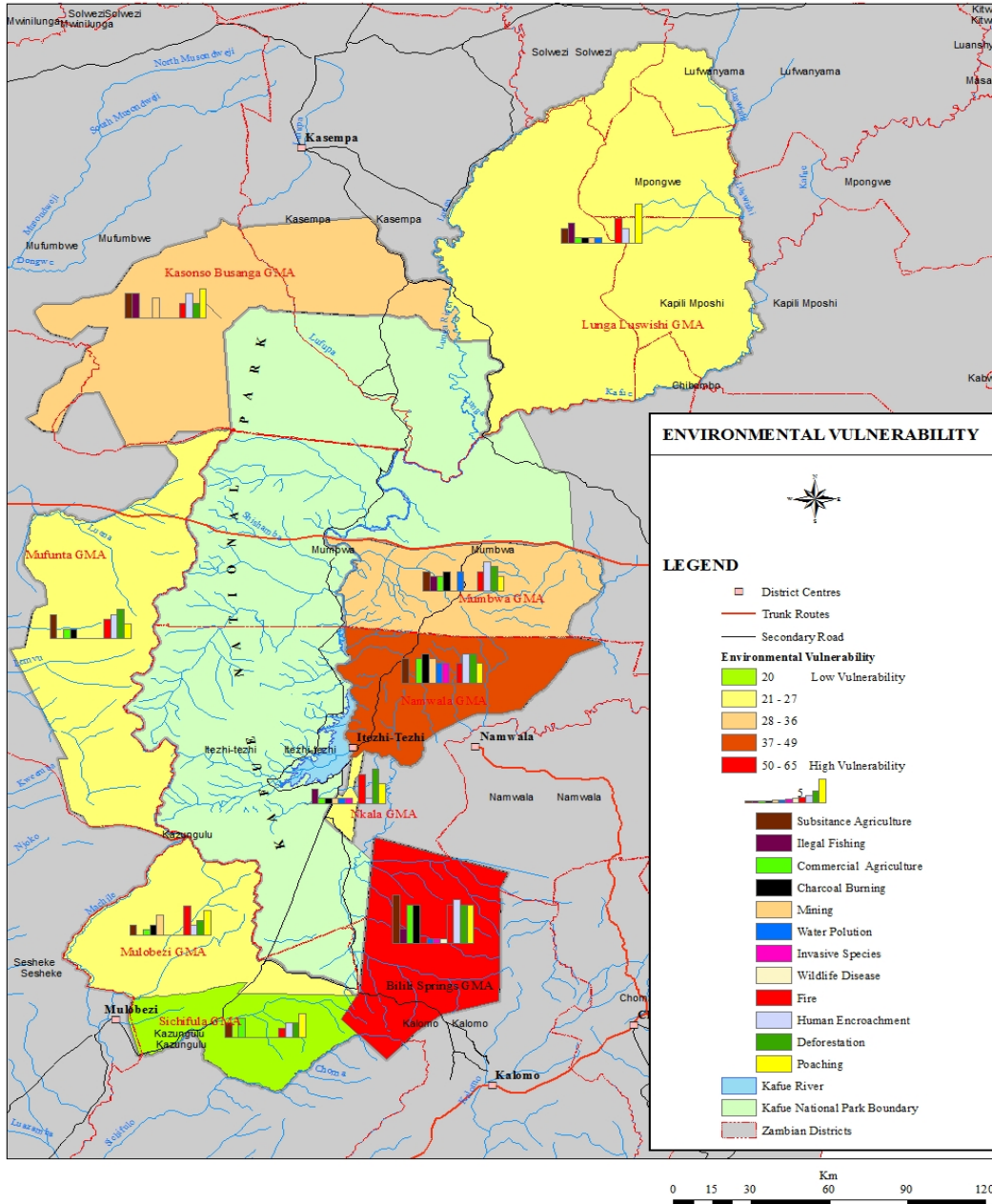
In addition, there is little feedback from ZAWA in terms of reports to the CRBs, via the RMCs, on the success of their activities, so the communities are not sure what are being achieved. As a result, there is no accountability; no gauge of how their efforts are impacting poaching levels and what they can do to improve the situation. To exacerbate the situation, many of the CRBs are unable to pay their village scouts, forcing them to adopt alternative means to earn a living and survive, which include harvesting the wildlife they are employed to protect.

There is also poor understanding and knowledge of the conservation status of their GMAs among the CRBs. For example, none of the CRB members or ZAWA staff interviewed knew that Kasonso-Busanga GMA contained a RAMSAR site, or indeed, what it meant. Similarly, there was little understanding or knowledge of the reclassification project (UNDP) and the identification of Partnership Parks and Game Reserves in, respectively, Kasonso Busanga and Lunga Luswishi GMAs.

Exhibit 21. Environmental Vulnerability Map



MCC gKNP GMA Situational and Livelihoods Study



Overall, the CRBs lack the capacity and support to enable them to conduct appropriate and effective natural resource monitoring. This was evident in their failure to produce adequate reports on the status and trends in their natural resource base in the GMAs and absence, for the most part, of any conservation or management activities. The lack of an adequate revenue stream from ZAWA intensifies the situation, as there is simply no money to use on such activities and programs. It was also evident that there was a distinct lack of adequate support by ZAWA and/or NGOs in most GMAs, with input coming largely in the form of governance assistance and concession agreement coordination and support from ZAWA, and village scout wages, coordination and management coming from the hunting operators.

Throughout the GMAs, there is a considerable lack of communication and collaboration between the Fisheries and Forestry Departments and the CRBs. In fact, there was no extension officer activity by these departments in many of the GMAs. As a result, the feeling that the fish and forestry resources were the government's responsibility negated the communities desire to monitor and manage these resources. This was compounded by the fact that the CRBs did not receive any benefit from any commercial activities to harvest these resources. The Forestry Act, for example, provides for the community to receive 10 percent of the revenue generated from any licensed forestry activities in the GMAs. No GMA CRB has realized this share of the revenue. Lack of dispensation by the Ministry of Finance and absorption by the council (the route through which this share of the revenue has to flow to get to the community) were cited as reasons for this failure.

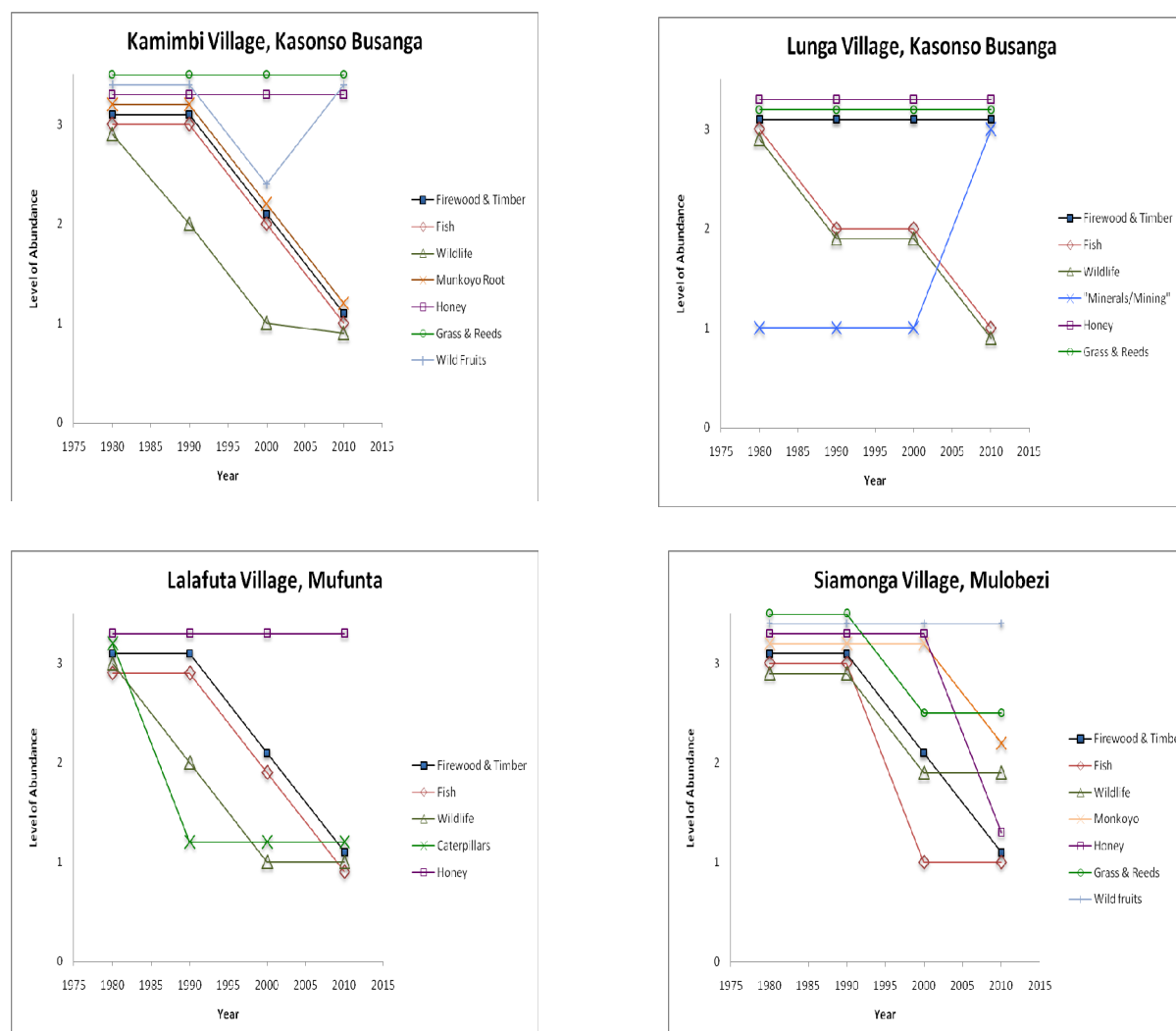
From a community based management point of view, no system currently exists that enables the CRBs to monitor the use and extent of their natural resources. There was evidence of some monitoring and conservation activities in Bilili that were introduced by the CONASA project, but the system failed soon after the project ended and, although aware of the need and benefits of such programs, the CRBs lack any training or support and have neither the resources nor the capacity to implement monitoring systems. WWF is currently introducing the MOMS system to CRBs in Mufunta, and the RMC at Kabulwebulwe, in Mumbwa GMA was quick to show the team their 'Event Book' forms that their village scouts were being trained by WWF this year to use. The Kabulwebulwe CRB Event Book indicated that poaching levels had reduced from ten incidents per month to three per month in the last six months. This was one good example of how a supporting NGO was making a difference in building the capacity and supporting natural resource monitoring that having an impact on CBNRM ownership and responsibility at the CRB level.

## **B2. Trends in natural resource abundance**

As a result of the general lack of adequate management and conservation activities, there is a general downward trend in the abundance of natural resources in all of the GMAs visited. During natural resource trend analysis exercises conducted in some of the villages, the communities testified to a significant reduction in the abundance of all natural resources important to their livelihoods (please see Exhibit 22).



**Exhibit 22: Trends in the natural resources important to people’s livelihoods recorded during Resource Trend Analysis exercises in the villages of Kamimbi, Lunga (both in Kasonso Busanga), Lalafuta (in Mafunta) and Siamonga (in Mulobezi)**



According to the communities in all of the GMAs, except Mulobezi, the wildlife resource has been depleted to low levels by excessive consumption by local hunters. Community members in Kasonso Busanga stressed that the biggest losses in wildlife numbers have happened in the last two years as a result of rampant poaching activities among the village scouts. This was confirmed by most people interviewed on the subject; the local hunting operators, the photographic tourism operators in the KNP and an honorary ranger at the Chifumpa copper mine in Lunga. In contrast, the relatively high numbers and population stability of all wildlife species in Mulobezi has been attributed to relatively low human population levels in the GMA (according to ZAWA officials and village scouts) and ZAWA’s anti-poaching efforts imparting enough fear in the people to deter them from hunting like they used to in the 1990s as one village member in Siamonga said, “the thought of getting caught by ZAWA is painful in the stomach”.

Communities have also seen a dramatic decrease in some of the other natural resources important to their livelihoods like fish, firewood and timber, and munkoyo root (*Rynchosia* spp) in all of the GMAs. According to village members of Lunga village, fish populations on the Lunga River in Kasonso Busanga have been depleted by the use of poison as a fishing technique, and an increase in the number of commercial fishermen coming from outside the area (e.g. from the Copperbelt). Firewood and timber resources have also been depleted heavily on average within a radius of two to four kilometers of the villages. Daily trips of between three to four hours are now required to collect firewood. Poles are still plentiful further away from the village in the Miombo woodland of GMAs like Kasonso Busanga and Mumbwa and the Kalahari Woodlands of Mulobezi. Despite the extent of agricultural encroachment (maize and tobacco fields) in Bilili and Mufunta, which is putting pressure on some of the commercially viable timber products (e.g. mukwa – *Pterocarpus angolensis*), villagers still believe there is sufficient timber for commercial use by the carpenters in their villages. A severe reduction on *munkoyo* roots has been observed almost everywhere as a result of its popularity as an ingredient (a sweetener) in a traditional porridge non-alcoholic drink. In most villages, family members have to travel far to harvest roots. Because women are the main users and beneficiaries of sales of this resource, women and their families will be particularly impacted if *munkoyo* roots are depleted locally.

### **B3. Governance in Conservation**

GMAs were established under the wildlife legislation as protected areas to be managed primarily for the sustainable utilization of wildlife, through consumptive and non-consumptive tourism, but which also permit other activities such as settlements, agriculture and mining. They also act as buffer zones to the KNP to facilitate its protection from other land use pressures. The Zambian government recognizes the intrinsic strength of the CBNRM philosophy, whereby local people and other landholders are accepted as the best custodians of the wildlife and other renewable resources on their land, a philosophy that rests on the principle that wildlife and other natural resources have inherent economic advantages over other land uses. The realization of this economic potential is a powerful incentive to conserve and use the resource in a sustainable way.

The new Environmental Management Act of 2011 now provides umbrella legislation for integrated environmental management and the protection and conservation of the environment and the sustainable management and use of natural resources. Although CBNRM is not specifically mentioned in the Act, the integrated management of natural resources that is implicit in GMA management is provided for.

There are multiple government ministries and agencies involved in natural resource management in Zambia including Ministry of Agriculture, Department of Fisheries, Ministry of Lands, and most notably ZAWA. The legislation that defines the roles, responsibilities, and powers of the various government actors is summarized later in this report in Section IV C. ‘Policy and Legislation’.

### **B4. Community Resource Boards, Village Action Groups and ZAWA**

ZAWA is the arm of government that has the legal authority for the management of all natural resources in the GMAs, including but not limited to wildlife. ZAWA plays a leading role in the establishment of all management policies, including setting hunting quotas, awarding hunting

concessions, and regulating tourism development such as camp sites, lodges, and game ranches. It is also operationally responsible for resource management activities including law enforcement, regulation of safari hunting and resource monitoring. ZAWA also established and provides legitimacy to Community Resource Boards (CRBs). The Wildlife Act of 1998, which established the legal basis for CRBs, defined ZAWA's role in registering and providing oversight to CRBs. They are, therefore, an essential player in the functioning of CRBs and the natural resource management activities they carry out and are mandated to promote the conservation and sustainable use of natural resources by and for the benefit of the communities.

According to the Zambia Wildlife Act No. 12 of 1998, a "local community along geographic boundaries contiguous to a chiefdom in a GMA or an open area or a particular chiefdom with common interest in the wildlife and natural resources in that area, may apply to ZAWA for registration as a community resources board" (CRB). CRBs are democratic local institutional structures through which local communities work with ZAWA to manage wildlife in GMAs and Open areas. CRBs are responsible for promoting and developing an integrated approach for the management of human and natural resources in GMAs and open areas within their jurisdiction.

Each chiefdom is divided into between three and ten Village Action Groups (VAGs). The ZAWA extension staff and office of the Area Warden together with the representative of the district council assists the traditional council and the community to zone the chiefdom into VAGs. Elections at VAG level are supposed to be held first so that one or two of those elected (depending on the number of VAGs in the Chiefdom) who have the highest votes are the ones who qualify to represent the VAG at CRB level. Therefore, it is from VAGs that a balanced representation of democratically elected CRB members are supposed to be chosen.

ZAWA co-manages wildlife resource management with CRBs and shares revenue generated through hunting concession agreements as discussed in earlier in the report. As part of their contribution to wildlife management, CRBs are also expected to recruit Village Scouts to compliment ZAWA law enforcement efforts of in GMAs.

Village scouts were initially introduced under the Administrative Management Design (ADMAD) program as a way of increasing anti-poaching efforts and improving the level of community involvement in natural resource law enforcement. They are recruited locally and paid by the CRBs from their portion of the hunting revenue. Their duties are similar to those of ZAWA scouts and they work alongside the Wildlife Policy Officers and village scouts in the field. Currently, many village scouts are employed by the various CRBs to combat anti-poaching in their respective GMAs.

Natural resource monitoring is another important activity that ZAWA and the CRBs are required to carry out in order to effectively manage the GMAs. Hunting, poaching, wildlife and other natural resource quantities, fire and Human Wildlife Conflict are some of the important data sets that should be recorded by the Resource Management Committees of the CRBs, in order to allow the community to make informed decisions on management interventions and the ultimate conservation of their resources. There have been tools designed to facilitate the capacity building of the CRBs in this role of natural resource co-management, e.g. the National Resource Management Planning Manual.

Phase II of this study, the Situation Analysis, revealed that neither ZAWA nor the CRBs have the capacity to undertake the co-management of the wildlife natural resource effectively in terms of staffing, transport and equipment levels. This was confirmed during field visits where no single CRB had any transportation or office space. In addition, all CRBs were in arrears on payment of salaries for village scouts, except for Kahare CRB where all village scouts are paid by WWF. Siachitema CRB has laid off six village scouts to bring the current number from nine from fifteen. As a result of these low staffing levels, inadequate resource and other factors, staff on the ground who are supposed to undertake permanent patrols sometimes provide seasonal and periodic patrols. The total number of patrol-man-days and supervision visits varies from GMA to GMA depending on staffing levels, number of activities requiring services of the VVs and WPOs, and availability of food rations, fuels and transport. The literature review and key informant interviews revealed that for the period 2005 to 2010, the number of patrol-man-days for ZAWA WPOs and for CRBs' village scouts (VVs) for the three operational areas (Mumbwa, Chunga, and Ngoma) were below targeted patrol-man-days, except in 2008 when actual patrol-man-days for WPOs surpassed the budgeted number.

#### **B5. Relationship of CRBs/VAGs to Traditional Authorities**

A chief in whose area a board is established is a patron of that board. Some chiefdom structures for the CRBs and GMAs which were covered during field visits are shown in Exhibit 23, below. The Wildlife Act stipulates that a ZAWA-registered CRB should have between seven and ten elected representatives from the community, one representative from the local authority and a representative of the chief. Any other attendees to meetings are not eligible to vote. It is from VAGs that a balanced representation of democratically elected CRB members are to be chosen.

However, it was discovered during the field visits that some election guidelines are not being adhered to in that sometimes ZAWA and the traditional leaders allow communities to elect CRB representatives first then those representatives mobilize the community to hold elections at VAG level afterwards. This was the case in Siachitema and Kahare CRBs for the current boards. For Kahare CRB, ZAWA dissolved both the CRB and VAGs in December 2010 but only CRB elections were held in that month. At the time of the field visit, VAG elections had not been held yet. This is despite the fact that Kahare CRB is supported by WWF which is an indication of a weak link between the WWF project and ZAWA. In addition, most CRBs do not adhere to the provisions in their Constitutions. For instance, in Siachitema CRB no elections were held between 1997, when the CRB was formed, and 2008 even though the constitution stipulates that elections are supposed to be held every 3 years. The elections which were scheduled to take place in February 2011 did not take place as it was decided that the same board members should continue for the next three years.

The CRB has three major functions which are executed through three subcommittees: the Finance Management Committee (FMC), the Resource Management Committee (RMC), and the Community Development Committee (CDC). These sub-committees are at both at the VAG and CRB level. Those elected from VAGs to sit on the CRB hold in-house elections to identify the CRB Technical Committee. This includes a chairperson and vice chairperson of the CRB and a chairperson and vice chairperson of each of the three sub-committees. Those elected to head the sub-committees at the VAG level automatically become members of the respective sub-

committees at the CRB level. Membership of subcommittees is supposed to be nine and 12 people. In addition to the chair people of the subcommittees, the remaining subcommittee members are elected from the VAGs.

The organizational structure of the GMAs around the gKNP with the number of VAGs only for the CRBs which were covered during field visits is provided in the table below:

**Exhibit 23: Organizational structure of the GMAs – CRBs and VAGs interviewed**

Name of GMA	Names of CRBs No. of VAGs	No. & Sex of CRB Members	Traditional Leadership Structure of Chiefdoms
Kasonso Busanga	Kasempa CRB with 5 VAGs (Shimuka, Kamakechi, Kamfuwe, Lunga and Busunte)	2002 = 1 F, 9 M 2004 = 10 Male 2006 = 10 Male 2009 = 10 Male	1 Senior Chief (male) 5 Indunas (all male) 5 Senior Headmen (all male) More than 15 headmen (all male)/ used to be 2 females but now dead)
	Mushima-Mubambe CRB with 5 VAGs	2011 = 10 Male 1 Female Bookkeeper	1 Chief (male) Senior Headmen (not provided) Headmen (not provided)
Mufunta	Kahare CRB with 10 VAGs (Luampa, Lalafuta Mwangalesha, Shikuli, Litoya, Kalale, Shikela, Shipungu, Kanyeze, ...)	2010 = 1 F, 9 M	1 Chief (male) 1 Prime Minister (male) 10 Senior Headmen (all male) Several headmen (all male)
Mulobezi	Moomba with 5 VAGs (Moomba Central, Mulanga, Choonzo, Mabwe and Kalobe)	2002 = 10 Male 2005 = 10 Male 2008 = 4 F, 6 M	1 Chief (male) 6 Chief council members (all male) 5 Senior Headmen (all male) Many headmen (all male)
Sichifulo	Siachitema CRB	Not visited	
	Nyawa CRB	Not visited	
Bilili Springs	Shezongo CRB with 3 VAGs (Mbila, Nanjila and Kakusa)	2001 = 10 Male 2005 = 1 F, 9 M 2010 = 2 F, 8 M	1 Chief (male) 17 Senior Headmen (1 F, 16 M) 156 headmen (5 F, 151 M)
Bilili Springs	Siachitema CRB with 5 VAGs (Siachitema Central, Chifusa, Naliya, Simwanda and Bilili)	1997 = 10 but sex not known 2008 = 1 F, 9 M	1 Chief (male) Senior Headmen (not known) 200+ headmen (15 F, 185 M)
Bilili Springs	Chikanta CRB	Not visited	
Nkala	Musungwa CRB	Not visited	
Nkala	Shezongo CRB with 3 VAGs	Not visited	
Namwala	Chilyabufu CRB	Not visited	
Namwala	Shimbizhi CRB	Not visited	
Namwala	Kaingu CRB	Not visited	

Name of GMA	Names of CRBs No. of VAGs	No. & Sex of CRB Members	Traditional Leadership Structure of Chieftoms
Mumbwa	Kabulwebulwe CRB with 5 VAGs (Lungobe, Nalusanga, Chikanda, Lukanga and Chona)	2003 = 3 F, 7 M 2006 = 2 F, 8 M 2010 = 1 F, 9 M Chair of FMC is female; all other Chairs & Bookkeeper are male	1 Chieftainess (Female) 1 Chief's Representative (M) 7 Senior Headmen (1 F, 6 M) 79 headmen (5 F, 74 M)
Mumbwa	Mulendema CRB with 5 VAGs	N/A	
Mumbwa	Chibuluma CRB	Not visited	
Lunga Luswishi	Kasempa CRB with 5 VAGs	Not visited	

### B6. Relationship of CRBs to other Natural Resources Bodies

Although Part III Section 7(1) of the Wildlife Act stipulates that “*the functions of a board shall be to promote and develop an integrated approach to the management of human and natural resources in a Game Management Area or an open area falling within its jurisdiction*”, CRBs activities are biased towards wildlife in natural resource management and not “other natural resources” like fisheries, forestry, water, etc. One of the reasons given was that the Departments of Fisheries, Forestry and Water do not collaborate with the CRBs. In addition, community members pointed out that this bias is due to the fact that the community does not get any monetary benefits from the licenses issued by the Forestry Department and the Fisheries Department. It is, therefore, not surprising that all the DDCCs interviewed during the field visit indicated that fisheries management committees do not exist even where they existed at one time.

### B7. Relationship of CRBs to Local Area Committees

The Decentralization Policy of 2002 has provided for the establishment of the National, Provincial, and District Development Coordination Committees. At sub-district level, the Decentralization Policy provides for the establishment of Area Development Committees (ADCs) in each ward.

At district level, the District Commissioner is a political head of the district appointed by the President to perform district administrative functions. He is in-charge of coordination of all sector ministry activities on administrative arrangement through the District Development Coordination Committee (DDCC) which he chairs. The DDCC is established by the Decentralization Policy of 2002 under the Ministry of Local Government and Housing. Each DDCC is divided into relevant sector subcommittees according to institutions existing in the district. For example, the District Environment and Natural Resource Committee (DENRC) is a subcommittee of the DDCC which deals with natural resources issues, including wildlife in which ZAWA and all other government departments, NGOs, and private sector dealing with natural resources management are represented.

At the sub-district level, the nature of ADCs will vary between urban and rural districts depending on the institutions in that ward. However, all organizations operating in a particular

ward are supposed to be members of the ADC. By implication, even the CRBs are supposed to be members of the ADC. The tricky part for GMAs is that some cut across more than one district and province while ADCs are within a particular district. Even where the GMA is in one district, there is no CRB that is working with an ADC. One of the reasons is that the Decentralization Policy which has established ADCs is not backed by an Act while CRBs are statutory bodies. ADCs are very weak because they lack funding while CRBs receive some revenue from ZAWA, so there is usually some form of conflict in terms of who should report to who between the two.

The Government is supposed to link the operations of Area Development Committees (ADCs), DDCCs, PDCCs and NDCCs through the submission of reports and feedback. In terms of reporting, the Provincial Administration is linked to the national and the district level. At the district level, the Council and the Government representatives will report to the Provincial Administration. The sub-District Level will report to Councils.

### **B8. Current Functioning of CBNRM in the GMAs**

The Wildlife Act of 1998 institutionalized the process of allowing communities to take part in conservation and development in Zambia's Game Management Areas, using the previously discussed CRBs. Following a decade of implementation of this Act, CRB/ VAGs face huge challenges, particularly on issues of governance. These institutions are slowly eroding, and elements of more representational forms of governance have emerged. This has created a space for elite members of the community to take control of power and have in most GMAs, sidelined the VAGs whose efforts they are designed to coordinate.

To understand the current difficulties CRBs/ VAGs face, a review of events leading to the transformation of ZAWA are important. In 2000 the National Parks and Wildlife Services (NPWS) under the Ministry of Environment transformed to the self-funding, parastatal, ZAWA. This was the beginning of the destabilization and undermining of the original principles in which community institutions were developed. Factors that have contributed to this have been documented in "The rise and fall of community based natural resource management in Zambia's Luangwa Valley: An illustration of micro- and macro governance issues, (Lubilo & Child, 2010: 202 – 223). These include:

1. Poorly conceived transition from NPWS to ZAWA leading to poor payment of staff salaries, in turn leading to poor disbursement of community funds.
2. Hunting ban of 2001 - 2003 exacerbated income generation of both ZAWA and communities.
3. *"Legally ZAWA, was established through the Zambia Wildlife Act No. 12 of 1998, followed by a commencement order issued in 2000. This legislation provided a firmer legal basis for CBNRM through newly legislated CRBs. Unfortunately, the framework for CBNRM in the Act provided a lot of administrative detail about how CRBs were to function (with little room for flexibility), but missed the lesson that accountability arises through well-organized bottom-up processes. ZAWA established representational CRBs at the scale of approximately 10, 000 people, defining accountability from the top-down but without any logistical capacity to implement requirements such as regular audits. The Act could nevertheless be interpreted to entrench further devolution using*

*subsidiary legislation and guidelines, but in practice was used to recentralize CBNRM both nationally and locally.” (Lubilo & Child, 2010: 216 – 217).*

Lubilo & Child, 2010 in their study of the collapse of the CBNRM program highlight a crucial factor that has created one of the major shifts towards representational forms of CRB governance, where the ten Board members have become extremely powerful and have been the primary decision makers of issues related to the CRB body.

*“Despite experiences of the advantages of participatory democracy over more remote and large-scale representational governance structures, ZAWA has shown a preference for the latter. ZAWA institutionalized a system of Community Resource Boards across the country, effectively re-establishing the ineffective top-down approach associated with the first phase of first generation CBNRM programs.” (Lubilo & Child, 2010:218)*

Another factor that has contributed to a lack of promoting a participatory model of CRB governance is the absence of the ZAWA CBNRM program. Following the establishment of ZAWA in 2000, a department was created that specifically focused on issues of CBNRM with a Director and a team in charge of these functions. This office has since been restructured and reduced in terms of staff and funding. Capacity for ZAWA staff that should be providing technical support in strengthening community institutions such as the CRB is almost non-existent and has created a vacuum that has led to very few checks and balances at the community level. This gap has allowed a few members of the community board to make decisions without oversight from their constituents or their co-managing partner ZAWA.

### **B9. Barriers, Challenges, or Gaps that Affect Conservation and CBNRM in the GMAs**

There are a number of issues that stand out as constraints to the implementation of effective natural resource management by ZAWA and through CBNRM, via the CRBs in the Great Kafue National Park area (GKNP). From literature review and field visits, the following have been identified as barriers, challenges and gaps for effective CBNRM which need to be addressed. These are categorized into registration, governance, participation and benefits, operational, and policy, institutional and legal issues. Please see below:

#### ***Registration and Governance Issues***

1. The way CRBs are registered limits them from conducting business.
2. CRBs do not have well defined membership and governance guidelines. Although those CRBs which were visited had constitutions in place, the constitutions did not define membership, they are rarely formally adopted by the community and they were not made available to the VAGs and to some CRBs for reference to guide day to day operations. There is a lack of training and coordination for CRBs to carry out elections, registration and adequate hand over of office after new elections hamper adequate CBNRM implementation –many of these functions are filled by ZAWA, either in the interest of speed or because of capacity failings in the CRBs, or to avoid conflict situations developing. It was observed that in most cases, the same people rotate in various positions from election to the other. It could be that the CRBs constitutions do not limit the term of office or where that is provided for, it is not followed. Handovers



are not done from one CRB/VAG to another even though ZAWA is present at those elections for all the CRBs and VAGs which were visited. This is the case even where some people are still in the committee who held different positions in the previous boards or VAGs and negatively affects continuity.

3. CRBs, VAGs and the community do not have a system to demand reports from three sub-committees charged with the responsibility of carrying out the three key functions of the CRB thereby making them accountable and transparent. Where the scheduled quarterly meetings are held, sub-committees do not present reports as a routine.
4. There is very poor record keeping in almost all the CRBs visited both at CRB and VAG level, even for CRBs like Kabulwebulwe and Kahare that have had some form of external support from DANNIDA and WWF respectively.
5. Policy documents like CRB elections guidelines, financial guidelines, and Wildlife Act are not availed to CRBs/VAGs, and most CRBs/VAGs are not trained in them.
6. There is deviation from the procedures laid down in election guidelines by ZAWA e.g. ZAWA allows CRB elections to be held first before VAG elections in some CRBs like Siachitema and Kahare which encourage a top-down approach rather than a bottom-up approach prescribed in the guidelines. In Mubambe CRB, elections have been held only 3 times since 1999 while in Siachitema CRB elections were only held in 2008 from 1997 when they are supposed to be held every 3 years.
7. There has been a major shift from being democratic towards representational forms of CRB governance, where CRB Board members have become extremely powerful and have been the primary decision makers of issues related to the CRB body. This has created a space for elite members of the community to take control of power and have in most GMAs, sidelined the VAGs whose efforts they are designed to coordinate.
8. In almost all CRBs and VAGs, the meetings are not being held. For instance, in Siachitema CRB, one of the VAGs met had never had a meeting from the time they were elected into office in 2008 and they did not even know each other as committee members. *“We have not been meeting because there is no money from ZAWA”*. In Kasempa CRB, VAGs met during field visits have not held meetings since 2010 due to non-disbursement of funds by ZAWA and there have not been any contact between VAGs and the CRB and the VAGs and the communities but the CRB has continued to hold meetings quarterly *“to strategize on how they will get money from ZAWA”*.

### ***Community Participation and Benefits Issues***

1. A good number of people do not appreciate the benefits of community development in the form of infrastructure development, they prefer that CRB revenue should be disbursed as cash payments
2. While it is good that the CRBs are statutory bodies which should allow tenets of democracy by being open to all for participation, in terms of functionality, they exclude women due to high illiteracy levels as are unable to meet the educational level conditions set out in the elections guidelines. In addition, for most women, it is like a taboo to engage in election campaigns for the CRB.
3. There is lack of broad and equitable participation in benefits from tourism and other alternative livelihoods. Although CRBs members are supposed to be elected from and represent VAGs, when they get to the CRB positions, they pay themselves allowances

even at the expense of co-business. For example, all CRB members get allowances although the amounts differ from place to place. Some CRB members see this as an opportunity for enrichment. For example at Kasempa CRB, each CRB member gets K400,000/quarterly meeting which is equal to the salary of a village scout for the whole month while committee members in Shimuka VAG get K80,000/quarterly meeting. For any other meetings held in the boma, each CRB member gets ZMK350,000 as subsistence allowance while for extra ordinary meetings held in the village each one of them is paid K150,000 per meeting. Meanwhile village scouts are in arrears for 10 months.

4. A central weakness in the current CRB system is that the line of communication and resource flows ends at the CRB level, with practically no connection to the basic village and household level. It is widely considered that little progress will be made with CBNRM in GMAs until VAGs and households believe they are involved in and contributing to the flow of and decision making for natural resources information and revenues.
5. Some chiefs allocate land indiscriminately in GMAs without consultation with the traditional council, the community and the CRB. For instance, the District Commissioner said Mumbwa GMA has problems of encroachment due to people migrating especially from Southern Province (Namwala), charcoal burning, poaching, and illegal mining.”This is going on because some Chiefs have been selling land indiscriminately and rampantly because they get some benefits making it difficult to control the people, even though they have been sensitized and they know that they hold land on behalf of the President. The conversion of some portions of land from customary tenure to leasehold tenure has left a lot of people displaced. Some Chiefs also do not consult the people most of the time when giving out land, including those to be displaced. These chiefs are dictatorial in nature and most of them are not learned but very traditional in nature.” This was also confirmed during the FGD held with traditional leaders from Kabulwebulwe Chiefdom where some headmen said they did not participate in the allocation of land to the four lodge owners in the area. In Mubambe CRB, it was revealed that Ilinda Investment game ranch is about to be opened and it will cover all VAGs except for Lalafuta East. The Chief has allocated 55,000 ha of land for this game ranch without the involvement of the CRB. Land is not yet on title but it is in the process of being turned from customary tenure to leasehold.
6. Community-hunting operator agreements and relations are, for the most part, carried out through ZAWA, but both the communities and the hunting outfitters in the GMAs would prefer direct partnership agreements that, they feel, would improve relations and capacity building among the CRBs and general public to improve the co-management of natural resources. Almost inevitably this also requires the presence of an “honest broker”.

### ***Operational Issues***

1. Both ZAWA and CRBs do not have sufficient staff, transport, equipment and financial/resource capacity to undertake natural resource management effectively. There are limited sources of income such that almost all CRBs just depend on revenue from hunting concessions disbursed to them by ZAWA. The revenue receive from ZAWA is

not adequate. Out of the CRBs which were visited during the field visit, two CRBs had other sources of income. Kabulwebulwe CRB has one hammer mill and one staff house which has been put on rent. These were donated to the CRB by DANIDA. Kahare CRB has two hammer mills which were donated to them by WWF in November 2010 but they still do not benefit from one of them since it is placed at the Chief's palace where it is difficult to access and the area does not have much maize to enable it generate income the way the other hammer mill is doing.

2. Even for the limited revenue which ZAWA disburses to CRBs, it is not disbursed on a timely basis even though ZAWA receives revenue from safari hunters on time especially since 2008 during the period of the economic crunch. This affects the CRBs in a number of ways such as late payment of village scouts (11 months in Kaempa CRB in Kasansa-Busanga and 45 months in Bilili) and other CRB staff which in turn encourages poaching, slowing down or no implementation of community projects, and non-adherence to some laid down procedures like holding of quarterly meetings and financial guidelines on how revenue should be apportioned among the three functions of the CRBs. People on the ground feel that ZAWA is not remitting revenues on time because they are holding the money to meet contractual obligations for ZAWA senior staff, which are now on three year contracts which was not the case before. This creates mistrust among CRBs. The lack of transparency and accountability of hunting revenues in ZAWA has been pointed out by CONASA project and other independent reviews as one of the major threats to the success of CBNRM in Zambia.
3. Although Part III Section 7(1) of the Wildlife Act stipulates that "*the functions of a board shall be to promote and develop an integrated approach to the management of human and natural resources in a Game Management Area or an open area falling within its jurisdiction*", CRBs activities are biased towards wildlife in natural resource management and not "other natural resources" like fisheries, forestry, water, etc. Some of the reasons given were that the Departments of Fisheries, Forestry and Water do not collaborate with the CRB and that there is no revenue which communities benefit from these other natural resources except wildlife.
4. Part III Section 7 (2) (d) of the Zambia Wildlife Act No. 12 of 1998 stipulates that the CRB shall "*in consultation with the Authority, develop and implement management plans which reconcile the various uses of land in areas falling under the board's jurisdiction*", seven of the nine GMAs around the gKNP has their GMPs approved by the ZAWA Board in June 2010. Two GMAs (Bilili Springs and Lunga Luswishi still do not have their GMPs in place. For some CRBs like Kabulwebulwe, more than 40 traditional leaders in the chiefdom who were met said they did not agree with the zoning which has been done in the approved GMP and as a result, the Chief has refused to sign it.
5. The annual audits for CRBs provided for in the Wildlife Act are not always conducted. For example, Kasempa CRB claimed they were audited from 2007 to 2009 yet the CRB was established in 2002 and for 2009 the audit was not completed. Mubambe and Siachitema CRBs have never been audited. Where audits have been conducted, no audit reports are given to CRBs for them to learn from their mistakes. None of the CRBs visited provided an audited report for verification.
6. No CRB secretariats are in place as provided for in the Wildlife Act in any of the CRBs visited.

7. Almost all CRBs have no office space except for Kabulwebulwe CRB which has an office which was given to them by DANNIDA when the project came to an end.
8. Quota setting is largely done by ZAWA, and although they hold quota meetings with the CRBs to involve the communities in the setting of these quotas, there is very little capacity among, or input from, the CRBs to influence quota setting decision making. In addition, many last minute additions to quotas are made without the communities consent. Improved training by ZAWA and the hunting outfitters on how these quotas are set and how to establish a sustainable off take of their wildlife would improve this situation. An entirely new quota setting system, aligned with greater decentralized control by the CRBs, is a possible medium-term target if sufficient capacity-building support can be applied with it.
9. Some provisions in the hunting concession agreements are not adhered to by the three parties (ZAWA, CRB and safari operator) in some CRBs. For example, Kasempa CRB has written to ZAWA to ban hunting from 2011 to 2014 yet the concession agreement is still on-going. This could be in reaction to the fact that ZAWA owes the CRB more than ZMK 1 billion in hunting revenue arrears. In Siachitema CRB, the safari was not remitting revenue to ZAWA for a very long time until now when a replacement has been found while the CRB was not meeting its part of conditions in the concession agreement too.
10. Resource monitoring is very poor among all the CRBs. Few reports are made to ZAWA by the Resource Management Committees and fewer are kept on record by the CRBs to provide historical records that can be used for comparison and trend information provision for decision making (although all daily hunting records are maintained by ZAWA accompanying scouts in each hunting camp). Monitoring of hunting, poaching, HWC and general sightings could all contribute to a valuable information resource base. Some programs have and are being introduced, e.g. CONASA's IWIMIS (Integrated Wildlife Management Information System) in Bilili and WWF's introduction of MOMS in Mufunta and Mumbwa. More training and continuous support and coordination is required for successful implementation of such resource monitoring programs.
11. There are weak linkages at different levels for institutions involved in natural resource management e.g. between ZAWA and CRBs, Projects like WWF and ZAWA, CRBs and government departments including the sub-committee for Natural Resource Management on the District Development Coordination Committee (DDCC), of ZAWA and other government departments, CRBs and VAGs, VAGs and the community, CRBs/VAGs and traditional leaders, CRBs and NGOs, chiefs and village headmen etc. As a result information flow to different institutional levels is not effective and efficient especially on financial matters, quotas, governance issues, etc amongst CRBs, VAGs and the community.
12. There is inadequate funding by government departments to carry out their duties. For instance, during one of the meetings with the DDCC, one of the forestry officers said *"For the pitsaw licenses issued in Lusaka, I'm mandated to provide an input by making a recommendation based on the population of timber in the area which I can only know about when I have access to transport. Even when the license is issued, I'm suppose to monitor the quantity of the timber and ensure all other conditions provided for in the license are adhered to but there is no means for me to do that, so I just sign what do I do. As a result, forestry management is at stake."* In Moomba Chiefdom, there has never

been a Camp Extension Officer from the Ministry of Agriculture and Cooperatives in the area for over ten years.

### ***Policy, Institutional and Legal Issues***

1. The existence of fragmented legal, institutional and policy framework for different sectors involved in natural resource management which are sometimes in conflict (not harmonized). This results in sector operations not being done in a coordinated manner. The absence of a formal policy for CBNRM has meant that any major decisions regarding CBNRM have been delayed pending formal adoption of a policy.
2. Roles of the different stakeholders mentioned in each piece of legislation are not defined.
3. The role of village scouts needs to be more clearly defined. Are they just providing cheap law enforcement support to ZAWA for resource management support (they are often deployed in the national parks)? Or should their role be re-oriented towards community service as natural resource managers and, for example, tackling community issues like human wildlife conflict monitoring and mitigation? This role has important implications for the success of the community's role in natural resource management. The essential role of law enforcement needs to be factored into the village scout job description, but indications are that a much tighter command and control system is required to ensure that access to firearms and patrol areas is not misused.

### **C. Policy and Legislation**

This section provides a summary and analysis of provisions in the Wildlife Policy and Act and other policies and legislation that are relevant to GMA-level dynamics, including the role and structure of the CRBs. It looks at the legal basis and structures for CRBs as statutory bodies under the Wildlife Act and assesses whether they can be reformed/changed to be effective, transparent, and equitable partners for sharing non-consumptive as well as consumptive tourism revenues.

#### **C1. Vision 2030**

The current National Long Term Vision 2030 (Vision 2030) aims to see Zambia become “A prosperous middle income nation by 2030.” Vision 2030 creates the framework for the various medium and short term plans, and for coordinating national activities for achieving that vision. It is a basis on which Zambia has recently been striving to articulate a coherent socioeconomic development strategy that is both predictable and practical. This path has taken the country through the evaluation of programmes such as the United Nation's inspired Millennium Development Goals (MDGs); the just ended Fifth National Development Plan (FNDP) 2006 - 2010; and the development of the current Sixth National Development Plan (SNDP) 2011 - 2015.

The Vision 2030 has identified priority socio-economic sectors that must be targeted for the Vision to be achieved. For economic growth the targeted sectors are Agriculture, Land, Tourism, Manufacturing, Mining, Infrastructure, Energy, and Science and Technology. For social investment and human development the targeted sectors are Education and skills development,

Health, Food and nutrition, Housing and settlements, Water and sanitation, Social Protection, and Arts and culture.

## **C2. Sixth National Development Plan**

The Sixth National Development Plan (SNDP) reveals that notable improvements were recorded during the FNDP period in terms of tourism development as seen by an increasing trend in tourist arrivals and private investment in the sector. However, the performance still remained far below the potential because of the challenges of poor and inadequate infrastructure, limited investment, fragmented operations, policy and legal framework, inadequate marketing and limited skilled manpower. Therefore, the SNDP has identified Tourism, including Arts and Culture, as one of the priority sectors for development in Zambia which has the potential to be a major contributor to socio-economic development of the country.

During the SNDP, the *tourism sector* will focus on infrastructure development in three priority areas namely Greater Livingstone area, Kafue National Park and Northern circuit. The other focus areas will be tourism promotion and marketing, product development, and human skills development. Further, Arts and Culture will focus on the provision of requisite infrastructure and skills for the promotion of creative industries for socio-economic development and preservation of Zambia's cultural heritage. Therefore, this study fits well in the national context.

## **C3. National Agricultural Policy: 2004 - 2015**

The Zambia Wildlife Act No. 12 of 1998 which established ZAWA and CRBs for co-management of natural resources stipulates that such management be done using game management plans in GMAs and national parks. One of the activities undertaken in the GMAs is agricultural production which makes the National Agricultural Policy (NAP), 2004 – 2015 relevant to this study. The NAP encompasses all facets of the agricultural sector including food and cash crop production, inputs, agro-processing, agricultural marketing including exports, sustainable resource use, livestock and fisheries development, irrigation, agricultural research and extension services, institutional and legislative arrangements, co-operatives and farmer organizations, biodiversity, emergency preparedness and crosscutting issues i.e. HIV/AIDS, gender and the environment.

The NAP points out that the important resource base for increased agricultural production and productivity comprises soils, water and air. Current environmental problems of major concern to the agricultural sector include rapid deforestation, loss of agro-biodiversity, land degradation and over-fishing which the NAP planned to address through promotion of sustainable and environmentally sound agricultural practices.

Other identified strategies in the NAP which are related to this study include:

1. Reviewing and realigning institutional and legislative arrangements;
2. Facilitating availability of and accessibility to land for agriculture and development of infrastructure in potentially productive agricultural area;
3. Promotion of gender equity in resource allocation and access to agricultural services focusing more on women and young farmers;

4. Promoting conservation of fisheries resources;
5. Promoting and strengthening Cooperatives and Farmer Organizations as a vehicle for agricultural development through the Cooperative Societies Act, Cap. 397 which aims to promote and regulate cooperative development in the context of agricultural liberalization, which will involve rural and urban people operating and running cooperatives on sustainable, viable, commercial and business lines; and
6. Maintaining agro-biodiversity and promoting conservation of aquatic ecosystem and sustainable utilization of natural resources.

In providing its services, the Agricultural Sector is governed by several laws including the Environmental Protection and Pollution Control Act, Cap 204 which is administered by the Zambia Environmental Management Agency (ZEMA), formerly Environmental Council of Zambia (ECZ). ZEMA has been renamed under the Environmental Management Act of 2011. It also recognizes that the private sector including NGOs will play a complementary role in the sector. The policy is currently in the process of being reviewed.

#### **C4. Land Policy and Land Act CAP 184 of 1995**

The Land Act CAP 184 of 1995 is yet another Act which affects operations in the GMAs. There are currently two land tenure systems in Zambia: customary and land under leasehold. Customary land is estimated to be 94 percent and state land is estimated at 6 percent of the total land area of the country whose area is 752,614 square kilometers. Under this Act, all land in Zambia is held by the President forever on behalf of all Zambians. All land in the GMAs is customary land. According to the Land Act, the President cannot give *customary land* away to either a Zambian or a non Zambian unless he/she:

1. Takes the customary law in that area into account,
2. Consults the Local Chief, local authority and if the land is in a Game Management Area (GMA), the Director of the National Parks and Wildlife Service, (unless the person applying for this land has already done so)
3. Consults those currently occupying/using the land in question

Transfer of land from customary to statutory land can only take place after the approval of the chief, the Local Council, and (if the land is in a Game Management Area) the Director of the National Parks and Wildlife Service. No title, other than a right to use and occupy land under customary tenure shall be valid unless it is approved by the chief and the local authorities and a lease is given by the President.

The Act introduced qualifications to own land. All Zambians could own land while only ‘certain categories’ of non-Zambians could do so like permanent residents and investors, a company registered under the Companies Act CAP 388 with less than twenty-five per cent of the issued shares are owned by non-Zambians, co-operative society registered under the Co-operative Societies Act CAP 397 with less than twenty-five per cent of the members being non-Zambians, a body registered under the Land (Perpetual Succession) Act CAP 186 and is a non-profit making, charitable, religious, educational or philanthropic organization or institution which is registered and is approved by the Minister for the purposes of this section; or the non-Zambian

granted a concession or right under the National Parks and Wildlife Act. CAP 201, etc were also allowed to hold land in Zambia.

According to this Act, to give out land, the President must also:

1. Control settlements, methods of cultivation and utilization of land as may be necessary for the preservation of the natural resources on that land; and
2. Set aside land for development of forest reserves and game management areas and national parks.

The Land Act provides for an establishment of a Land Development Fund whose money consists of:

1. Money Parliament contributes to the Fund
2. 50% of ground rent collected from all land held under leasehold
3. 75% of the fee paid when land is allocated by the President

The fund's monies are to be put towards the opening up of new areas for development of land. Also, local District Councils may apply to receive money from this Fund for development of land in their areas. The Fund is run by the Ministry of Finance and National Planning and Ministry of Lands who are responsible to report to Parliament every year on how the money was used.

#### **C5. Local Government Act CAP 281 of the Laws of Zambia**

The other relevant Law is the Local Government Act CAP 281. The Second Schedule (Section 61) of this Act provides a schedule of 63 functions which a Council may perform. Among other things, the Council functions may cover areas of general administration, advertisements, agriculture which includes conservation of natural resources, and prevention of soil erosion (including the prohibition and control of cultivation), maintenance and protection of local forest and woodlands, preparation and administration of schemes for the encouragement of, and participation in, community development, establishment and maintenance of roads and provision of other road services, establishment and maintenance of public amenities, establishment and maintenance of colleges, schools and nurseries, establishment and maintenance of environmental health services and other public health services, provision and maintenance of registration services, provision and maintenance of sanitation and drainage services, provision and maintenance of water supplies, etc.

A Council may be involved in the discharge of all or part of the stipulated functions. A Council may enter into contracts necessary for discharging its functions according to the standing orders of the council using a tender procedure. It should be noted that if CRBs were registered as an autonomous body, they could bid for contracts for provision of some of such services as a source of income.

#### **C6. Fisheries Bill 2011**

The Fisheries Department was created by the Fisheries Act of 1974. This act was amended by the Fisheries Act (Amended) No 22 of 2007 to provide for the establishment of fisheries



management areas, the management of which would be undertaken by a fisheries management committee and guided by a fisheries management plan. A Fisheries Bill of 2011 has still to be put in place but it provides the Minister with powers to declare certain areas Fisheries Management Areas where no one is allowed to fish without a license. It also allows the Director, in consultation with a committee appointed by the Minister and other government departments affected by the fisheries management plan, to develop a Fisheries Management Plan for the conservation and management of fish and the development of the fish management areas.

*"Where the fisheries management area falls in a game management area (as defined in the Zambia Wildlife Act No 12 of 1998) , the Minister shall appoint the committee in consultation with the Community Resource Board (as defined in the Zambia Wildlife Act No 12 of 1998) for that area."* However, this does not seem to be the case as all the CRBs which we interviewed during field visits claimed they are not directly working with Fisheries.

The management of fisheries is provided for under the Fisheries Bill 2011. Some of the salient functions of the Department of Fisheries as stipulated in the Act which relate to this study are to:

1. Conserve, manage and develop fishery resources and waters in a sustainable manner;
2. Take appropriate measures in consultation with the Environmental Management Agency for the safeguard against extinction of protected species;
3. Allocate money from the Fund; and
4. Create an environment of cooperation and consultation with other public institutions so as to enable the other public institutions to perform their functions that impact on this Act, within the context of this Act and the ambit of their respective powers and functions.

The Fisheries Bill of 2011 has amended the Fisheries Act of 2007 so as to:

1. Provide for the involvement of the riparian communities in fisheries management;
2. Provide for the development and regulation of aquaculture;
3. Establish the Fisheries Development Fund; and
4. Provide for matters connected with or incidental to the foregoing

The Act allows the Department of Fisheries to promote a community-based natural resource management approach in respect of fisheries management, facilitate and simplify the issuance of licenses and permits to those who are entitled to them, and create a climate of cooperation with communities and organs of civil society so as to encourage them to cooperate with the Department in the application and implementation of the Act. It also allows for the establishment of a fisheries management area by statutory order for the management and sustainable utilization of species of fish as may be specified in the order, after consultation with the Minister responsible for environmental protection and management, national heritage conservation and management and wildlife management and with the Director and the local riparian community. The Act stipulates that "where a fisheries management area is in a Local Forest, National Forest or National Park, the exercise or enjoyment of any fishing right or interest in the area shall be consistent with sustainable forest management or wildlife conservation and management, as the case may be".

According to the Act, a fisheries management is supposed to be managed by a committee appointed by the Minister, *“provided where the fisheries management area is in a game management area, the Minister shall appoint the committee in consultation with the community resources board for that area”*. That committee shall comprise: Six representatives from the specified fishing community as well as the local authority; a representative of the chief; representatives of any NGOs operating in the area; representative from the commercial fishing operators; two representatives from the aquaculture industry; two other individuals.

The functions of a committee are “to promote and develop an integrated approach to the management and sustainable utilization of natural and fisheries resources in a fisheries management area under its jurisdiction”.

The Act gives the committee power to:

1. Negotiate, in conjunction with the Director, co-management agreements with industrial fishing companies operating in the fisheries management area under its jurisdiction;
2. Manage the fisheries resources under its jurisdiction, within fishing quotas specified by the fisheries management plan;
3. Develop and implement management plans which reconcile the various uses of water in the fisheries management area under its jurisdiction;
4. Cooperate with the Department in the management of the fisheries management area under its jurisdiction;
5. Facilitate the involvement of non- governmental organizations providing support to fisheries management and conservation efforts in the fisheries management area under its jurisdiction;
6. Recommend to the Director the measures, plans and programs required for fisheries development in the fisheries management area under its jurisdiction;
7. Monitor the development of aquaculture in the fisheries management area under its jurisdiction;
8. Submit to the Director, on a regular basis, reports on the status of the fisheries management area under its jurisdiction; and
9. Perform such other functions as the Minister may direct.

The Act also gives power to the Minister to appoint a zone and village fisheries management committee under the fisheries management committee for the purpose of fisheries and aquaculture development in the area, and determine their composition and functions. A committee may regulate its own procedure subject to the Provisions of this Act.

The Act prohibits engagement in aquaculture without a license, which is supposed to be obtained at a fee. The license is subject to an environmental impact assessment in accordance with the provisions of the Environmental Management Act 2010.

The Act permits a committee to establish a Fund to enhance the economic and social well being of the local riparian community within a fisheries management area using:

1. Revenues payable in respect of fishing and aquaculture licenses issued under this Act and services rendered from the use of fisheries resources within a fisheries management area as the Minister may, after consultation with the Minister responsible for finance by regulations prescribe; and
2. Such moneys as the committee may, with the approval of the Minister, accept by way of grants and donations from any source within or outside Zambia.

*The National Forestry Policy of 1998 and the Forestry Act No. 7 of 1999*

The National Forestry Policy of 1998 recognizes the importance of involving local communities and other stakeholders such as NGOs and the private sector in the protection, management and sustainable utilization of forest resources. In addition the policy highlights the importance of sharing of benefits arising from stakeholder participation in the management of the forests.

The Proposed Forests Act No. 7 of 1999 is an Act to establish the Zambia Forestry Commission and define its functions;

1. To provide for the establishment of National Forests, Local Forests and joint forest management areas;
2. To provide for the participation of local communities, traditional institutions, non governmental organizations and other stakeholders in sustainable forest management;
3. To provide for the conservation and use of forests and trees for the sustainable management of forest ecosystems and biological diversity;
4. To provide for the implementation of the Convention on International Trade in Endangered Species of Wild Flora and Fauna, the Convention on Wetlands of International Importance Especially as Water Fowl Habitat, the Convention on Biological Diversity and the Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa; to repeal the Forests Act, 1973; and,
5. To provide for matters connected with or incidental to the foregoing.

The Minister may, on the recommendation of the Commission, local community, or owners or occupiers of an area in a forest, declare by statutory instrument any Local Forest, forest plantation or open area, a Joint Forest Management Area. Any area proposed to be declared a Joint Forest Management Area shall only be so declared once the local community has given consent. On the recommendation of the Commission, after consultation with a local community in the area, the Minister may assign the control and management of a Local Forest to a local community, traditional authority or joint Forest Management Committee, subject to such terms and conditions as the Minister may determine.

The Commission, in consultation with a local community living in or adjacent to a Joint Forest Management Area and with the approval of the Minister, may constitute a Forest Management Committee for that Area. The Committee will include representation by the Chief, the Commission, and representation from the village and the local authority. The Committee should also include representation from the license holders and appropriate government authorities.

The functions of a Committee shall be to manage and develop the Joint Forest Management Area and distribute the benefits amongst the local communities. The Committee has power to develop and implement management plans to reconcile land use issues that arise in the area, including negotiations with various stakeholders. A percentage of the revenues payable under this Act, as determined by the Commission shall be payable to a fund set up by a Committee for implementation of a Joint Forest Management Plan.

It is important to note that this proposed Forestry Act of 1999, which provides for the establishment of the Forestry Commission and the Joint Forest Management Committee at community level, has not been signed by the Minister. The 1973 Forest Act which the Zambian Government is currently using does not recognize the involvement of the community through Joint Forest Management committees and the distribution of benefits amongst the local communities, although a Statutory Instrument of 1999 makes provision for Joint Forest Management in a small number of pilot forests. As a result, communities do not have a sense of ownership of the forestry resources and are not committed to preserving those resources. Even though the Zambian Government Financial Guidelines provide for the community to be able to have access to 10 percent of the revenue generated from the Forestry licenses once all the revenue has been remitted to the Government Treasury, the proposed process for the implementation of that is so cumbersome that it does not work at all. None of the communities interviewed during field visits acknowledged receipt of such revenues.

#### **C7. Zambia Wildlife Act No. 12 of 1998 and Policy for National Parks and Wildlife in Zambia of 1998**

The Zambia Wildlife Act No. 12 of 1998 provided for the establishment of the Zambia Wildlife Authority (ZAWA) as the principal institution to be responsible for the management of the country's wildlife estate. In addition, the Act provided for the establishment of Community Resources Boards (CRBs) that are democratic local institutional structures through which local communities work with ZAWA to manage wildlife in GMAs and Open areas. CRBs are responsible for promoting and developing an integrated approach for the management of human and natural resources in GMAs and Open areas within their jurisdiction. *"All forms of land use in GMAs are subject to provisions of management plans developed by CRBs"* (Zambia Wildlife Act, 1998, Section 7) which are supposed to determine the following:

1. How the wildlife is to be used for consumptive and non-consumptive utilization;
2. How the resources are to be managed and how the use is to be organized, in particular, how abuses of the resource are to be controlled and how quotas for consumptive uses of the wildlife are to be set, subject to the approval of the ZAWA;
3. How products, including those associated with the non-consumptive use of the resource, are to be marketed; and
4. In the case of communally held resources, how the decision relating to the apportionment of benefits with the CRBs will be decided.

The Policy for National Parks and Wildlife permits the private sector participation in natural resource conservation and management through:

1. *Private Wildlife Estates:* Under this, ZAWA may grant permission under conditions and when appropriate fees have been paid for private sector to establish private wildlife estates.
2. *Public-Private Partnerships:* ZAWA may co-manage National Parks, Wildlife and Bird sanctuaries, GMAs or other protected areas with the private sector and/or non-profit organizations.

Both the Wildlife Policy and the Act require management of all CRBs be done through a democratically elected representation of the local community, but day to day operations of any CRB are supposed be carried out by properly qualified secretariats employed on conditions and terms of service as determined by the respective CRBs. The chief of the area is a patron of such a CRB.

According to the Wildlife Policy and Act, ZAWA is supposed to cooperate with all registered CRBs and provide the technical input that will assist CRBs in developing management strategies and plans. All meetings of any CRB are supposed to be conducted in a democratic way, decisions reached through consensus, and minutes of all their transactions and deliberations recorded. Other government and non-governmental technical departments represented in the areas where there is a registered CRB, may be called to a meeting to provide the appropriate technical input that will assist CRBs make informed decisions about the rational and sustainable utilization of natural resources in their area, but will have no vote.

The Authority (ZAWA) and CRBs are supposed to share all revenues and benefits accruing from the sustainable utilization of natural resources in the area. The revenue stream to CRB originates from ZAWA and is called “Wildlife Conservation Revolving Funds (WCRF).” (ZAWA, 2007). The revenue generated is meant to be ploughed back into the CRB and assist in socio-economic development of the local communities in the chiefdom. The levels and types of such use are supposed to be determined in a GMP. This fund is supposed to be controlled by the CRB according to proper accounting practices with proper books of accounts maintained. Each CRB is required to submit to ZAWA a report of its activities and audited financial statements during any financial year.

### **C8 2005 National Policy on Environment and the Environmental Management Act 2011**

The 2005 National Policy on Environment (NPE) observes that the extent of resource depletion indicates that mounting pressure is being exerted upon the environment, particularly in the "*key economic sectors of tourism, agriculture and industry*", leading to widespread deterioration and depletion at a "fast rate". In the foreword, the NPE highlights that it was to avoid conflicts of interest, to harmonize sectoral strategies in order to rationalize legislation that concerns the use and management of land, water and natural resources and to attain an integrated approach to development through a national cross-cutting consensus, that the Government recognized the need to develop a NPE.

With growing appreciation of the top priority need to eradicate poverty the NPE has also recognized that sustainable development must embrace natural resources conservation as an equal partner. The main purpose of the NPE is "*to create an umbrella policy for the welfare of*

*the Nation's environment so that socio-economic development will be achieved effectively without damaging the integrity of the environment or its resources”.*

The NPE is cognizant of the challenges of having a policy that facilitates development whilst at the same time conserving natural resources and without hindering social and economic objectives as defined in national sectoral policies and in the Millennium Development Goals. To attain this target it recommends that it will be necessary to harmonize disparate sector policies by rationalizing and facilitating the use of Institutional Framework and Action Plan, and introducing suitable institutional, legal and funding measures required for inter-sectoral implementation, building wherever possible on the existing foundation both at the central and local levels, using a holistic approach under the auspices of the Ministry of Tourism, Environment and Natural Resources (MTENR) in line with the National Decentralization Policy, 2002.

The Environmental Management Act of 2011 is the one that has been put in place to regulate the implementation of the NPE. It has created the Zambia Environmental Management Agency (ZEMA) which has been renamed after Environmental Council of Zambia (ECZ) and repealed Environmental Protection Control Act No. 12 of 1990 which established the ECZ.

### **C9. National Decentralization Policy, 2002**

The vision of the Decentralization Policy 2002 is *“to achieve a fully decentralized and democratically elected system of governance characterized by open, predictable and transparent policy making and implementation processes, effective community participation in decision making, development and administration of their local affairs while maintaining linkages between the centre and the periphery”.*

This vision stems from the background of *“centralization of power, authority, resources and functions, which has in turn subjected institutions at provincial, district and sub-district levels to absolute control by the centre. In order to remove the absolute control by the centre, it is necessary to transfer the authority, functions and responsibilities, with matching resources, to lower levels”* through a devolved system. One of the advantages cited is that *“accountability will be enhanced because local representatives will be more accessible to the local populace and will thus be held more closely accountable to their policies and outcomes than distant national political leaders (or public servants)”.*

Under institutional arrangements, the policy prescribes that:

4.1.1.1 *“The Government will establish a new decentralized structure of governance, backed by law, through which services will be delivered”.*

4.1.1.2 *“The new structure will comprise four levels, namely: National, Provincial, District and Sub-district”.*

4.1.1.3 *“... The District shall be the focus for development and service delivery, thus empowering communities to play an effective role in national affairs. ...The sub-district shall be introduced”.*

Under this proposed institutional arrangement, the role of the Central Government (including ministries) will be to redesign the system of government and to discipline or suspend

decentralized units that are not performing effectively. At provincial level, the function will be to coordinate and consolidate district plans into provincial development plans for submission to the Center, monitoring of utilization of resources and implementation of development programs in the province, preparation of reports, among other things. The Policy stipulates that the district level shall perform functions through democratically elected councils covering all the sectors, including those which relate to GMAs like:

1. Community development;
2. Infrastructure development and maintenance;
3. Planning and implementation of development projects and programs;
4. Mobilization of local resources;
5. Management and conservation of natural and wildlife resources
6. Environmental services;
7. Land allocation and utilization;
8. By-Laws;
9. Any other functions as delegated from the centre

It should be observed that both the legal framework and the institutional structure for the implementation of this policy have not yet been put in place in totality. Due to lack of the backing legal framework and matching resource allocation, the District Development Coordination Committees (DDCCs) are still institutions which are not functioning according to their intended purpose. The situation is even worse at the community level where each sector tends to operate independent of others according to the provision of its respective Act without coordination through the Area Development Committee (ADC) as provided for in this Policy.

#### **C10. International Conventions/Agreements**

The Convention on Wetlands of International Importance (Ramsar 1971), or the Ramsar Convention, is an inter-governmental treaty and provides a framework for national action and international cooperation for the conservation and wise use of wetlands, and to contribute to sustainable development worldwide. The convention provides a List of Wetlands of International Importance, which includes the Busanga Plains wetlands. A country signatory to the convention retains exclusive sovereign rights over listed wetlands and is obliged to;

1. Develop and implement a conservation plan and plan for the Wise Use of wetlands;
2. Promote conservation by establishing nature reserves of Wetlands;
3. Compensate for loss of wetland resources by creating reserves;
4. Encourage research and information exchange regarding wetland fauna and flora;
5. Promote training of personnel in wetland research and management and to
6. Consult with other contracting parties especially where the wetland resource extends over territories of more than one contracting party as in Okavango Delta.

The UN Framework Conventions for Climate Change (UNFCCC) 1994 provides guidelines for inter-governmental efforts to address climate change issues. The convention is guided by the concept of sustainable development and states that contributions to global warming are to be avoided even if impacts not fully understood. Parties to the convention are obliged to;

1. Take measures to minimize or mitigate adverse environment effects;
2. Compile an inventory of greenhouse gas emissions and to
3. Submit reports to the convention on actions they are implementing to combat climate change.

A National Adaptation Program of Action on Climate Change (2007) now exists and pilot projects are now being implemented in accordance with it.

The UN Convention on Biodiversity is the first global agreement on conservation and sustainable use of Biological Diversity. Its objectives are to conserve biodiversity, promote the sustainable use of Bio-diversity components and to promote fair and equitable sharing of benefits arising from use of genetic resources. States party to the convention have sovereign right to exploit their own resources according to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction do not cause damage to the environment of other states or areas.

Contracting parties are obliged to develop national strategies for the conservation and sustainable use of biological diversity and to integrate the conservation and sustainable use of biological diversity into relevant sectoral plans, programs and policies.

The Convention on International Trade in Endangered Species (CITES) provides for three types of trade restriction:

1. Ban on trade of certain species and their products
2. Globally threatened species are listed in Appendix 1 of the convention and species listed that are relevant include: pangolin, black and white rhinos, and African elephant.
3. Controlled and monitored trade in certain species and their products
4. Species under growing threat are listed on Appendix 2 of the convention and include aardvark, cheetah, water buck, hippopotamus, roan antelope, lechwe, flamingos, kori bustards, all owls, all tortoises, pythons. Floral species include Mahogany, Mukwa (Rhodesian teak), Baobab, Motsintsila (bird plum), and Mokochoong.
5. Trade from Zambia prohibited
6. Each country may place nationally threatened species on Appendix 3. No trade is allowed in respect of jackal, African civet, wild dog, and honey badger.

The Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora, was created in 1994 to apply CITES and other law enforcement strategies among SADC countries.

The UN Convention to Combat Desertification (UNCCD) aims to combat desertification and mitigate effects of drought in countries experiencing serious drought and/or desertification particularly in Africa. Parties to the convention undertake to:

1. *"Adopt an integrated approach to combat desertification and drought;*
2. *Integrate poverty reduction strategies into effort to combat desertification and drought;*



3. *Promote co-operation in the fields of environmental protection and conservation of land as they relate to desertification and drought;*
4. *Strengthen sub-regional, regional and international co-operation;*
5. *Cooperate with relevant inter-governmental organizations and to*
6. *Prepare a National Action Plan, which addresses the underlying causes of desertification and drought, promotes awareness and facilitates participation of local populations especially women and youth and provides an enabling policy and legal environment."*

African-Eurasian Waterbird Agreement (AEWA), otherwise known as the Agreement on the Conservation of African-Eurasian Migratory Waterbirds is the largest of its kind developed so far under Convention for Migratory Species (CMS). In November 1999, after the required number of at least fourteen Range States, comprising seven from Africa and seven from Eurasia had ratified, the Agreement has become an independent international treaty.

The Agreement provides for coordinated and concerted action to be taken by the Range States throughout the migration system of waterbirds to which it applies. The AEWA covers 235 species of birds ecologically dependent on wetlands. Parties to the Agreement are called upon to engage in a wide range of conservation actions including: species and habitat conservation, management of human activities, research and monitoring, education and information, and implementation.

#### **D. Education and Training**

The focus of this section is the current status and functioning of education and skills training in the selected GMAs surrounding KNP and the constraints and ability of communities to access livelihood opportunities. Included in the section is an analysis of the issues affecting women and out-of-school adolescent girls and their ability to participate in livelihood activities, community development, and natural resource management. There is an emphasis on youth (age range from 18-35 years – as defined by the Ministry of Sport, Youth and Child Development (MSYCD) developments needed to increase educational opportunities mainly through youth and entrepreneurs projects paralleled with literacy initiatives.

##### **D1. Current Status and Quality of Education in the GMAs**

According to interviews with key informants in and around the GMAs, tertiary education is largely inaccessible and there is poor linkage between formal school education and further skills training for formal employment or self-employment, and future income-generating or job opportunities. Table 2 below indicates the number of formal education institutes centers in and around the KNP GMAs.

**Table 2. Overview of schools and trades centers by type, location, and numbers**

<b>KNP GMAs</b>	<b>Basic Schools</b>	<b>High Schools</b>	<b>Zambia Open Community School (ZOCS)</b>	<b>Trade &amp; Youth Centers</b>	<b>Total</b>
Kasonso Busanga	8	1	3	0	12
Mufunta	8	2	0	2	12
Mulobezi	3	0	5	0	8

Sichifulo	8	0	0	0	8
Billili Springs	48	0	0	1	49
Nkala	20	0	0	0	20
Namwala	9	1	5	0	15
Mumbwa	11	1	2	1	15
Lunga Luswishi	6	1	3	0	10

Source: KII from Ministry of Sport, Youth and Child Development (MSYCD) and GMPs.

In Zambia, the enrollment in basic education is universal (grades 1-9) but this changes when they get to higher school. MOE data from 2009 show that only 44 percent of women and 53 percent of men attend secondary school, indicating significant dropout rate in higher education (MOE Annual Progress Report, 2009).

According to KIIs, teachers work under deprived conditions with poor staff housing and educational infrastructure and inadequate material resource base, and are de-motivated by these constraints. Visits to schools in and around the GMAs confirmed the above finding. Most schools had an inadequate number of classrooms, high student-teacher ratios, and limited or no resource materials for instruction. When visiting these rural schools, one positive observation was the average number of brick and cement walled pit latrine toilets demarcated separately for staff, girls and boys, and the quality and cleanliness of these facilities. In addition most of the schools visited had hand pump wells on their premises.

According to the Education Planning Officer in Mumbwa from a KII conducted during the Livelihoods Analysis study, there is already a component in the Basic Schools Integrated Science curriculum that focuses on the GMAs and aims at bringing environmental lessons to learners relevant to specific GMA challenges. Some of the topics in the Zambia Basic Education Syllabus (2003) for Grade 4 Integrated Science include:

- Methods to control the wildlife animal population in the GMAs.
- Threats to wildlife (danger of extinction).
- Effects of poaching on wildlife.
- Importance of conserving wildlife.

The syllabi for Grades 1-7 contain content relevant to forest conservation, livestock farming, and plant and animal studies. According to the Education Planning Officer, the Ministry of Education (MOE) has made progress in implementing this relevant localized curriculum, focusing on specific local livelihood activities such as fishing, bee keeping, conservation farming and forestry. This coursework is supplemented by seminars from community members speaking about their experiences working in these various sectors. In some cases the localized curriculum is not being supported by the teachers. It was not clear that staff recognized the importance of having localized curriculum, and were frustrated by the amount of time this took out of the regular school day. In some circumstances, two full days out of each school week were geared towards localized learning. Teachers also expressed concern that given the large size of classes (sometimes as many as 70 learners per classroom), and the new curriculum, it was difficult to prepare learners to attain success during final exams in this subject area. Furthermore, many do not see the need to see it as the school's responsibility to help out local communities.

## D2. Current Status of Skills/Vocational Training

In 2006 the National Youth Strategic Plan (2010-2014) was formulated by the Ministry of Sport, Youth and Child Development (MSYCD) and launched to guide the implementation of youth programs. The intention was to design and implement programs which would help mitigate the deterioration of the economic and social condition of the youth in Zambia, because many youth are unemployed and have left school after Grade 7, with little or no further help from the state.

There are 17 Youth Resource Centers in the country for skills training of young adults in self-help entrepreneurship or formal employment. However, these centers are under-resourced, in terms of both technically skilled human resources and in material resources. They are inadequately equipped even for the few subjects available, such as carpentry (not enough tools), dressmaking and tailoring (few fully functional sewing machines), agriculture (lack of modern tools for horticultural practices), bricklaying (lack of materials and machines). There is also a serious lack of up-to-date equipment in most institutions, to match the dynamic technological developments in industry. There is also no refurbishment, replacement and retooling policy/program to sufficiently equip or fund these institutions. The library resources in these institutions are often inadequate. Information technology is also insufficient and out-dated with regards to Internet access and other modern communications set ups.

Access to students entering the system is constrained due to the number of places available (40,000) for the whole country (KII, Dr. Nkanza, 2011). This is of particular concern considering the fact that about 200,000 students leave the formal school system annually without any opportunities for acquiring skills for a future productive life (MOE, 2009). In regards to the GMAs, only three of these centers are located within or near the five GMAs studied, including one each in the towns of Mumbwa, Kaoma and Kolomo. See Table 3 for a description of the curriculum available at these centers.

**Table 3: Vocational training centers in the districts overlapping with the GMAs and a description of the curriculum offered at these centers, July 2011.**

Center	Curriculum Description
Mumbwa Youth Resource Training Center	Offers a limited number of training courses in six vocational areas such as: 1) agriculture, 2) general hospitality and catering, 3) carpentry & joinery, 4) IT, 5) tailoring and dressmaking, and 6) bricklaying and plastering with entrepreneurship activities. Does not offer any auto-trades, mechanics, plumbing or electrical engineering due to costs of equipment needed to resource such institutions.
Kaoma Youth Resource Center	Similar to Mumbwa but with only five subjects offered: 1) agriculture, 2) IT, 3) bricklaying & plastering, 4) dressmaking, and 5) carpentry & joinery. Does not offer catering opportunities or entrepreneurship elements.
Koama Trades Training Institute (under the Ministry of Science and Technology)	Offers: 1) bricklaying and plastering, 2) carpentry and joinery, and 3) design, cutting and tailoring, with future intentions to offer horticulture and agro-forestry courses to certificate level.

Center	Curriculum Description
The Technical Education Vocational and Entrepreneurship Training Authority (TEVETA) Lusaka,H/Q.	Has a gender related and literacy and numeracy approach being promoted in a key skills and core skills program for vocational training to upgrade those students who lack the higher level skills need for attending Vocational Colleges (KII, Dr Patrick Nkanza of TEVETA). The Skills Awards Program, sets standards and tests achievements to performance levels in different areas such as plumbing, building trades, plastering, carpentry, electrical and other trades so that achievers can be acknowledged with an award within the QTF (Qualifications Framework) at Crafts and Trade certificate levels.

To increase the employability of its young adult population, the Ministry of Technical Educational Vocational and Entrepreneurship Training (TEVET) has established training colleges to provide skills training for entrepreneurs, casual workers and already established workers. Currently, the TEVET colleges can only accommodate 40,000 participants per year. Of the remaining school leavers, approximately 5,000 enter the University of Zambia's Science and Technology departments, and 5,000 others attend trade schools. Other school leavers participate in industries such as mining (KII, Nkanza of TEVETA, 2011). Table 4 below indicates the number of participants attending vocational training institutes in the KNP GMAs.

**Table 4: Number of Youth Resource Centers and Trades Institute participants per optional subjects in two GMAs (Mumbwa and Mufunta), 2011.**

GMA	Gender	Agriculture	Bricklaying	Carpentry	Dressmaking	Entrepreneurship	Hospitality	IT	Tourism	Total
Mumbwa Resource Center	Male	5	5	5	1	All	3	2	0	21
	Female	5	0	0	8	All	15	10	0	38
										59 T
Kaoma Resource Center	Male	11	8	6	1	0	14	4	0	44
	Female	10	0	0	17	0	3	0	0	30
										74 T
Kaoma Trades Institute	Male	9	14	10	0	0	1	0	0	34
	Female	13	3	0	0	0	5	0	0	21
										55 T
Total	Both	53	30	21	27	All	41	16	0	188

**Source:** KIs from each of the three centers (principals and head teachers). Note: 'Entrepreneurship' is done by all in Mumbwa (figures excluded) as it not an optional subject. The other centers have not started this subject yet, because they have no trained personnel.

There are 42 Farm Training Centers in Zambia (including a total of four in the KNP GMAs in Kasempa, Mumbwa, Kolomo, and Kaoma) and every community is meant have access to one. These centers offer training in subsistence agricultural production, extension work, and basic

farm principles, such as fertilizer application, and conservation farming activities. There are also nine provincial Farm Institutes country-wide for providing extension worker training. In areas where resource and community centers are scarce, these pre-established training centers could provide the opportunity to enhance literacy in rural areas, should the Ministry of Education work with the Ministry of Agriculture to introduce literacy training to be taught alongside agricultural activities.

Another collaboration aimed at increasing the skills and employability of Zambia's population is a project spearheaded by UNICEF and Barclays Global. This project has initiated entrepreneurship training courses including four courses in management and business skills and loan management for entrepreneurial activities (learners in this program received funds from the Constituency Youth Development Fund – CYDF). This process is administered through the Citizens Economic Empowerment Commission (CEEC) and UNICEF with funds donated by Barclays Global (£600,000 over the three-year duration of the project).

The function of CEEC and MYSCD was to strengthen mechanisms for monitoring and evaluation of funds by the beneficiaries. In 2011, the process was being reviewed as the present term was expiring at the end of this year. Results have been discouraging so far. Although training workshops have been successfully conducted, the number of participants entering self-employment or being absorbed into mainstream business was low. This situation is also found near the GMAs. According to the Chief Protection Officer at UNICEF (KII, 2011), at the Mumbwa Youth Resource Center, none of the 200 youth trained in 2010 had found employment afterwards in the business sectors, and only five had achieved independent businesses success. Most explained that they were not able to access funds from the CYDF and therefore they had not set up their own small or medium-scale enterprises (SMEs) or projects.

A partnership between the UNESCO Chairperson, Children Youth and Civic Engagement at the Child and Family Research Center, Foróige, the National Youth Development Organization and the Alan Kerins Projects was launched in June, 2010 to promote civic engagement and enhance social support networks for disadvantaged children and youth. The program is aimed specifically at increasing access to appropriate learning and life-skills and promoting youth participation and leadership. The partnership initiated a pilot project in the Kaoma District (overlapping with Mufunta GMA) targeting youth affected by HIV and AIDS and is currently developing a model for a youth center, which integrates youth work and sport with the MSYCD. Using sport as the initial medium to reach out to young people, the proposed youth center will provide a forum for youth to actively participate in a range of activities that extend beyond sport, including active citizenship and youth leadership programs and life skills training. Through this initiative a model could be developed for use throughout the country and especially in the GMAs.

Zambia also lacks initiatives aimed at training ZAWA guides and it appears that there are no training centers of this type in the Kafue area. Indeed, ZAWA only trains village scouts for law enforcement and protective duties in the GMAs (see ZAWA training syllabus for Village Scouts in Annex G.3), but no organization is providing basic tour guide training. There is one institute, Nymaluma Trades Training Institute (under the umbrella of the Ministry of Science and Technology) which has started a diploma course in Wildlife and Management studies to help

establish a cordial relationship between the communities and wildlife areas in South Luangwa National Park focusing on human-wildlife conflicts and management skills.

### D3. Current status of Literacy Training

Zambia uses the UNESCO UN Common Database (UNESCO, 2010) to define literacy as follows: “the percentage of people aged 15-24 who can, with understanding, both read and write a short, simple statement related to their everyday life.” See Table 5 below for an indication of literacy rates in Zambia in 2007. While literacy data are not available for the KNP GMAs, one can assume that they are probably close to the figures indicated in Table 5 for *rural* areas. Literacy levels are improving, albeit gradually.

**Table 5: Literacy Rates in Zambia by sex and age group for 2007**

Age Group	Zambia 15-24	Zambia 15 & over	Rural 15-24	Rural 15 & over	Rural Ave	Urban 15-24	Urban 15 & over	Urban Ave
Males	75.4	76.6	66.5	68.1	67.3	89.1	90.3	89.7
Females	65.5	58.3	53.3	46.4	51.6	83.9	79.3	81.6

**Source:** World Bank Data, and the Demographic and Health Survey, 2007 (WB & DHS, 2007). Note: Literacy tests were administered only to respondents who had less than secondary education.

Zambia has the following initiatives in place to teach literacy in the formal education system in order to improve literacy rates: ‘New Breakthrough to Literacy’ (NBTL) for Grade 1, ‘Step into English’ (SITE) for Grade 2, ‘Read on Courses’ (ROC) and ‘Read on Express’ (REX). This new curriculum was designed after assessing what the major barriers to literacy were, primarily lack of appropriate materials, and instruction in English at too early a level. The Ministry of Education created new formal education models, teachers’ guides, and reader materials that were also translated to local languages to maintain consistency in content and format (KI, Mr. B Mwenlende, MOE, July 2011).

The Directorate of Open and Distance Education (DODE) which is the department focusing on adult literacy specifically focuses on functional literacy with the Ministry of Community Development and Social Services (MCDSS). The weaknesses at the DODE are lack of funding and an inadequate number of teachers who have been trained in distance mode learning. Many teachers use the radio as part of their teaching materials, specifically Zambia’s Radio for Adult Literacy Program, which is beamed throughout the country in the local vernacular and English (KII, Chief Education Officer, Mr. A. Mulenga, 2011).

A new ‘E learning’ program has been initiated for high school learners. The program is intended to supplement curriculum in literacy, finding employment and ICT techniques and practices. This program is dependent on Internet access and availability of computer technology. There is also an ‘E Learning’ bus, which travels around the country promoting the use of these online methods to supplement the school curriculum.

### D4. Current Status of ‘Lifeskills’ Training (e.g. on human, legal and civic rights; gender-based exploitation and violence)

In the SADC Declaration on Gender and Development of 2008 all Member States, including Zambia, committed themselves to ensuring equality through equal representation of both women and men in decision-making positions with a 30 percent target share of women in political and decision-making positions by the year 2010. In the same Declaration, SADC Member States committed themselves to the promotion of women's full access to and control over productive resources in order to reduce poverty among themselves and their families. Other areas of concern addressed in the Declaration include: increased provision of quality health and education services, protecting and promoting the reproductive and sexual rights of women and the girl children, repealing and reforming all gender insensitive laws, and taking measures to reduce gender violence (The Art of Adult Learning Education (ALE) report MOE, 2008).

Several NGOs in Zambia focus directly on these types of 'lifeskills' training and human rights advocacy. The longest established gender-focused NGO in Zambia, 'Women for Change' (WFC), works with women and children in rural communities to contribute to sustainable development using Popular Education Methodologies. WFC works in the following areas: 1) gender analysis and awareness raising, 2) human rights, 3) income generating activities, 4) HIV and AIDS, 5) advocacy, 6) rural child development, and 7) traditional leaders programs. Currently WFC operates in three of the provinces that overlap with the GMAs – Western, Southern and Central – including some of the chiefdoms overseeing the KNP GMAs. WFC has established rural groups throughout these three regions that currently have more than 260,000 members. These rural groups are active participants in and beneficiaries of WFC programs.

The mandate of the Women and Law in Southern Africa Trust (WLSA) is "to contribute to the sustained well-being of women and men in southern Africa through collaborative strategic and action research, and related activities in the legal field, by promoting and lobbying for legal reform and policy changes on legislation that discriminates against women in the region" (WLSA 1997). The Zambian branch, Women and Law in Southern Africa Research and Education Trust (WLSA-Zambia), has conducted research and educational awareness over the years in Zambia on a variety of relevant themes, including: the violation of women's rights within the context of sexual and reproductive rights; the interplay between customary law, general law and the reality of women's lives and how structures reinforce the subordination of women; gender violence and the administration of justice; the family and access to resources; and socio-cultural construction of gender and infringement on human rights in general and women's rights specifically. Part of this work has included the facilitation of 'Girls Empowerment and Consultative Forum' and 'Chiefs' Workshops' (WLSA, 1997 and WLSA-Zambia, 2007). WLSA-Zambia has also provided legal support to women on many of these issues. For example, according to the KI at the WLSA-Zambia, the legal aid clinic at WLSA-Zambia has had many women coming in to get help on property rights cases.

These and other NGOs and government departments are part of Zambia's Sector Action Groups (SAGs), which have been formed for national planning purposes. One of the SAGs draws from organizations specializing in gender, women, social and community development. Some of these may be already involved in gender advocacy and women's rights, but the limited time for this Livelihoods Analysis prevented further follow-up with these organizations.

## **D5. Effects of Educational Levels and School Completion Rates on Livelihoods, including Intergenerational Effects**

Many parents and grandparents, especially females, are illiterate in Zambia. These low levels of literacy lead to a general lack of capacity for self-employment outside of agriculture work and a lack of confidence to participate in community governance, community development meetings and activities. Based on observations gleaned in the field during community FGDs, there appears to be very limited innovative thinking when it comes to ideas for skill development and alternative livelihood activities, especially among the older generation. This status quo inhibits the ability of the older generation to pass on insights to their children or to act as role models for entrepreneurial initiatives.

From the field research, the trend appears to be that almost all girls and boys in the GMAs are completing primary education, but dropping out soon afterwards. According to FGDs with parents and KIIs with head teachers and other school staff and from MOE statistics (MOE 'Review of the Re-entry Policy', Dec 2010), girls seem to be dropping out after Grade 7 to get married, while boys are leaving after Grade 9 to start farming with their parents as there are no jobs available elsewhere in the area. Some of the Household Case Study interviews (see Annex J) further indicated that both male and female children were forced to discontinue their education at Grade 10 or Grade 12 because the families could not raise sufficient income to cover the cost of education at these higher levels. This typically led to these adolescents not being able to find work, and the parents having to continue to support them.

#### **D6. Description of Barriers, Challenges, or Gaps that Affect Education and Training (specifically literacy and vocational skills training), which Need to be Addressed**

Generally after completing the basic education system (up to Grade 7), 50 percent of the school-going population leaves the formal education system. Many school leavers do not go on to further training in the formal or in-formal sectors due to low levels of education and a lack of applicable skills for the job market. The following two subsections provide more detailed information on some of these challenges.

##### **D.6.1. Constraints to Participation of Females and Males in Schooling**

Early marriage, pregnancy and cultural traditions, which place girls and women at an unequal level compared to boys and men, have been listed as barriers to girls' ability to continue their education until completion. However, none of those reasons were given during the GMA fieldwork. In contrast, the main constraints to youth entering and completing secondary school or vocational institutions are related to low literacy levels, and the low income levels of parents and other guardians. Access to higher education (e.g. high schools, Youth Resource Centers and vocational training) after basic education is insufficient due to limited access to funding; high costs of school fees, school uniforms, and boarding fees; and other economic and social constraints. The previously discussed Youth Resource Centers charge up to K250,000 per year and TEVETA's trade test fees can range from K55,000 to K95,000 depending on the level of exam. These financial burdens can discourage interested individuals from participating. Other examples of educational costs are indicated in the various Household Case Studies found in Annex J.

Lack of income to cover school costs is the most significant constraint to continuing education, and can have an impact on the wildlife in the GMAs. From examining records for poaching during this study in Kabulwebulwe CRB, there appeared to be some correlation between



poaching incidents and times when school fees were due. Records for 2005 indicate increases in poaching during the months of November and December when food stores were running low and school fees were due, suggesting that certain community members resort to poaching to feed their families and to gain income to cover educational costs (ZAWA publication, CRB notice board, 2005). A similar scramble for income at the time that school fees are due was mentioned during a Household Case Study Interview held with a female head of a household from Mukunanshi Village in Kasonso Busango GMA. Here, illegal poaching was not indicated. Rather it was reported that the women, who make non-alcoholic beverages and traditional beer, greatly increased their production of these beverages when school fees were due. With great quantities of *munkoyo* drink available for sale but the same (or less) number of buyers as usual, competition reportedly becomes rife and “bad feelings” among neighbors abound.

In certain cultures found in the GMAs, both boys and girls were expected to drop out of school during traditional initiation ceremonies. According to participants in several FGDs (for example in the Ila culture in Mumbwa GMA and the Nkoya culture in Mufunta GMA), the isolation period of initiation has been reduced from the traditional three-month period to now occur during the month-long school holiday. This change has occurred due to the growing recognition of the importance of education.

Dropout rates are at 1.68 percent for men and 2.36 percent for women annually and more than 50 percent of young adults throughout the country never reach secondary school (MOE bulletin, 2009). For teen girls who became pregnant, the MOE has developed a policy of ‘re-entry’ back into the formal education system. Through the re-entry policy, launched in 1997, girls may return to basic and higher schools after pregnancy. Program participants are required to attend evening classes until they are able to rejoin their classmates during the standard school day. Since its inception, 75.8 percent of new mothers in urban areas and 71.8 percent in rural areas have taken advantage of the policy by going back to school (MOE Review of Re-entry policy, 2010).

#### **D.6.2 Availability and Accessibility of Continuing Skills Development Opportunities in the GMAs for School Leavers**

Generally, vocational skills development programs, including youth skills training, are limited nation-wide and often lacking in the KNP GMAs. The alternative education opportunities, which are required for the growth of self-employment, entrepreneurship, and other economic empowerment activities, are simply not present in the KNP GMAs and surrounding areas. Open and distance learning techniques are in place but require more effort to reach a wider audience, as IT technology is poorly developed being constrained by electrical power and communications access in many GMAs. For example, out-of-school programs have been developed (e.g. Interactive Radio Instruction – IRI – and Distance Mode), but are failing due to lack of radios and reception problems and need to be supported by improved communication systems in the GMAs. During the fieldwork, some CRBs (including Kasempa CRB in Kasonso Busanga, Kabulwebulwe CRB in Mumbwa GMA, and Siachatema CRB in Bilili Springs GMA) indicated that they do not have funds to support functional literacy projects and are not able to provide alternative educational opportunities in the informal sectors.

## **E. Gender**

The key gender-related findings presented in Section III relate to current livelihood strategies. The following highlights the most important issues facing women and men in the GMAs as they strive to provide for themselves and their families. This section also examines the current cross-cutting issues presented in this Section IV and analyses various linked gender concerns on land allocation and control, conservation and management of natural resources, and CBNRM.

### **E1. Gender Aspects of Agricultural-based Livelihood Strategies**

The following key findings from the Livelihoods Analysis for agriculture should be the starting point of any gender-based strategy to improve women's capacity to gain income from farming, please see below:

- Crop production (prominently maize, tobacco, and cotton) is typically the number one livelihood activity in the GMA communities and households.
- Women are very involved in crop production, in some cases more than men, because of their seemingly greater need to be supporting themselves and their families in the confines of the very limited number of significant livelihood options for women.
- A large portion of a woman's day during the agricultural season is spent walking to and from the fields and working in the fields. This is also generally true for most men in the GMAs. While gardening may consume less time each day, it is a year-round activity that therefore occupies a considerable amount of a woman's time. See Tables 6a to 6d for the results of three 'Daily Task Analysis' exercises.
- Reasonably large percentages (40-60%) of female farmers are participating in agricultural cooperatives and women's clubs focusing on agriculture along with other livelihood activities. See Tables 6b and 6c
- Women farmers are keen to gain skills in conservation agricultural methods, to access improved seeds, fertilizers and pesticides; along with skills in poultry production and piggery.
- In most of the GMAs, adequate agricultural extension services have been lacking – for both men and women.
- Although, the National Agricultural Policy (NAP) of 2004-2015 encompasses all facets of the agricultural sector including the crosscutting issue of gender plus a strategy to promote gender equality in this sector (“promotion of gender equity in resource allocation and access to agricultural services focusing more on women and young farmers”) (MOA 2004), it does not appear that this policy has been put into action in the KNP GMAs.

**Table 6a: Results from Daily Task Analysis in Lukanga Village, Kabulwebulwe CRB, Mumbwa GMA**

WOMEN											
05:00	06:00	07:00	8:00-12:00	13:00	14:00	15:00-16:00	17:00	18:00	19:00	20:00	21:00
Wake up & Kids fetch water	Prepare washing water & break-fast for husband	Go to the field	Work in field of the man & wife's	Prepare lunch & have lunch	Fetch water	Work in field of woman	Fetch & prepare water for bathing & collect firewood on the head	Prepare supper	Story telling	Go to sleep	
MEN											
05:00	06:00	07:00	8:00-12:00	13:00	14:00	15:00-16:00	17:00	18:00	19:00	20:00-22:00	22:00
Wake up	Wash face & eat break-fast	Go to the field	Work in the field	Work in the field	Have lunch	Back in the field or CFU meeting	Return home/ Bathe	Fetch firewood & carry on the shoulders*	Eat supper	Story telling, watch TV, drink beer	Go to bed

**Source:** Daily Task Analysis with 13 men and 11 women, youth, and elderly conducted in Lukanga Village, Kabulwebulwe CRB, Mumbwa GMA, 1 July 2011.

Note: The men and women were separated into two groups and then brought back together to present and analyze the two different Daily Task Analysis charts.

Note: \* The women said, "The men never collect firewood!"

**Table 6b: Daily Activity Chart for Men in Mukunanshi Central, Kasempa CRB, Kasonso Busanga**

ACTIVITY	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
Wash face & prepare to go to field															
Work in field					Attend Coop meeting	Attend Coop meeting									
Eat lunch															
Go back to field & work															
Come back from field; collect firewood along the way															
Bathe															
Eat supper															
Chat & listen to radio															
Go to sleep															

Source: Daily Task Analysis in Mukunanshi Central, Kasempa CRB, Kasonso Busanga, 11 July 2011 with 12 men

**Table 6c: Daily Activity Chart for Women in Mukunanshi Central, Kasempa CRB, Kasonso Busanga**

ACTIVITY	Hours of the Day														
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20-21
Wake up															
Sweep ground															
Wash pots & plates from night before															
Cook breakfast & eat															
Wash pots & plates															
If dry season; prepare lunch															
Work in field (agric season)															
Return home from field															
Collect firewood															
Fetch water															
Prepare supper															
Eat supper															
Chat with children about their day in school & tell stories as a family;															
Pray															
Go to sleep															

Source: Daily Task Analysis in Mukunanshi Central, Kasempa CRB, Kasonso Busanga, 11 July 2011 with 12 women

**Table 6d: Daily Activity Chart for Women in Siamwanja Village, Moomba CRB, Mulobezi**

ACTIVITY	HOURS OF DAY															
	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20-21	
Wake up, wash face,																
Wash dishes																
Sweep ground																
Drink <i>munkoyo</i> drink for breakfast																
Winter: Collect <i>munkoyo</i> for selling		<i>Munkoya</i> roots are found 5 hours walk from village														
Or collect thatch grass		Grass is 1 hour walk from village near river														
Agric season work in field																
Go to next village to buy relish for lunch																
Prepare relish & <i>nshima</i>																
Eat lunch																
Wash plates																
Rest a bit																
Draw water																
Visit friends/ relatives																
Prepare supper & eat																
Bathe																
Have fun, tell stories, visit friends																
Go to sleep																

Source: Daily Task Analysis in Siamwanja Village, Moomba CRB, Mulobezi, 15 July 2011 with 3 women.

Given the very busy daily schedule of the women in the KNP GMAs, when planning any agricultural extension service (including guidance and training courses to develop skills in such areas as conservation agriculture and horticulture such as vegetable gardens and orchards), women farmers need to be carefully consulted to ensure that the methods, location, and timing of the initiatives meet their specific needs and time availability. ‘On-site coaching’ could be considered with the women farmers receiving training right in their own fields and gardens. Local skilled women farmers could be identified and sent off on training to become salaried ‘coaches’ for other women farmers in their community; which would provide one avenue of employment for at least a few women per CRB.

Ways to train women on food processing of horticulture products to add value and to kick-start SMEs should also be considered. Ideas from the COMACO project could be considered for the KNP GMAs, such as the processing of peanut butter, but other added-value products could be considered, such as jams, preserves and chutney; tomato and chili sauces; dried fruit and sugared dried fruit rolls; and pureed baby food from vegetables and fruit.

## E2. Gender Aspects of Land Allocation and Use

There are various gender-related constraints for women to obtain and have access to land in the GMAs, but these vary depending on the specific cultural traditions of each chiefdom. Table 7 below describes these differences for four different chiefdoms and GMAs.

**Table 7: Land allocation, control and access for four chiefdoms**

<b>Bilili Springs (Tonga)</b>	<b>Mumbwa (Nkoya)</b>	<b>Kasonso Busanga (Kaonde)</b>	<b>Mulobezi (Nkoya)</b>
Husband and wife each have own fields but man gets more land from chief than woman	Husband and wife each have own fields	Married women cannot have own land, but can access (and work on) husband’s land	Given by chief and shared by couple – have equal access to land and land is shared
Married women has control over her own fields & money earned from own fields	Married women has control over her own fields & money earned from own fields	Husband & wife will share money earned from fields jointly worked	Husband & wife will share money earned from fields jointly worked
	Single woman works in father’s field	Single woman can get land & controls money earned from land	Single woman works in father’s field
Single woman can get land & controls money earned from land			Single women with children cannot have own land but shares in decisions about money earned from land
If husband dies; man’s land goes to relatives of deceased husband and wife returns to her parents’ village			
Since 1995, deceased man’s land goes to children			

Bilili Springs (Tonga)	Mumbwa (Nkoya)	Kasonso Busanga (Kaonde)	Mulobezi (Nkoya)
If wife dies, land goes to husband & children			
If divorced, wife's land goes to husband & she must move out		If divorced, couple's land goes to husband & wife returns to her parents' village or wife can apply for her own land from headman	

**Source:** Participants in 'Ownership, Control, Access' and 'Daily Task Analysis' exercises in four chiefdoms

In the Tonga culture in Siachitema Central VAG area (Bilili Springs GMA), if a man abuses the money from his own fields or jointly-worked fields (e.g. spending on beer and women) or does not allow the wife to access the plow and oxen to plow her own fields, according to participants in the 'Ownership, Control, Access' exercise, a wife cannot complain to the headman, as she will come home and be beaten by her husband. These participants further stated that there was a lot of domestic violence in this community.

In Bilili Springs, in the Ila culture, both men and women can acquire land from the chief. But this applies to single women only. Married women can only get land through the husband. But if husband dies, husband's/couple's land will go to widow even if she does not have children. "Property grabbing does happen – some families will grab the deceased husband's land and not allow it to go to his widow. They tell the widow, 'you were just married to our son, so his land must come back to our family.'" FGD participants noted that, "This is a difficult situation to deal with because some people are just 'mad' when it comes to land. Both parties – the widow and the deceased husband's family – can go to the chief to negotiate. The response will be considered on a case by case basis." "If you are a woman in this community, there is a 50-50 chance that the property of your deceased husband will be grabbed by his family. Women without any children especially have this problem. There are more cases than 50 percent of property grabbing in these cases where a woman has no children."

### **E3. Gender aspects of conservation and resource management**

The need for building capacity and supporting natural resource monitoring in order to improve the GMA communities 'ownership' of the CBNRM concept and the responsibility at the CRB and VAG level for resource management and monitoring is a clear finding from this study and many previous studies about CBNRM in Zambia. As mentioned above, the Zambian government recognizes the intrinsic strength of the CBNRM philosophy, whereby local people are accepted as the best custodians of the wildlife and other renewable resources on their land. This is a philosophy that rests on the principle that wildlife and other natural resources have inherent economic advantages over other land uses, and that only when the local people – men and women – see the benefits from this economic potential will they be willing to conserve and sustainably manage their resources.

Currently the main component of resource management (in the form of protection and poaching reports) is in the hands of ZAWA and the male Village Scouts. Women are totally left out of this equation. In order to expand and enhance any efforts to manage and monitor the natural resources of the GMAs, new programs need to be designed to bring women on board in the



sphere that is most important to them – the management and monitoring of the plant resources, especially *munkoyo* roots, thatching grass, wild fruits, and mushrooms. By doing this, two gender matters can be addressed: 1) to involve women in the management and control of the resources that most impact their own lives and livelihoods, especially if they were to be depleted, and 2) to provide another livelihood opportunity for women in the form of being paid by the CRBs, just like the male Village Scouts, to manage and monitor one aspect of the natural capital found in the GKNP.

#### **E4. Gender aspects of CBNRM**

##### **E4.1 Benefits from CBNRM**

‘Threat’ to the natural capital of GKNP can easily be linked to some of the failures of CBNRM in Zambia. Because the male Village Scouts are not being paid on time by the CRBs (due to late payments by ZAWA), many of the Village Scouts, especially in Kasonso Busanga, are allegedly poaching so they can gain income for their families from the sale of illegal game meat in absence of their monthly salaries. This creates a ‘vicious circle’ with the very ones who are supposed to be protecting the GKNP natural capital actually harming it. The gender component of this ‘vicious circle’ is that when the male poachers, who are caught by ZAWA, are convicted they face fines upwards to ZK2 million or two years in jail (KII with ZAWA officer). The lack of salary payments to Village Scouts and subsequent hefty fines and jail sentences significantly undermine one of the goals of CBNRM – to improve the livelihoods of people living in GMAs. Furthermore, with a husband in jail or having to raise ZK2 million in fines to prevent him from going to jail, the wife and the children face the brunt of this punishment, probably far beyond the husband’s stay in jail. She must work harder and longer than she is already doing. In some cases the children – girls and boys – also suffer as they are pulled out of school because of the loss of family income or the loss of the labor around the homestead that the husband previously provided.

##### **E4.2 Gender facets of the CBNRM institutional structure**

Exhibit 23, found above in Section IV.B.5, indicates the number of men versus women represented in the CRBs and in the traditional authority structures. A simple gender analysis on these numbers indicates that women’s participation in CBNRM in Zambia is sorely limited. Given that the chiefs and other traditional authorities are also part of CBNRM, the low representation of women in the chieftom structures is also cause for concern. Table 8 below summarizes the information contained in Exhibit 23 above.

**Table 8: Women’s Representation in the CBNRM Structure in Seven of the CRBs/Chiefdoms in the KNP GMAs**

	CRBs	Chiefs	Induna	Senior Headmen	Headman
Males	61	6	6	37	440
Females	9	1	0	2	25
Totals	70	7	6	39	465
<b>% of Females</b>	<b>12%</b>	<b>14%</b>	<b>0%</b>	<b>5%</b>	<b>5%</b>

**Source:** Meetings with CRBs and Traditional Authorities in seven chiefdoms that were visited during this study. The data used for this summary table represent the most recent year of each CRB’s membership, and the current year (2011) for the traditional authorities figures.

In order to ensure greater and real representation of women in the CBNRM structures some innovative ways will have to be developed to empower women and provide them with the necessary skills, confidence and incentives to participate in the highest levels of decision-making bodies for CBNRM (e.g. traditional authority structures, CRBs, the various CRB management committees and in the VAGs). Cultural traditions and attitudes about customary structures will take a much longer time to change than for modern governance structures. Possibly if women are empowered and elected into CBNRM bodies and prove capable (as they surely will), communities can begin to recognize the inherent benefit of also having more female representatives in the chiefdom structures.

## **F. Ecosystem Services**

### **F1. Potential for Payment for Ecosystem Services**

In the recent General Management Plan for the Kafue National Park (PMTTC 2011), ecosystem services provided by GKNP were identified. These relate holistically to its geographic location and it secures a large part of the Kafue River catchment. The value and importance of these ecosystem services are measurable in terms of the following functions:

1. Providing sanctuary for indigenous flora and fauna in an unfenced wilderness area that has intrinsic cultural, scientific and genetic value;
2. Protection of biodiversity;
3. Watershed protection and maintenance of stream flow;
4. Water supply, storage and provision (Lake Itezhi-Tezhi and off-takes from the Kafue River for urban and agricultural needs);
5. Increasing carbon sequestration by fire control;
6. Climate regulation through retention of vegetative cover;
7. Erosion control through soil and sediment retention;
8. Soil formation and nutrient cycling in natural succession, and;
9. Maintenance of cultural resources;
10. A rising importance for nature-based tourism that in turn is an increasing source of employment and income for the communities that reside in the GMAs as well as revenue for the Zambia Wildlife Authority.

In addition, the Management Plan states that, “*recognizing the increasing trend towards payment for ecosystem services, consideration must also be given, in due course during GMP*”

*implementation, for opportunities for ZAWA to seek international funding support for carbon sequestration through integrated conservation forestry, watershed and stream flow protection and sustainable utilization of environmental assets, especially working in partnership with communities in the GMAs. While KNP's status as a National Park may exclude it from some funding mechanisms, the ecosystem is inextricably linked to the GMAs where these funding sources could provide important sources of income for communities."*

## **F2. Carbon Verification**

To generate Voluntary Carbon Units (VCUs), a project activity must apply a VCS-approved methodology to estimate and monitor its net GHG emission reductions or removals. Methodologies are step-by-step explanations of how emissions reductions or removals of greenhouse gases (GHGs) are to be estimated following accepted scientific good practice. Methodologies should be applied conservatively, transparently and thoroughly.

In this regard, the Voluntary Carbon Standard (VCS) guidance document for Agriculture, Forestry and Other Land Use (AFOLU) projects helps guide interested parties in the development of appliance with VCS and ultimately gain more saleable carbon credits (VCS Carbon Standards AFOLU Guidance Document, 2007). Interested parties can use this guidance document to develop VCS-compliant AFOLU projects and methodologies:

*"As part of its drive for credibility and innovation (combined with the fact that forestry projects account for 35%-50% of all offsets sold within the voluntary carbon market), the VCS will include Agriculture, Forestry and Other Land Uses (AFOLU) in the list of eligible project activities based on a new approach to managing non-permanence risks. To begin with, the following four categories of AFOLU project activities will be covered under the VCS:*

- 1. Afforestation, Reforestation and Revegetation (ARR);*
- 2. Agricultural Land Management (ALM);*
- 3. Improved Forest Management (IFM);*
- 4. Reducing Emissions from Deforestation (REDD)*

*In the future, the VCS Board will consider adding new AFOLU project categories (e.g., avoided devegetation) as best-practices become defined and robust methodological frameworks are established."*

Despite their clear potential, AFOLU projects can be quite challenging to design, implement and monitor. Fortunately, defined solutions for dealing with permanence, additionality, leakage, measurement, and monitoring have emerged in the last few years and are documented in this guidance document to reflect these latest solutions and to provide best-practice guidance for different AFOLU project activities. This will ensure that verifiers can credibly and robustly account for such measuring and monitoring under the VCS.

VCS recommends cost-effective projects that integrate all four of these AFOLU project activities, where possible. Some agro forestry / enrichment planting (ARR) and community forestry (IFM) practices could be implemented under the same project and avoid duplication and extra cost. Farmers often integrate these activities within a single landscape anyway. Similarly,

forest conservation (REDD), fast-growing woodlots (ARR) and improved agricultural management practices (ALM) could be combined to maximize synergies within a single project. Notwithstanding, each project activity must be considered separate in terms of risk criteria, buffer withholding and carbon accounting under the VCS guidance.

A good example of a project that was set up to realize the potential for carbon credits and getting paid for ecosystem services is the USAID funded project ‘Payment for Ecosystem Services: Developing Forest Carbon Projects in Nepal’

A case study was conducted under the TRANSLINKS program by EnterpriseWorks/VITA (by De Gryze, S. and L. Durschinger of Terra Global Capital in 2009). In their report, they conclude that community-based forestry carbon offset projects can, and have, succeeded in Nepal, and serve as a valuable source of information and experience that can be drawn upon to implement similar carbon projects elsewhere. For example, they recommended that an implementing organization is identified, which has sufficient experience and capacity to carry out community-based carbon forestry projects; the main implementing organization can be assisted by one or more of the many civil society organizations in the base country, and; all relevant government agencies should be consulted to resolve any issues surrounding carbon credit ownership and revenue sharing.

### **F3. Water Conservation**

The role of the GKNP in conserving water for generation of use values downstream no doubt has potential and it behooves the project to explore the possibilities for this.

Payments for ecosystem services appear to hold significant potential but will take time to materialize, as the markets are not developed and many complexities need to be ironed out. It is unlikely that such payments will be realized in the GKNP project investment period. Nevertheless the ground work in terms of research and development should begin.

## **SECTION V. ANALYSIS OF POTENTIAL FOR LIVELIHOODS DEVELOPMENT AND CHANGE**

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In this section an analysis of various factors related to livelihoods development in the GMAs are presented, including viability of selected livelihood strategies in agriculture, tourism/cultural tourism, and natural resource exploitation, opportunities for CBNRM reform, and potential for skills development.

### **A. Potential Projects to Develop Livelihood Strategies**

#### **A1. Financial and Economic Analysis of Livelihood Enterprises**

In this section, summarized results of analytical work on the private returns and the economic contributions characteristic of selected livelihood strategies are presented. The activities selected are currently considered to be important sources of revenue for GMA residents and have potential to be scaled up.

Selected livelihood activities were modeled in detail as either having widespread importance, such as with maize, or having potential for expansion while not jeopardizing the conservation objectives in development of the GKNP area. Data from the field studies conducted during this study were used to develop detailed financial and economic models for these activities. The objective was to characterize the local conditions for production and income generation. The viability of these activities in terms of their contribution to local livelihoods (measuring private values in kind and cash) and their contributions to the economy was measured.

Exhibit 24a , below, shows key livelihood measures from the enterprise models developed for the KNP GMAs. Detailed results from these models are presented in Annex D. In the case of the small-scale household models, gross output is measured in terms of both home-consumed and sold products. We define private net incomes as the annual profits at stability, measured after deduction of both variable and fixed costs. Private net incomes along with any salaries and wages paid annually to local residents make up the livelihood contributions of these activities. We define the private rate of return as the internal rate of return measured over 10 years from start-up and is a measure of the viability of the enterprise for the investor. All show positive returns equal to or exceeding the private discount rate for capital, and this suggest that they are viable enterprises.

Exhibit 24b, below, shows key economic measures from the same enterprise models. Here, the key measures are the gross and net (after deduction of asset depreciation) contributions in terms of value added to the national income (the national economy). These contributions measure all the income generated in the national economy, including profits going to the private investor or household, salaries and wages, and taxes and rents paid to others. The 10 year economic rates of return are the returns accruing to the national economy. They all reflect positive rates, significantly in excess of the discount rate or opportunity cost of capital, and these are higher than the private rates of return, reflecting price distortions and tax effects.

**Exhibit 24a: Selected livelihood results from enterprise financial and economic models (2011)**

Enterprise	Land Extent (Hectares)	Private Gross output (ZMK'000/year)	Private Net Income (ZMK'000/year)	Private Rate of Return (Percent at 10yrs)
Bilili Small-Scale Maize	1	7,491	2,406	14%
Kasonso Busanga Small-Scale Maize	1	5,993	1,737	15%
Mumbwa Small-Scale Cotton	1	6,300	2,019	13%
Mumbwa Small-Scale Beekeeping	2,000	27,000	10,660	27%
Kasonso Busanga Small-Scale Fishing	2,000	2,500	857	22%
Mulobezi Small-Scale Furniture	2,000	2,320	878	21%
Mulobezi Medium-Scale Saw Timber	20,000	5,400,000	1,448,361	19%
Kasonso Busanga Wildlife Viewing	24,100	6,454,751	926,840	12%
Mulobezi Safari Hunting	112,800	4,946,043	877,972	14%
General CRB Business Model	284,000	1,125,554	355,441	10%

Note: More detailed results presented in Annex D

Note: US\$1.0 = ZK 5,000

**Exhibit 24b: Selected economic results from enterprise financial and economic models (2011)**

Enterprise	Gross Value Added (ZMK'000/year)	Net Value Added (ZMK'000/year)	Economic Rate of Return (percent at 10yrs)	Potential Resource Rent (ZMK'000/year)
Bilili Small-Scale Maize	5,766	5,128	31%	-
Kasonso Busanga Small-Scale Maize	4,493	4,309	43%	-
Mumbwa Small-Scale Cotton	5,076	4,438	30%	-
Mumbwa Small-Scale Beekeeping	24,948	23,888	62%	-
Kasonso Busanga Small-Scale Fishing	1,898	1,825	50%	-
Mulobezi Small-Scale Furniture	1,256	1,171	30%	-
Mulobezi Medium-Scale Saw Timber	4,322,897	4,218,303	78%	810,000
Kasonso Busanga Wildlife Viewing	2,691,478	2,180,921	46%	277,952
Mulobezi Safari Hunting	2,211,290	1,936,880	59%	713,265
General CRB Business Model	626,898	532,700	28%	-

Note: More detailed results presented in Annex D

Note: US\$1.0 = ZK 5,000

To begin with maize and crop production, Exhibit 24c shows some per hectare gross margins (operating profits before deduction of fixed costs) for small-scale crop enterprises in Zambia, calculated in 2009. All these crops are grown in the GKNP GMAs. The primary crop grown in the GMAs and surrounding areas, maize has poor profitability, and the diversity of crops grown by some households may be due to the need to overcome this. The product prices used were those recorded centrally, in Lusaka, at the time. Local farm gate prices for small-scale farmers in the study area will tend to be higher as they tend to reflect the opportunity costs of replacement.

**Exhibit 24c: Comparative enterprise profitability (gross margins) for small-scale crop production in Zambia derived from ZNFU Farm Budget calculations (2009)**

Crop	Gross margin /hectare (ZMK'000)
Maize	(52)
Cotton	1,861
Groundnuts	642
Sorghum	1,662
Sunflower	(657)
Soya	1,662
Sugar beans	525

Source: JFW Fynn (pers. comm., 2011)

Maize in the Bilili GMA area reflects the conditions to be expected in the southern and central GMAs where ox-drawn tillage is generally more prevalent. Maize in Kasonso Busanga GMA reflects conditions in the northern GMAs where livestock are scarce and tillage by hand is the norm. Cotton is grown as a supplementary out-grower cash crop, mostly in the central and southern GMAs. Mumbwa and Bilili, which are closest to the markets, are the most important cotton areas. Profitability for cotton is potentially high but is constrained by the terms of trade set by the cotton companies, which in turn tend to reflect the relatively remote situation of the GMA settlements. Improved maize and other supplementary crop production has potential for enhancement through adoption of conservation farming. Potential improvements in local food security and cash inflows for recycling in the development areas of the GMAs could follow.

Small-scale production honey shows good viability, and thus it has potential in all the GMAs as a way to make use of miombo woodland habitats. Small-scale furniture making or other small-scale timber uses have greater viability and potential in the southern and western GMAs, particularly Mulobezi GMA, where the relatively valuable Kalahari sand timber species are found. The use of fish resources also has potential economic viability, particularly where floodplain and surface water is abundant. Here, low input intensification of production (fish farming) building on traditional fishing systems might be pursued. These small-scale activities are not as widespread as crop production but certain households reported to specialize in them. With development, they hold potential for generating enhanced amounts of income from conservation zones in the GMAs

Medium-scale uses of natural resources were also modeled. These enterprises contribute or have potential to contribute to livelihoods through employment of residents and rent capture at the

local community level. A medium-scale model of commercial saw timber in the Mulobezi GMA shows both private and economic viability. There is also generation of economic rent (or excess profit), which has potential to flow as rentals and royalties to local land holders (the communities) in return for land allocation and custodial management of the resource base. Currently no flows of this type are in place, while the state captures some of the rent.

A medium-scale model was also developed for non-consumptive wildlife viewing through lodge development on concessions in KNP and the GMAs. Such an enterprise can generate a reasonable private rate of return on investment, and a very high economic return. It can provide some employment for local residents, and can generate fairly significant economic rent for capture by stakeholders through rentals and royalties. Some of these rents are currently captured by the state, but in the GMAs these could be flowing to the land holders (the communities) as a return on their allocation of land for wildlife, and their custodial management and protection of these resources. Wildlife viewing tourism is the current core of the economy in KNP and has potential in the long term for enhancing incomes in the high quality wildlife areas of the GMAs.

Similarly, a typical medium-scale safari hunting model was developed for the GMA setting. Here again reasonable returns are possible for the investor, high economic returns to the economy are possible, and economic rents can be generated for capture by stakeholders. These enterprises currently form the main wildlife use in the GMAs with ZAWA receiving the rents and distributing some of these to local communities. Hunting makes efficient use of relatively low quality wildlife areas and has an important role. However, in high quality wildlife areas, the returns to land are low, compared with those of wildlife viewing tourism. Thus as wildlife populations build in the GMAs and the potential for non-consumptive tourism expands, it may be more beneficial for wildlife viewing tourism to take priority in land allocation.

## **A2. Potential Livelihood Activities that could be Promoted**

The financial and economic analysis above provides a guide to where livelihood activities could be supported to enhance overall wellbeing of residents in and around the GMAs, while contributing to the conservation and development objectives of the GRZ's proposed GKNP economic development project.

As highlighted in earlier sections, there is a link between food security and the illegal use of wildlife and other natural resources. Poor food security encourages poaching and illegal uses of resources. To overcome the poverty and food insecurity encountered in the GMAs, households need increased income in the form of food as well as cash. In the absence of a functional CBNRM program, despite the best efforts of ZAWA in this regard, few benefits accrue to communities and households from tourism. Conservation for tourism is not seen by households as a legitimate land use in the GMAs. Similarly, forest and fish conservation are not seen in this light, and management of these resources for sustainability is lacking.

### **A2.1. Agriculture**

Promotion of Conservation Agriculture (CA) and market support in the agricultural sector that is both focused on the development zones and combined with enhanced income from CBNRM land uses could have a major impact on food security.



Potential for enhancement of crop production is significant through the adoption of yield enhancing CA practices. These have been shown to increase yields of maize from less than one ton per hectare under traditional methods to eight tons when all crop nutrients are provided and precision timing and spacing is adhered to within the system (see also the Household Case Study conducted in Mukunanshi Village Kasonso Busanga GMA, 12 July 2011 in Annex J). Expectations of yields in the region of 4.5 tons per hectare are commonly obtained using such practices, which is comparable to the average yield expectation in the commercial farming sector. Similar improvements have been proven for all crops, substantiating the imperative to promote CA in all agricultural areas and enterprises.

Scaling up of production by enhancement of yields per unit area should be the main objective. Expansion of the area under poor traditional management should be avoided within the GMAs, as elsewhere. Intensification of sustainable agricultural practices rather than expansion of traditional agriculture is a preferable policy since it would more efficiently provide for the needs of the communities and imply less destruction of wildlife habitat and biodiversity.

Promotion of ripping (not plowing) with oxen is commendable. Economies of scale are important if mechanization of ripping is to be promoted. Lack of experience with machinery is a major drawback to mechanization in the small-scale farming community. In areas with a high density of farmers it is reasonable to promote acquisition of tractors by experienced individuals who can rip the fields of others under contract. However, care needs to be taken not to create undue dependency with the risks of that.

Herbicides provide an effective means of increasing the productivity of labor, moisture and crop nutrients as well as reducing the burden on women and children who are usually engaged in manual weed control. The capacity to control weed growth is the major constraint on the size of fields that can be cultivated by a family, so use of herbicides provide the means to expand the area under cultivation.

Enhancement of crop production is best promoted within the KNP GMA chiefdom areas that fall outside the actual GMAs (see Map XX: Chiefdom Map). Where yield enhancement inside the GMAs is promoted, it should be restricted to development zones, and run hand in hand with a sound wildlife, forest and fish CBNRM programme which promotes viable land use with these resources.

Expansion of crop production inside GMAs will be constrained by increasing distance from urban markets. Development of market chains should be managed so as to minimize encroachment of settlement outside the development zones in GMAs. The overall intention of enhancement in crop production in the GKNP area is to enhance household livelihoods to take consumptive pressure off the natural wildlife and forest resources, and this should be the guiding principle.

There is currently no organized processing of any crops such as exists under COMACO in Luangwa. Potential for replication of the COMACO model in Kafue GMAs is good and, if initiated, any such activities within the GMAs should be replicated or initiated in the main agricultural areas outside the GMAs in order to avoid inward migration.

Within the COMACO model, good use should be made of all the support organizations and opportunities available that can increase efficiency of input supply and market chains. For example, the Zambia National Farmers' Union (ZNFU) has district associations that gain and provide guidance to and from the parent body. These associations have a chairperson, secretary, and treasurer, and the members benefit from information and lobbying of the central executive body in Lusaka. There are also nationwide commodity associations similarly affiliated to the ZNFU, which focus on beef, game farming, poultry, pigs, dairy, grains, and irrigated crops, among others. Causes can be taken up by the ZNFU at the central or district level and members have benefitted significantly from the activities of their union. One such example is that of the distribution of market price information through a centralized system accessible through phone texting. Similarly, farmer co-operatives are formed for the purpose of receiving subsidized fertilizer and seed under the Farmer Input Support Program (FISP), a government social welfare program delivered through the agricultural industry.

Another input supply program is the Farmer Input Support Response Initiative (FISRI), funded by NORAD (Norwegian Agency for Development Cooperation), which allocates vouchers to be redeemed against inputs to the value of K500,000 per participant on condition that they apply CA methods. The program is centered on Kaoma and other areas of Zambia where there is small-scale farm development, and is being scaled up.

The private sector can also be influential. Private companies such as CHC commodity traders have established markets for sorghum and cassava, in addition to the staple food crops, on a national scale, while ZAMBEEF has created markets for beef. Dunavant has also entered into trade in grains in addition to their cotton related activities. Grain traders are free to trade in the GMAs although they are generally unable to compete in remote areas with the Food Reserve Agency (FRA), which buys at pan-territorial and pan-seasonal prices. The Commercial Farmers Union (CFU) has also been instrumental in enhancing the availability of crop inputs and equipment in many small-scale farming areas, and has further developed availability through a voucher scheme.

In the context of localized promotion of marketing through a program incorporating the COMACO approach, use should be made where possible of all the support partners described above.

## **A2.2. Tourism**

### ***Tourism joint ventures***

A functional CBNRM program with adequate honest broker support, devolution and enhanced joint venture incomes could change this in the long term. Development of appropriate commercial enterprises as joint ventures with communities should be promoted by the GKNP project. This is discussed in great detail in the analysis on CBNRM below. It is the most vital area for promotion to break the cycle of natural resource depletion in the GMAs. Furthermore, enhanced cash income to communities can be reinvested in household livelihood activities such as crop production in development zones.

***Cultural tourism: Existing cultural practices and crafts production that could be linked to cultural tourism***

During four FGDs on traditional cultural practices, FGD participants described various types of ceremonies, rituals and celebrations that are still being practiced in the communities and chiefdoms of the Ila, Tonga, and Nkoya. These are described in Annex G.1.

Participants in the FGD on Ila culture in Kabulwebulwe Chiefdom (Mumbwa GMA) noted that tourists would be welcome to come and view/participate in the *Chisungu* ceremony to celebrate the girl initiates 'coming of age' once they come out of isolation. In fact, this is reportedly already happening, where tourists hear about the ceremonies and celebrations, and come to the village to observe and participate.

Similarly, participants in the FGD on Nkoya culture with members of the Kamakokwa community from the Kahare Chiefdom, Mufuntu GMA, noted that visitors are already coming to the villages to observe and participate in various ceremonies, especially for the *Kazanga* ceremony. These tourists are not charged to attend the ceremonies, but they still contribute to the local economy and help to promote local businesses by buying food, chickens, drinks, and sometimes crafts. Also according to the FGD participants, Professor Wim Bisberden from the Netherlands, who wrote a book in 1972 on the Nkoya culture, wants to return to the Kahare Chiefdom to build a museum on Nkoya culture near the site of the *Kazanga* ceremony. If this transpires, it would be recommended that any museum initiative is a joint venture activity with the Professor working directly with the Kahare CRB and Chiefdom and members of the community.

Beyond tourists going to villages/chiefdom to view or participate in traditional ceremonies and celebrations, a number of other cultural activities can be created to the benefit of the communities and tourists alike. Some possibilities include: 1) dancing, drumming, and singing troupes coming to the lodges to entertain the lodge guests, 2) the creation of 'cultural villages' – newly made staged 'mock-ups' of old time villages with community members paid to be 'actors' engaged in such activities as craft-making, traditional medicine/divining, food and natural resource processing, and beer brewing, 3) access to real villages and chief's palaces to observe and partake in daily activities such as farming, food preparation, collecting natural resources, and palace events, 4) craft demonstrations and sales; 5) storytelling and educational 'lectures' on various cultural traditions and practices, 6) viewing and/or participating in fishing drives and other traditional fishing events, and 7) nature walks where natural resource collectors take tourist on walks in the bush to indicate the various plant resources used in the area and to describe how they are used.

To increase the added value for any of these cultural tourism activities, the community or CRB should be charging a direct fee for tourists who come on their own (self-drive) or receive a percentage of the amount charged to the tourist by a lodge or tour operator, directly from the tourism operator. Any charge should include opportunities for tourists to take as many photographs as they would like, to avoid the situation where tourists are hassled for a fee per photograph.

By incorporating cultural tourism events into the Zambian CRB/CBNRM model, additional income can be gained by the CRBs and communities involved. In the early days, this income might be very minimal, but as the idea of cultural tourism activities gains traction, and there are more tourism operators who partner with the communities to provide cultural activities/trips to their guests along with their existing boat rides and safari drives, specific benefits can accrue.

Beyond the above-mentioned cultural activities, much can be done to encourage the large variety of crafts currently be made in the GMA communities, which are described in Annex G.2. Reportedly crafts are only being made for home-use and sometimes for selling to other community members, but no craft production appears to be done to make crafts for sale to tourists or to sell outside the GMA communities. By examining craft development and marketing programs in other southern African countries (especially Botswana, Namibia and South Africa), support could be provided to the KNP GMAs to implement their own craft development and marketing program.

All of these cultural activities can go a long way to increase the financial benefits accruing to communities, and importantly provided additional opportunities for women to participate in and benefit from CBNRM. An added benefit comes from the preparation of these events – that of keeping the culture of the GMA communities alive.

### ***Potential for income from other assets***

Zambia has 3,687 national heritage sites listed in the national register of the National Heritage Conservation Commission (NHCC). Many of them are in KNP and GMA. They represent an underdeveloped tourism potential that, if properly developed, could contribute to tourism development and sustainable financing for protected areas.<sup>10</sup>

### **A2.3 Natural Resources**

Sustainable, small-scale use of forest and fish resources and conservation-friendly activities such as beekeeping should be promoted. In some cases, these can be linked with commercial operations, such as the supply of timber to commercial saw timber operations as out producers. Munkoyo production has potential for scaling up as well, if resource management can be improved, as does intensification of fish production using fish farming approaches.

Combined with a functional CBNRM program the opportunities for getting small-scale natural resource use on a sustainable footing will be much enhanced. For example, charcoal production, while clearly viable, is considered destructive. This could be reversed within a sound community-based forest management system.

Responsible support making value-added products and in marketing along the lines of the COMACO model could also contribute to ensuring sustainable resource use. As an example, the Organic Producers and Processors Association of Zambia (OPPAZ) is managing a training program for honey producers in Kaoma. Similar production processes have been initiated in the northwestern province, for example by a small company called Forest Products.

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<sup>10</sup> REMNPAS Program Document p. 28

## **B. Potential for Successful CBNRM in the GMAs**

In order for CBNRM to be effective in Zambia, there is need to draw lessons from both the neighboring countries and Zambia's own experiences from CBNRM projects implemented before. The following are the valuable lessons learned from the CBNRM efforts in Zambia's neighboring countries (Zimbabwe, Botswana and Namibia) which can help improve Zambia's CBNRM as articulated in the World Bank Report 2008 (Simasiku et al. 2008):

1. These countries have deliberate policies to empower communities to manage wild resources themselves and participate in the hunting and tourism industry.
2. Community structures are registered legal entities under 'common law' with clearly defined membership.
3. Community structures have defined user rights exercised in a well-defined geographical area.
4. Rights are granted to community structures upon fulfilling requirements set by government.
5. Collaboration with external private or NGO partners enhances the capacity to harness knowledge, financial resources and market linkages as well as optimizes businesses practices for effective management.
6. Decentralization to community structures is not effective without capacity building.
7. When local authorities or local governments have wider mandates than wildlife or tourism they become a disincentive for conservation in communities.
8. Diversification through tourism development and other forms of natural resources use, in addition to hunting, increases community income.
9. Research on benefit sharing and impacts on livelihoods is necessary to adapt policies and devise strategies that bring genuine and more equitable distribution of wealth.
10. Economic activities in remote wildlife areas require extra incentives to stimulate growth.
11. Conservation areas are more likely to succeed when their establishment is initiated by the community.

### **B1. Lessons from Namibia's Conservancy Program**

The Namibian government has stood out as one of the only governments in southern Africa that has devolved rights to manage and use wildlife to communities. This fundamental shift of rights to local communities has created space for communities to negotiate, bargain, manage, and benefit from wildlife resources. For the past 20 years, Namibia has successfully used conservation of wildlife to benefit its rural communities. Hard lessons have been learned, and strong institutions of governance have emerged. One of its strengths has been **a strong support network** consisting of a committed government, an international NGO support group, a donor community, local traditional authorities, local NGOs (primarily IRDNC), and the communities. In addition, Namibia has invested in institutional development of local communities, a vital component of any successful program that aims to meet both conservation and development objectives.

The Namibia model presents some very important lessons from which the Zambia-GMA communities can learn. Interventions to help strengthen the CRBs will require both macro and micro-level developments.

*“Best practice in community conservation is not so much about transferring ‘good’ experience from one project to another – rather it is about strengthening capacities and developing resilience of conservation agencies, communities and program managers through the process of adaptive management where they experiment, learn and take decisions within the constraints under which they work” (Murphree, 2001e)*

Several factors at the national/macro-level have fostered Namibia’s successful community-wildlife program. As highlighted, the strong commitment and support of government, both international and local NGOs, the donor community, and traditional authorities have created an enabling environment for the success of this program. Zambia has several macro level actors that could play this part; however, very little coordination is undertaken. The process of fiscal devolution for the CRBs requires support from Zambia’s Ministry of Tourism, Environment & Natural Resources. This policy shift is fundamental in ensuring that the VAG gets strengthened and decision-making is taken to the households in the GMAs. Strong donor commitment is also important in advocating for this policy shift. Lessons from previous CBNRM programs in Zambia (ADMADE and LIRD/SLAMU) show that donors provide both financial and political support that ensures decision-making power is devolved to the local communities (Lubilo & Child, 2010 and Dalal-Clayton & Child, 2003).

At the micro-level, the Namibia model has a slew of institutional initiatives that Zambia can learn from and adopt. It is important to note that Zambia already pioneered some of these same initiatives during the implementation of the Norwegian-funded LIRD programs in the South Luangwa. Built on the principles of CBNRM, these interventions are therefore not about reinventing the wheel, but understanding that a successful CBNRM program requires revisiting and implementing the right principles and practices.

#### *Clear definition of Rights*

Devolved power to the local communities begins with a clear definition of rights and responsibilities. Namibia has successfully devolved wildlife and natural resource rights to local communities residing in communal tenured land. Zambia, on other hand, has what is loosely articulated as a ‘co-management’ arrangement that limits community autonomy and in turn limits the community’s access to full use of the communal lands on which they reside. This ‘co-management’ arrangement constrains communities from claiming ‘rights’ to the natural resources and instead leans more on increasing the responsibility and the cost of residing in these GMAs.

#### *Management Committee*

In Namibia, each Conservancy is managed through a Management Committee. This is the executive body of the conservancy that consists of both elected and appointed representatives of the community. This institution has worked relatively well. The Management Committee in the

Namibia Conservancy is in charge of the day-to-day operations of the conservancy. With strong support from IRDNC (a local NGO), this committee has over the years become institutionalized as part of the Conservancy governance system. Its composition includes a manager (who oversees all operations for the Conservancy) and a management committee in charge of programs such as community development, enterprise development, and natural resources.

Similar to this model is the position of Trust Manager in the Botswana CBNRM program. The Trust Manger, who is a highly trained professional, undertakes the responsibility of managing the communities' private sector leases, enterprises, lodges, employment, and natural resources. In the Botswana case, this position has helped manage local conflicts and political turmoil in some communities, as the Trust Manager is an external agent who is professionally trained.

The Zambia/ CRB structure currently has a position that similarly encompasses both the Management Committee roles in Namibia and the Trust Manager in Botswana. The position of Unit leader is currently being implemented in the GMAs around KNP. The Unit Leader is an employee of ZAWA that is supposed to provide the same technical backstopping that the positions of Management Committee (Namibia) and Trust Manager (Botswana) provide. A proposal in the Zambia case is to have a non-ZAWA employee play this function for the CRBs. The Wildlife Act of 1998 outlines the role of the Secretariat in CRBs. The functions of the Secretariat need to be articulated, and among the proposals is to employ a full time professional member with the same function as the Conservancy Manager or Trust Manager in the Namibia and Botswana case.

The role of the committee in Namibia would contain the following elements:

1. To represent the interests of the conservancy members in matters related to natural resource and wildlife management and use within the conservancy;
2. To oversee the management of conservancy income and expenditure;
3. To represent the conservancy in negotiations with business ventures and to develop tourism initiatives within the conservancy;
4. To discuss policy issues with the MET;
5. To arrange annual general meetings of the conservancy;
6. To keep conservancy members informed and consulted on critical issues
7. To apply to the MET regional head for quotas for the use of wildlife;
8. To determine how game will be used once quotas are set;
9. To determine what technical assistance is needed from MET and other organizations;
10. To determine training needs of the conservancy;
11. To initiate projects for improved wildlife management within the conservancy;
12. To establish a practical problem animal management program;
13. To manage, if necessary, a community/ conservancy game guard system.

#### *External Agency support*

The Namibia Conservancy program, has over the years received tremendous help from external agencies such as the Ministry of Environment & Tourism, IRDNC, the WWF-implemented Life Project, district councils, and traditional authorities. These external agencies provide oversight

and ensure stronger lines of accountability protect the majority of community members. This particular form of support is lacking in the CRB program in Zambia. Over the years there have been coordinated efforts through the international NGOs which have drastically reduced since the transformation of NWPS to ZAWA. Strengthening links between meso-level institutions that understand issues of conservation and development is key. Meso-level institutions such as the local District Council should be strengthened and be part of the institutions that provide coordinated external support to the CRBs. The Decentralization Act of 2002 encourages such partnerships.

## **B2. Key Findings on the Potential for CBNRM in GKNP GMAs**

This section attempts to encapsulate the findings in the analysis bringing out the broader key issues and challenges associated with CBNRM in the GKNP GMAs. These are the elements that need to underpin planning of improvements in the CBNRM system.

***Incentives and rights.*** CBNRM rests on the central hypothesis that if a resource is valuable and landholders have the exclusive rights to use, benefit from and manage the resource, then sustainable use is likely to ensue. Therefore, the benefits from management must exceed the perceived costs and must be secure over time. Three key elements are important for this hypothesis:

1. *Economic incentives:* CBNRM approaches assume that the most critical decisions regarding the allocation of land, resources, and management investments are based primarily on economics rather than conservation considerations. It is therefore necessary to give a resource such as wildlife a focused value that can be realized by the landholder. The landholder will be unlikely to invest time, effort, and finances into managing a resource if the benefits (which could be tangible or intangible) do not exceed the costs.
2. *Devolution:* In all southern African states, authority over natural resources such as forests and wildlife was centralized by colonial governments, and this situation was maintained after independence by post-colonial governments. In order to create positive conditions for landholders to manage wildlife sustainably, the authority to take crucial management decisions needed to be devolved from the state to the landholders. This authority includes the right to manage, the right to benefit, and the right to dispose or sell, which amounts to proprietorship over the resource.
3. *Collective proprietorship:* the importance of tenure and property rights or “proprietorship” for sustainable natural resource management has been long recognized. Murphree (1994) defines proprietorship as “sanctioned use rights, including the right to determine the mode and extent of management and use, rights of access and inclusion, and the right to benefit fully from use and management.” “Collective proprietorship” is where a group of people is jointly given sanctioned use rights over land and/or resources which they are then able to manage according to their own rules and strategies. This implies the development of some form of local institutional arrangement that governs decision-making.



In summary, CBNRM at its core aims to create the right *incentives* for groups of resource users within defined jurisdictions to use natural resources sustainably. These incentives include enabling the resource users to realize tangible economic benefits from resource use and providing strong proprietorship over the resource. CBNRM also aims to support the development of appropriate and effective institutional arrangements for groups of resource users to control resource use and manage the benefits that are derived from that use. For community institutions to be effective they need to have legitimacy from above i.e. their right to manage resources is recognized and supported by government. They also need legitimacy from below i.e. they are accountable to a local constituency of community members and act on behalf and in the interests of those community members.

***Integrated resource management.*** Very broadly, CBNRM is about how rural people manage the resources on their land, particularly where such management requires some form of cooperation between community members. Communities use a piece of land for multiple purposes and the use of different resources is interlinked. Wildlife and livestock graze and browse in the forest, which also supplies thatching grass, poles for construction, wild fruits for food, and the like. However, governments have fragmented responsibility for regulating resource use into different government ministries and departments each with its own set of policies, legislation, regulations and administrative procedures.

For CBNRM to be successful there needs to be greater recognition of the integrated way in which communities use and manage their resources. Policy frameworks and implementation approaches need to promote integrated approaches instead of fragmentation.

***Challenges for CBNRM implementation in Zambia through CRBs.*** The general approach of CBNRM in Zambia of revenue sharing between government and communities is unlikely to produce CBNRM success. First, the system is inefficient – income due to communities from government agencies or parastatals often does not reach the communities concerned. Although it might be argued that the system of income distribution can be improved, there are more fundamental problems with the revenue sharing approach:

1. The amount of income reaching communities is insufficient for them to cover the costs of managing resources and to also provide some benefit to residents. This means that there is insufficient incentive for residents of GMAs to manage resources sustainably. Hence the ongoing poaching and degradation of other resources that has been well documented.
2. If income is distributed by government to communities, there is no real link between management of the resource and the benefit gained. Communities have no sense of *earning* their income through good management of the resource. They receive a hand out from government at some stage in the future if the system works and they actually receive their income. The link between sustainable management and benefit is broken. Again there is no incentive for residents of GMAs to manage their resources sustainably.

One means for communities to potentially increase their income is through tourism. However, there does not appear to be a clear policy and legal framework that ensures communities can gain significant benefits from tourism. If a CRB acquires the appropriate legal *persona* it is possible for it to enter into a partnership with the private sector for lodge development within a GMA, but at the same time it is also possible for the private sector to develop tourism facilities and activities in GMAs without any real involvement of the CRB. For CRBs to be able to gain real benefits from tourism they need to acquire concession rights in the GMA so that any tourism development should be through and with the CRB.

***Rights and proprietorship.*** The Zambian CBNRM approach does not provide strong proprietorship to communities through clearly defined rights to take management decisions and to benefit from resource management. Legislation tends to include general provisions regarding community *responsibilities* but does not define rights to manage. For example as noted above on Policy and Legislation, the Wildlife Act states that CRBs shall have the power to “negotiate, in conjunction with the Authority, co-management agreements with hunting outfitters and photographic tour operators and to manage the wildlife under its jurisdiction”.

However neither these provisions nor any others in the Act actually *define* what management means. There is no clear definition of a “co-management agreement” hunting outfitters or tourism operators. There is no indication of whether communities gain income from this “co-management”. The draft Policy on National Parks and Wildlife in Zambia goes somewhat further than the legislation by providing for Game Management Plans to be developed in GMAs that would indicate:

1. How the wildlife is to be used for consumptive and non-consumptive utilization;
2. How the resources are to be managed and how the use is to be organized, in particular, how abuses of the resource are to be controlled and how quotas for consumptive uses of the wildlife are to be set, subject to the approval of the ZAWA;
3. How products, including those associated with the non-consumptive use of the resource, are to be marketed; and
4. In the case of communally held resources, how the decision relating to the apportionment of benefits with the CRBs will be decided.

In addition, a draft national CBNRM Policy for GMAs and Open Areas proposed that CRBs should recommend trophy hunting quotas to ZAWA, that CRBs should operate bush camps for the trophy hunters, that CRBs could designate areas for non-hunting, and develop additional sources of income from wildlife in consultation with and on approval by ZAWA. Data collected on resources use and population trends by village scouts and other stakeholders knowledgeable about the GMA, such as Hunting Operators or NGO institutions active in the area, should form the basis for making recommendations of sustainable hunting quotas to ZAWA. Any changes ZAWA makes to CRB quota recommendations in an upward direction should have scientifically-based justification.

Although these draft policies appear to provide more clarification of the functions of CRBs they still do not go far enough in clearly stating the use rights of CRBs over wildlife. In addition, even if these policy provisions were approved, they do not provide strong rights, simply because

they are policy statements and are not entrenched in legislation. Policy provisions can be removed arbitrarily by officials and there is little legal obligation for them to be enforced.

In reality ZAWA concludes agreements with hunting outfitters on behalf of communities. There is no clear statement that communities may hunt wildlife, sell wildlife, use wildlife for meat or take any other specific management actions. In reality the management authority remains with ZAWA, while the CRB is given a number of *responsibilities* for which they lack the authority to properly carry out.

The result is *disempowerment* of communities rather than empowerment. The result is that the policy and legal framework does not promote a sense of ownership among communities regarding the resources on their land. This sense of ownership is necessary for communities to accept responsibilities for resource management. *Why accept responsibility for looking after someone else's resources, particularly when you receive little or no benefit for taking on these responsibilities?*

Although the Zambian Wildlife Act states that all wild animals are owned by the State, strong devolved use rights can still promote a sense of ownership by communities. This is the situation in Namibia, where legislation provides communal area conservancies with “ownership” over huntable game species which are kudu, oryx, warthog, springbok, buffalo and bush pig. In reality ownership is limited because the extent of the use rights is limited to the use of these species for “own use” (i.e. hunting for meat and selling of skins) without a permit or quota from government. For all other uses, quotas and permits are required. However despite this narrow definition of “ownership” these and the other use rights afforded conservancies seem to engender a sense of proprietorship over wildlife within conservancies.

The Wildlife Act aims for CRBs to “promote and develop an integrated approach to the management of human and natural resources in a Game Management Area or an open area falling within its jurisdiction”. However, the policy and legal framework is fragmented with different laws under different government departments providing for community involvement in resource management. The different laws provide for the establishment of different community institutions in different ways. For example, the Fisheries Act provides for the Minister to establish Fisheries Management Areas and to appoint a fisheries management committee. At least the Act obliges the Minister to appoint such a committee in consultation with a CRB if the committee is established in a GMA. However CRBs and other stakeholders report that the fisheries committees are usually non-functional and communities do not get any monetary benefits from the fisheries and aquaculture licenses issued as provided for by the Act.

Again, the Forest Act of 1999 provides for Joint Forest Management (JFM) Committees at community level. Although the Act has not been implemented, some JFM committees have been established in pilot areas. However there is no specific provision for integration with other community resource management institutions such as CRBs.

It is confusing for communities to have these overlapping legal and institutional arrangements as they do not use or manage resources in isolation to each other. A patch of forest with a river running through it will be used by local residents for a number of different purposes, yet the

resources and use rights for the same patch of forest fall under different government departments. Such arrangements are also inefficient in terms of service provision to communities.

***Institutional arrangements and community governance.*** The legislation for resource management does not adequately provide for the establishment of community institutions for resource management that are democratic and accountable to community members. For e.g. the Forestry Act of 1999 provides for committees to manage Joint Forestry Management Areas to be constituted by the proposed Forestry Commission in consultation with the local community and with the approval of the Minister. Any committee constituted in this way will primarily be accountable upwards to the Commission and the Minister. There should be no need for such a committee to be approved by the Minister. The legislation for all resources is generally characterized by the need for approvals by the Minister which lead to delays and which create circumstances which allow for arbitrary decisions by the Minister.

The Wildlife Act makes few provisions for governance issues in CRBs to be addressed. No provision is made for a constitution and other mechanisms for accountability downwards to the community apart from a stipulation that a CRB should be elected by the community. However the Wildlife Policy does state that all meetings of any CRB are supposed to be conducted in a democratic way, decisions reached through consensus, and minutes of all their transactions and deliberations recorded. In addition the draft national CBNRM Policy for GMAs and Open Areas makes provision for CRBs to develop constitutions. However, there is a need for stronger provisions in legislation for governance issues to be addressed.

According to DSI (2008) CRBs do not have any legal personality except for their recognition under the Wildlife Act of 1998. However, “Community structures created as legal entities are better placed to acquire the necessary recognition including rights to natural resource management and to access other types of support. Recognition of community structures as legal entities creates opportunities for economic empowerment through partnerships and joint ventures” (DSI, 2008:15). The establishment of a constitution for a CRB would be an important step towards providing it with a legal personality.

Implementation approach. An enabling policy and legal framework is not sufficient in itself for achieving success in CBNRM. Experience from within southern Africa indicates that implementation approaches are also of key importance.

Capacity building and support to community institutions. One of the factors in the success of the Namibian CBNRM program has been the extent of support provided to communal area conservancies to develop their capacity to manage their own affairs. Namibia has a strong group of NGOs that have combined to provide capacity support to conservancies in conjunction with the Ministry of Environment and Tourism (MET). Support is provided mainly through thematic working groups that focus on natural resource management, institutional and governance support, and business and enterprise development.

In natural resource management communities are supported in developing systems for resource monitoring and game counting, management planning and zoning, quota setting, and managing

human wildlife conflict. With regard to institution building communities are supported in developing constitutions, financial management, developing mechanisms for accountability and transparency in decision-making, holding committee meetings, holding annual general meetings (AGMs), deciding on how to use income for community benefit, administrative procedures, office management, and staff management. Conservancies are supported in negotiating contracts with hunting outfitters, tourism operators, and in managing these relationships. Conservancies receive support in developing and managing their own businesses such as community run camp sites. They are supported in developing business plans for individual enterprises and overall sustainability plans for the conservancy itself.

An important factor in Namibia has been the support to conservancies provided over a long period of time, which has been longer than the usual project life span. USAID funding over a period of nearly 15 years provided a strong foundation for the capacity building that was necessary for conservancies. It enabled support agencies (NGOs and MET) to meet new challenges as they emerged and develop their own capacity to provide support as the needs of conservancies changed over time as they began to engage in new and different activities.

Support for promoting good governance. Support for promoting good governance has emerged as one of the central issues in CBNRM implementation in the region. In Zambia concerns have been raised about elite capture within CRBs, while in Botswana government removed the ability of communities to keep all their income because of evidence of corruption and misuse of funds. In Namibia there has also been evidence of misuse of conservancy funds, although there has been little evidence of elite capture (Bandyopadhyay et al 2004, 2008).

Experience shows however, that there are ways of addressing these problems. In Botswana one of the reasons for the lack of accountability within community CBNRM trusts was the lack of external support and oversight. In Namibia, once communities become aware of the misuse of funds they tend to call their committees to account, often replacing them and in some instances changing their constitutions. This process has been assisted by the development by NGOs of a simple methodology, the Institutional Dashboard, which assists communities in identifying governance problems within their conservancy (interestingly this tool was developed based on experience in Zambia). The importance of ensuring that communities approve the conservancy budget at AGMs was also recognized in Namibia as an important means for ensuring greater accountability and transparency.

Experience in Zambia suggests that fiscal devolution to the Village Action Groups (VAGs) ensures greater community involvement, more efficient and effective use of CRB income and the development of more transparent financial accounting systems (Dalal-Clayton and Child, 2003). Fiscal devolution meant providing the hunting income to smaller groups of people operating at the local level through VAGs instead of the CRB taking all decisions regarding use of community income. In Namibia, there has also been a trend for conservancies to establish smaller units within the conservancy for improved governance and in some areas for villages to receive income from conservancies to use according to their own wishes.

CBNRM implementation approaches need to focus strongly on supporting communities to develop the mechanisms to ensure good governance

### **C. Potential for CRB Reform**

CRBs need to be registered as legal entities under the Companies Act or the Societies Act so that they can become entrepreneurial in nature and operate as a business. CRBs should undertake joint-venture, revenue-earning activities from wildlife and other natural resources (such as forestry, fisheries, and water) that promote employment, increase food security, and operate in a transparent and accountable way, provided they are not in conflict with wildlife and current commercial activities, particularly safari hunting. Such enterprises should be approved by ZAWA or other government departments dealing with such natural resources management to ensure they are done in accordance with existing laws and regulations.

In the field work it was found that CRBs, VAGs, and community members in the GMAs have almost none of the skills necessary for carrying out their role in CBNRM. Elsewhere in southern Africa, it has been shown that, besides being legal entities, community bodies managing CBNRM need to be subjected to ongoing training in the basic skills needed to manage businesses. They need to be trained in conducting elections, bookkeeping, accounting, managing audits, budgeting, managing resource monitoring, analysis of resource monitoring data, quota setting, marketing, negotiating joint venture agreements, making use of legal assistance, and many other skills.

Restructuring the CRBs begins with understanding the salient role of VAG structures in the governance of communities residing in GMAs. As highlighted below, and in many other studies, this unit is presently the best option for local anchoring of CBNRM. Key to this is institutional development. There is a need to assist communities in developing accountable, transparent, democratic organizations, beginning with strengthening the already existing VAGs and CRBs within the GMAs. VAGs, as articulated in recent work on CBNRM performance in Zambia, have been heavily undermined and their responsibility as the key decision-making unit has eroded. Capacity is required to re-institutionalize this unit of governance Child & Dalal-Clayton (2003).

#### *Membership*

Membership in the CRBs is currently an undefined issue. With the eroding of the VAG structure, communities within the GMAs have been alienated from having a stake in the process of decision-making. As an intervention to revisit this and enable communities to be part of the decision making process, they will need to identify 'who' qualifies for membership in their individual VAGs. In GMAs with significant in-migration, this is a contentious issue, and the constitutional review undertaken through community consensus can begin to address this. Membership rules, essentially, should ensure marginalized groups of the community are not left out.

#### *Accountability*

The current structure of representational CRB governance has allowed for few members of the Board to make key decisions for the larger population in the GMA. Strengthening mechanisms that ensure both vertical and horizontal forms of accountability is crucial. Horizontal accountability describes a relationship between equals; it refers to somebody holding someone

else of roughly equal power accountable, and is a key element of good governance (Schedler, 1999). Within the CRB structure, this form of accountability should be encouraged. Each VAG unit should enable accountability within the VAG, and secondly ensure elected leaders are accountable to their constituents. Institutions such as Annual General Meetings and General Meetings are important engines for channeling more face-to-face participation of members and in turn allowing them to question their elected leaders. Information flow for example has been used as a proxy measure of accountability within communities (Collomb-Emptaz, 2010). Information such as financial reports, budgets, staff salaries, and natural resource status, revenue, and quota reports, should be provided to constituents in an easy and accountable manner. Each CRB as well as each VAG should have regular General Meetings (every quarter) and one Annual General meeting where this information is provided to constituents in a transparent manner.

Another layer of accountability that should be enshrined within the CRB model is that of vertical accountability. Vertical accountability is the relationship between unequal's; it refers to a powerful 'superior' actor holding a less powerful inferior actor accountable (Scheduler, 1999). The mechanism for ensuring this form of accountability should be undertaken is through external institutions such as supporting NGOs and possibly also ZAWA, the District Council or the Traditional Authority. This vertical form of accountability particularly protects the larger membership of the community when elites begin to capture resources and make undemocratic decisions.

### *Elections*

Democratic institutions such as elections should be strengthened. Elections are important indicators of levels of constituents' participation in choosing their leaders. Secondly, enshrining regular elections in the constitutions allows for change of leadership, within constitutional rules. This institution, according to the Wildlife Act of 1998, is supposed to be upheld by each VAG and each CRB. It is important that local support NGOs as well as ZAWA or the local district council representative should monitor elections.

### **D. Analysis of Legislation vis-à-vis CBNRM**

The Wildlife Act of 1998 allows for potential devolution of authority to CRBs for wildlife management. However, under current policy GMA residents have no rights to benefit from the management of any natural resources. Progress in GMAs is made exceedingly difficult by the existence of a plethora of different sector authorities, most with small capacities, while the primary stakeholders, the villagers, have little authority. While policy, public pronouncements, and legislation suggest that the potential for CBNRM in Zambia is high, there is considerable slippage between stated intention in the Wildlife Act and practice (GRZ/UNDP/GEF REMNPAS Program Document).

Exhibit 25 below highlights areas of proposed modifications to the Zambia Wildlife Act No 12 of 1998 to create an opportunity for CBNRM to be successful. These are nearly all related to entrenching the rights that communities could have. A process of revision of the Wildlife Act has been initiated, and it is considered worthwhile to consider how the 1998 Act could be modified to improve the functioning of CBNRM. Exhibit 25 presents suggestions showing how this might be done.

The Forestry Act of 1999 and the Fisheries Bill of 2011 (as based on the currently effective Fisheries Act (Amended) of 2007) are described in Section IV above, both provide for devolution of resources to communities. As such they do not require modification. The revised Wildlife Act should make it possible for forest management committees and fisheries management committees to be incorporated into the CRB structure. The constitutions of the CRBS should be amended to allow for incorporation of these committees as subcommittees.

**Exhibit 25: Proposed changes to the Zambia Wildlife Act:**

<b>Wildlife Act, 1998</b> PART III COMMUNITY RESOURCES BOARDS	<b>Proposed areas of reform to allow for effective, transparent, and equitable partners for sharing non-consumptive and consumptive tourism revenues.</b>
6 (1) "A local community along geographic boundaries contiguous to a chiefdom in a Game Management Area or an open area or a particular chiefdom with common interest in the wildlife and natural resources in that area, may apply to the Authority for registration as a community resources board"	This clause limits CRB engagement in any activities outside ZAWA/GMA-related ventures. The way CRBs are registered should allow them flexibility to collaborate with external private or NGO partners as this will enhance the capacity to harness knowledge, financial resources, and market linkages, as well as optimize businesses practices for effective management.
(2) The Authority shall register as a board, a local community which, in addition to the pre-requisites described in subsection (1), meets the requirements of subsection (3) and shall, in consultation with that board, develop management plans for the Game Management Area or open area or any part thereof which is under its jurisdiction.	Some GMAs in the GKNP do not have GMPs in place. In some GMAs where they have been developed, there seems to be disputes on the zoning of those GMAs which comprises compliance. Therefore, all stakeholders should buy into a GMP and sign it since all of them will be needed to participate in its enforcement.  Community structures should be registered legal entities under 'common law' with clearly defined membership.
(3) A board registered under subsection (2) shall comprise:  (a) not more than ten but not less than seven representatives from the local community who shall be elected by the local community;	Guidelines on how this is structured should be included in this clause.
(b) one representative of the local authority in the area; and	A District Council representative adds accountability. This should be enforced as some consultations with CRBs revealed that these representatives from the Council do not attend CRB board meetings as stipulated by law.
A representative of a chief in whose area a board is established to represent that chief.	This role needs to be clearly articulated as in the past it has been used as an influence for chiefs to influence decision making at the community level.
Notwithstanding subsection (2) a board may invite any person, whose presence is, in its opinion, desirable, to attend and to participate in the deliberations of a meeting of the board, but such a person shall not vote on any matter	This position needs to be strengthened through the District Council/ District Development Coordination Committee, ZAWA, or the NGO (as in the case of IRDNC in Namibia). The importance of this role is that it strengthens 'external accountability.' Vertical accountability is important in governance. Within communities, aspects of horizontal accountability exist, but scaling this to the larger scale, such as the CRB, allows for stronger vertical accountability.
(6) The Minister may, in consultation with the Authority and the particular board, determine the allowances and honorarium which shall be payable to a chief referred to in subsection (5).	A uniform percentage is paid as honorarium to the Patrons of different CRBs, yet a particular CRB is supposed to determine that. Moreover, the honorarium should be linked to the performance of the chief in terms of natural resource management in his area.



Wildlife Act, 1998 PART III COMMUNITY RESOURCES BOARDS	Proposed areas of reform to allow for effective, transparent, and equitable partners for sharing non-consumptive and consumptive tourism revenues.
(8) Subject to the other provisions of this Act, a board may regulate its own procedure	Specific Board procedures – including governance, financial, and other institutional aspects – should be articulated in a policy document to highlight this important aspect. CRB members should not set their own allowance, but rather the community should. Community structures should have defined user rights exercised in a well-defined geographical area. Rights should be granted to community structures upon fulfilling requirements set by government.
(9) The board may convene any meeting at any time for the conduct of its business under this Act.	Institutions such as the AGM, General Meeting, VAG and CRB elections have not been articulated. Procedures for this are important and they should focus on the core business and functions of the CRB taking into consideration a holistic approach to natural resources management, socio-economic benefits to the community, accountability, and transparency issues. These meetings have in the past been used to control information. Board members have in the past not held Annual General meetings on the pretense that there are no funds. This institution has slowly eroded in large multi-village communities and needs to be restored as it is the highest policy making institution at the village level. General Meetings at the community level have also not been reinforced on the pretense of lack of funding. These are quarterly meetings held at the village level on issues that affect the individual VAG.
7. (1) The functions of a board shall be to promote and develop an integrated approach to the management of human and natural resources in a Game Management Area or an open area falling within its jurisdiction.	Procedures are required that will ensure an integrated approach to the management of all natural resources as this will also be in line with the umbrella policy, the National Policy on Environment.
(2) Without prejudice to the generality of subsection (1), a board shall have power to:  (a) negotiate, in conjunction with the Authority, co-management agreements with hunting outfitters and photographic tour operators;  (b) manage the wildlife under its jurisdiction, within quotas specified by the Authority;  (c) appoint village scouts to exercise and perform the duties of a wildlife police officer under the supervision of a wildlife police officer in the area falling under the board's jurisdiction;  (d) in consultation with the Authority, develop and implement management plans which reconcile the various uses of land in areas falling under the board's jurisdiction;  (e) perform such other functions as the Authority or Director-General may direct or delegate to it.	(a) The Board's roles as well as the roles of the other stakeholders mentioned in this Act should be clearly defined.  (b) Co-management agreements have been limited to consumptive tourism and not non-consumptive tourism. In addition, most of the negotiations seem to be done by ZAWA and not the CRB, although both parties sign on the concession agreement. ZAWA delays the disbursement of revenues to the CRBs (this could be incorporated in the Act). In addition, CRB revenues are inadequate to meet their three main functions such that there is need to widen the income base of CRBs by revising the law and policy to emphasize community-private partnerships to allow for non-consumptive tourism with lodge owners.  (c) The law should provide for the CRBs to be involved in quota setting  (d) Terms of reference for village scouts should be well spelt out, taking into consideration the integrated approach to human and natural resources management, not just emphasizing wildlife.  (e) The law should provide for CRBs to incorporate forest management committees and fisheries management committees as subcommittees into the CRB structure.

Wildlife Act, 1998 PART III COMMUNITY RESOURCES BOARDS	Proposed areas of reform to allow for effective, transparent, and equitable partners for sharing non-consumptive and consumptive tourism revenues.
8. (1) There shall be a secretariat for each board which shall consist of such properly qualified officers as the board may appoint, on such terms and conditions, as it may determine.	(a) The secretariat is similar to the model in Botswana and Namibia of professional staff employed to manage all day-to-day operations of the Community Board. In Namibia this is the equivalent of the Management committee and in Botswana it is the equivalent of the Trust Manager. However, there is need to define the composition, minimum qualifications, and functions of the secretariat. In addition, this regulation and policy is not followed in that in the GMAs around the gKNP, there is no CRB that has an established secretariat, except for bookkeepers. Instead, the Unit leader, who is employed by ZAWA and not the CRB, has come to represent this position. This compromises the effectiveness of the position. There is need to define the functions, minimum qualifications, and relationship of the secretariat to the Board.
(2) The Authority may, in consultation with a board, second officers to the board.	The position of Unit leaders has been revisited. In certain places this role is working and community members perceive that employing a Unit Leader has helped the community.
9. (1) A board shall establish a fund to enhance the economic and social well-being of the local community within the area described in section six.	The community project development fund is managed by the Community Development Committee (CDC). There should be strengthening of the CDC at the VAG level. The CRB should oversee and receive reports on community development activities from the CDC. Deliberate policies should be put in place to empower communities to manage all natural resources themselves and participate in the hunting and tourism industry. Economic activities in remote wildlife areas will require extra incentives to stimulate growth.
(8) The accounts of a board shall be audited annually by independent auditors appointed by the board with the approval of the Authority.	Accounting procedures are well articulated in this Act. What is lacking is capacity building in financial management of the CRBs, and adherence to the conducting of the annual audits by independent auditors. ZAWA has been inconsistently auditing CRBs through their internal audit unit. The question of who takes over this role if CRBs become autonomous of ZAWA should be articulated. In addition, the widespread misappropriation of funds by CRBs, where most are used to meet administrative costs rather than the co-business, should be addressed by adhering to the financial regulations of CRBs.
PART V GAME MANAGEMENT AREAS	
Provided that if any land within any declared or extended Game Management Area is held under a leasehold title that land shall not, except with the written consent of the occupier, be affected by the declaration or extension and shall be deemed to be excluded from it.	This clause allows for alienation of land within the GMA. This has applied to other leaseholds with private sector companies negotiating for leaseholds within the GMA under exclusive private property regimes. What needs to be articulated then is whether this same clause could apply to communities if they wanted to apply for leasehold land, so that they could later lease it out for commercial purposes. This would allow them to maximize both consumptive and non-consumptive tourism.

## **E. Potential for Education and Training**

### **E1. Rational for Creating an Integrated Skills Program as a Component of the Proposed Alternative Livelihoods Program**

There is poor linkage between formal school education and further skills training for formal employment or self-employment, and future income-generating or job opportunities. Tourism, other services industries, natural resource management, employment and self-employment opportunities are reliant on educational attainments (literacy and other functional ‘lifelong’ skills). The insufficiency of these basic skills in the local KNP GMA communities compromises community members’ ability to find a foothold in these income-generating activities.

There is a need for strengthening the educational system targeting those activities in the informal sector especially where women and other marginalized community members are socially and economically disadvantaged. Functional literacy programs outside the school gates can be successful if literacy improvements are linked to livelihoods so that people are empowered to improve their own lives.

Programs that start from livelihood skills seem to stand a stronger chance of success by demonstrating an immediate reason for learning. Organizations that are more concerned with livelihoods seem to be better at designing and delivering effective combinations of livelihoods and literacy than organizations that are more focused on general education. (World Bank, 2001)

In so far as education and skills training equips individuals with skills for self-employment, it can improve the employment situation overall. For example, through formal and informal education people can acquire skills in carpentry, building, bricklaying, dressmaking and trading, which permits them to establish their own enterprises. Similarly, one study (World Bank study by J. Oxenham, et al.,) has shown that basic education is likely to improve agricultural productivity through understanding new techniques, by improved reading skills to follow instructions, and also by improving the recipients’ receptivity to innovation and change (such as conservation farming) and generally improving their knowledge base.

The focus of the integrated skills program from the onset should be on developing the necessary vocational/livelihood skills and functional literacy competencies of adolescent girls, youth, and women to support production opportunities in the KNP GMAs. For this to happen, Zambia needs fully-resourced youth skills training schemes for early school leavers, such as having at least one Youth Resource Center per district or GMA. Along with the creation of new institutions for vocational training, sources of funding to pay for the tuition, such as bursaries, grants or loans, need to be created to mitigate the pressing constraint of GMA families lacking insufficient income for the children to continue their education.

### **E2. Recommended targets for an Integrated Skills Program (geographic and beneficiaries)**

Ideally each of the nine GMAs should be targeted as a site for the proposed integrated skills program. Because of the distances between GMAs and within GMAs, consideration should be given to developing sites for the integrated skills program scattered throughout each GMA, as feasible according to the budget made available for this program.

Individuals targeted for this program should include: adolescent girls, both female and male youth (as defined in Zambia as 18 to 35 by MSYCD), adult women, disabled and other vulnerable groups such as pregnant teens and teen parents (both boys and girls), female-headed households, child-headed households, households with OVC, and households living in absolute poverty.

Given the distance to schools and other educational facilities, consideration should be given to improving accessibility via the supply of bicycles, transport allowances, and road upgrading. In many remote areas communication remains a problem with limited possession of radios and/or no cell phone reception. Consideration should be given to supporting these communication constraints.

Further consideration should be given to supporting relevant institutions and infrastructural projects. For example, if existing basic, community or technical schools are used as sites for training, thought should be given to improving the utilized schools in terms of classroom upgrading/expansion, teaching resource materials and equipment, and stationery supplies. Given the link between good health and the ability to function properly in employment or self-employment activities and the insufficient capacity of Zambia's rural health system, consideration should also be given to supporting the physical infrastructure and human resource capacity of GMA health clinics and health posts.

### **E3. Proposed Education Content of an Integrated Skills Program**

The Planning Education Officer in Mumbwa District (KII, Planning Officer, 2011) stated that to improve the link between education and jobs in the GMAs there would have to be a more relevant current curriculum to ensure relevancy to life skills in the GMAs. He suggested the following areas to focus on: forestry, beekeeping, gardening, and livestock keeping, which are practiced by many households in the GMAs.

By looking at the 'Inventory of Livelihood Activities' found in each GMA (Annex C), other skills training areas can be identified that could be incorporated into the proposed integrated skills training program. Part of this should be training in food processing to add value to the wild and cultivated fruits and vegetables found in the GMAs. On top of these 'sector specific' areas of content, consideration should also be given to basic business and management skills, such as enterprise start-up; basic business principals; costing, budgeting and bookkeeping; proposal writing for funding and credit applications; and marketing. Most of these topics can be interwoven with literacy and numeracy skills training.

Furthermore, the monitoring and management of natural resources can be incorporated into this skills training program. In Namibia, IRDNC and other NGOs have built-in a system of Community Natural Resource Monitors into their conservancy programs. Because males are typically hired to be Community Game Scouts, this program was initiated to provide an income generating opportunity for women in the conservancies, while fulfilling a need to get community members involved in the monitoring and management of their own natural resources. Incorporating training of women and adolescent girls on how to monitor and manage natural resources into Zambia's proposed integrated skills program, can serve two purposes. It is an excellent way to incorporate functional literacy and numeracy skills development into a practical

skills training session, while at the same time preparing women and adolescent girls to become Community (CRB) Natural Resource Monitors. Other conservation-related training could be offered covering fire prevention and fire-fighting management of uncontrolled fires. This could lead to another cadre of employed individuals – Community Fire Fighters Brigade.

The Zambian formal school system has yet to incorporate any training on gender, HIV and AIDS or sexuality into the formal school curriculum. These issues have an impact on girls' and women's social and health status, which further impacts on their ability to stay in school and to find productive employment or self-employment after finishing their education. Thus consideration should be given to incorporating these topics into the proposed integrated skills training program, while also using these topics to promote literacy skills development.

#### **E4. Innovative Approaches and Best Practices for Delivering Integrated Skills Program**

Considering that some of the proposed targeted groups are adults and female-headed households, the timing of any training should be based on the availability of the targeted beneficiaries in order to ensure their active and consistent participation. To do this, various methods of training delivery should be considered, for example, distance learning, 'E learning' (via the 'E Learning' bus and 'E Learning' methods on line), radio assisted programs, day release, short courses, evening lessons, and weekend courses. Adolescents and youth, especially those unemployed, should have more flexibility with the time they can participate in training. For these targeted groups, training during the working week would unlikely be a problem, therefore longer term classes can be conducted, along with practicals via volunteer or intern positions with on-the-job training. Currently there does not appear to be the resources available or even sufficiently wide-spread Internet connectivity in the KNP GMAs, given the remoteness of this area. To meet these significant constraints in order to employ some of these alternative approaches, the proposed project might consider some investments in these areas.

***For literacy training.*** The DVV International (Deutsches Volkshochschul Verbandes) advocated for three approaches to literacy and livelihoods (Oxenham et al., 2001):

- Literacy instruction incorporating livelihoods.
- Livelihoods skills training incorporating literacy instruction.
- Vocational training programs (e.g. agricultural extension and micro-enterprises) incorporating relevant aspects of reading, writing, and mathematics.

Livelihood-plus-literacy/numeracy programs can also greatly improve the chances of success for communities, if the programs incorporate training in savings, credit, and business management, along with actual access to credit (World Bank, 2001).

Malawi has a literacy program titled, 'Functional Literacy for Integrated Rural Development (FLIRD)' in Nkhata Bay, Malawi, which is a tourism resort area on the edge of Lake Malawi. The program started in 2002 and is a unique approach to social and economic empowerment, by bringing together components of literacy, skills development, and income generation. Currently, the program covers 65 villages and is planned to run until 2011. "In this project, functional literacy is the entry point to improving the quality of life and economic status of beneficiaries. Through learning how to read and write, people can start income-generating activities." The

program has adopted a concept called ‘Regenerated Freirian Literacy through Empowering Community Techniques’ (using Paolo Freire’s ideas of ‘conscientization’ of 1970). According to the Nkhata Bay FLIRD Coordinator, Prince Kaunda, “The villagers now understand a number of development activities, and are working together to improve their livelihoods and deal with HIV/AIDS issues. The program has also cultivated a better understanding of gender issues in people of the area” (Oxenham et al., 2001). Given the high rates of HIV in some of the districts overlapping with the GMAs, especially Kazungula District which overlaps with Mulobezi GMA, incorporating HIV and AIDS topics and behavior change discussions into any GMA-based literacy program should be considered. In addition, examples of domestic violence and other gender-based violence were reported during the GMA Livelihoods Analysis study (for example, in FGDs held in Siachtema Chiefdom in Bilili Springs). To help to address some of these issues and to build awareness among boys and girls and adult men and women, simple literature on gender-based violence could be incorporated into any literacy programs.

***For youth and adult education and skills development training.*** Namibia had a five-year FAO-supported outreach component of the Rural Youth Development Program of the Ministry of Higher Education, Training and Employment Creation (MHETEC). The initial phase of the development of the outreach component took place in Oshana Region in northern Namibia. This was an innovative community-based program that provided training, education and income-generating opportunities to out-of-school youth from the ages of 15 to 30. The out-of-school youth gained basic knowledge and experiences in agriculture, nutrition, health, environment and other essential skills for living, through practical activity-based learning and income-generating projects and activities suitable for rural areas. The main goal of the program was to take education and training to even the remotest villages, so that large numbers of rural youth could be able to make an economically rewarding and satisfying life for themselves and their families in rural Namibia (MHETEC 2001c). The advantage of this FAO/MHETEC program in Namibia was that the activities were conducted *at the community level*. This enabled many more youth to have access to the program because they did not have to travel to large towns or the capital, where most of the vocational training institutes are located. Focused programs such as this one in Namibia need to be implemented directly inside the GMA communities if any substantial headway is to be made on youth skills development. Subsection E3 above has already indicated the type of subjects that could be incorporated into this type of program to ensure its relevancy to the GMAs.

In rural areas in Zambia, many faith-based organizations (FBOs) have been working in collaboration with government, using some unique methodology including: role playing theatre for development and participatory education strategies (through mobile units). In urban areas, where the literacy levels are relatively high (over 80 percent), the use of highly participatory methods and social and economic analysis in solving the challenges faced in the community have proved to be one the most effective practices in advancing adult learning and education. Further information needs to be collected on this system of using ‘mobile units’ before it can be deemed feasible in the remote GMAs with very poor road infrastructure.

***For skills training specifically relevant to the existing and potential livelihood activities found in the GMAs.*** This topic has been previously examined in ‘C3 Proposed education content of an integrated skills program’. As noted above in Subsection D.2, established tour guide training

does not exist in the KNP GMAs. Training would need to be supported to increase opportunities for GMA residents to access employment in the tourism industry or to establish tour operator services in the region. One key way in which these skills could be imparted rapidly would be to form mobile training units. In addition, the curriculum of the Nymaluma Trades Training Institute's diploma course in Wildlife and Management studies should be investigated to see if it could be made relevant to the KNP GMAs. Training local GMA residents, including women, as tour guides could be one strategy to meet the GNKP objectives of expanding on non-consumptive tourism and creating new livelihood activities and employment opportunities in the GMAs.

### **E5. Framework for Integrating Skills Training Program into Alternatives Livelihoods Program**

The framework with which to improve livelihood opportunities could be through basic educational interventions such as improved literacy access and equitable access to both sexes for further training opportunities. Efforts to improve literacy levels and productive skills can be channeled through existing interventions in formal education such as basic literacy programs or through TEVETA, DODE or IRI non-formal means (as documented in the World Bank study by Oxenham et al. 2001) and through existing vocational training schools, Youth Resource Centers, and the income-generating initiatives and skills training already being conducted by such NGOs as Women for Change via outreach projects and mobile workshops.

There would be a need for provision of a GMA-relevant curriculum for self-employment activities in the GMAs both focusing on literacy and entrepreneurship projects in conjunction with improving resource provision in those existing institutions such as the Youth Resource Centres or Farm Training Centres. Alternatively, new structures could be created building on what already exists.

Access to various forms of communications technologies would be required (needing infrastructure, Internet access developments, etc.) to support existing youth centers. IT methods and resources are needed (more computers and email/web access) to improve delivery of the training for alternative livelihood strategies. These could be in partnerships with various international organizations (i.e. Alan Keirens, Kerioge, World Bank, UNICEF, World Vision, and others) already operating in Zambia.

The predominant focus of learning should be on 'lifelong skills' opportunities relating to the tourism potential as GKNP grows and develops. The focus should be on learning about conservation plus implementing tourism training and guides schools. Partnerships can be forged with interested parties such as Mukambi Safari Lodge, Wilderness Safaris and with the help of ZAWA. The main emphasis throughout should be a focus on women and adolescent girls and their socio-economic improvements, as they appear to be some of the most disadvantaged members in the GMA communities.

### **E6. Recommended Strategic Institutional Partners for Supporting the Integrated Skills Program**

There are various existing programs and institutions in Zambia that might be considered as strategic institutional partners for supporting the integrated skills program, as follows:

- The existing Youth Resource Centers and Farm Training Centers in Zambia (including some near the KNP GMAs, e.g. Kasempa, Mumbwa, Kolomo, and Kaoma) could be utilized for aspects of the integrated skills training program including literacy and skills training. The proposed integrated skills training program could partner with three ministries: Ministry of Education (MOE), Ministry of Sport, Youth and Child Development (MSYCD), and Ministry of Agriculture (MOA).
- The National Child Policy of 1994 was revised in 2002 to incorporate to the African Child Policy Forum (ACPF), which is a joint undertaking involving government ministries (MSYCD and MOE), cooperating partners (UNICEF), NGOs (World Vision), FBOs (Apostolic Church of Zambia), traditional leaders and CBOs to incorporate issues that had emerged in the last decade. ACPF advocates for the rights and well-being of children in Africa. It promotes social protection and investment in health and education. These investments are aimed at meeting the MDGs (2015) set by Zambia to contribute to reducing children vulnerability to economic shocks and prices surges in food items.
- The Ministry of Sports, Youth and Child Development (MSYCD) works through sports, civic rights, the child welfare and orphans and vulnerable children (OVC) program of World Vision), and other programs (KII, Henry Kapacha, Chief Planner, MSYCD) to implement the revised policy on child development.
- International Institute for Community Development (IICD) Zambia Country Program helps MSYCD to reaching the overall objectives of the National Youth Policy of 2006. This program focuses on the following specific objectives via the 17 Youth Resource Centers, King George VI National College, and the National Youth Development Council:
  - To disseminate information to the youth especially in areas of health, governance, environment, and agriculture.
  - To support business activities in both urban and rural communities by providing market information and extension services.
  - To promote sustainable ICT education targeted at youth to increase employment opportunities and access to training.
  - To promote youth accessibility to ICT equipment and materials.
  - To promote the operation of internet activity as a potential area for entrepreneurship development among youth for information and communication.
  - Complement the Youth Resource Center (YRC) with activities that will enhance their development in line with the program objectives.
  - Deploying the experiences and lessons learnt of IICD supported projects in terms of content development and utilization and mobilization of user groups at community level.

Various actors from international and local NGOs (e.g. World Vision), UN organizations (e.g. UNICEF, UNESCO) private voluntary organizations (PVOs), and the private sector (e.g. hunting and safari companies operating in KNP) can have a part to play in upgrading the skills of



community individuals and groups through on-the-job training. Existing projects and organizations could be tapped into, for example:

- The collaborative project between UNICEF and Barclays Global is encouraging entrepreneurship training courses. These are held over a year with 4 courses for 50 school leavers (youth) for developing management and business skills and learning to acquire capital funding through loans (from the Constituency Youth Development Fund (CYDF)).

#### **E7. Recommendations to Increase Potential economic and Social Benefits for Girls and Women Participating in an Integrated Skills Program**

Some recommendations for increasing the potential economic and social benefits for girls and women participating in the integrated skills program are as follows:

- Any proposed initiative and implementation of an integrated skills program should be prefaced by a detailed needs assessment and feasibility study to ensure that it will meet the needs of the girls and women targeted for the program.
- Education and training programs for youth and adults living in poverty need to offer very clear, concrete and immediate reasons to justify enrolment and ensure perseverance.
- There is need to provide more financial centers (such as Citizens Economic Empowerment Commission (CEEC) and the Constituency Youth Development Fund (CYDF) in order to provide grants or to lend money for self-learning projects to promote self-help projects for economic and social development.



## **SECTION VI. CONCLUSION AND PRELIMINARY RECOMMENDATIONS**

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### **A. Conclusion**

Livelihoods activities in the GMAs are overwhelmingly dominated by agricultural pursuits, in particular crop production, and in particular production of maize. In some areas such as the central and south eastern GMAs, crop production dominates livelihoods almost exclusively. However, in the northern and south western GMAs, consumptive small-scale natural resource use is more important and supplementary to crop production.

Households and communities in the GMAs get some employment in commercial tourism, mining and timber enterprises in their areas. However they do not derive meaningful income from the resource rents generated by these enterprises. Amounts received (from hunting tourism only) are small and the people do not see tourism as a competitive land use in terms of livelihood generation. The current situation in the GMAs is generally characterized by agricultural encroachment and uncontrolled consumptive use of natural resources.

With lack of any comprehensive, dedicated NGO support to CRBs and CBNRM in the GKNP GMAs, with financial constraints, and within a restrictive policy environment, ZAWA has made commendable progress in ensuring CRB and VAG elections, facilitating the development of General Management Plans for GMAs, and in places reducing poaching. But constraints ensure that the CBNRM program, through which resource rents should flow to empowered communities, is essentially dysfunctional.

The potential for enhancement of livelihoods in the GMAs in line with the conservation objectives of the GKNP Project is entirely dependent on the development of a successful CBNRM program. Without this, any support to livelihoods will always tend to be deleterious to conservation, with expanding agriculture and natural resource depletion. Currently, the general situation in the GMAs is characterized by agricultural encroachment and uncontrolled consumptive use of natural resources.

Similarly, the objective of the GKNP investment in the National Park, in improved conservation and tourism development, is also entirely dependent on the development of a successful CBNRM program in the GMAs. The costs of protecting and managing the park will be much higher without, than they will be with, a successful CBNRM program. Without CBNRM, the economic viability of the GKNP project will be unattainable.

Many households, traditional leaders, VAGs, CRBs, and district officials recognize the problems with the existing CBNRM system and are aware that there is a need for more CBNRM support, devolution, and revenues from wildlife forests and fish. There is also widespread recognition and understanding of what is needed to make it work effectively. Making CBNRM work effectively to these ends will require ongoing and sustained support from dedicated NGOs and donors, providing for institutional development and skills training, and providing an 'honest broker' service to communities. It will also require effective devolution of custodial rights over the natural resources; empowerment for communities to operate as business entities, managing the resources, and entering into joint ventures with the private sector and others; and business financial viability, and for this, communities through CRBs need to be able to access all the resource rents that can be extracted from GMA joint ventures. This is all the more necessary given that the opportunity cost of land (for agriculture) in the GMAs of the GKNP is high.

There is potential for CRBs to be reformed to be effective, transparent and effective community institutions through adopting and adapting implementation approaches from within Zambia and the region. This requires a much stronger focus on governance issues within CRBs and the introduction of mechanisms that promote accountability and transparency in decision-making. More attention needs to be given to CRB constitutions which entrench these mechanisms and which provide for devolution within CRBs to more local levels such as VAGs. More support should be given to developing accountability of CRBs downwards to GMA residents. Tools exist within the region that can be used to promote this. However, such transformation of CRBs requires a commitment of adequate human and financial resources to provide regular and persistent field-based facilitation that is structured and focused.

Transformation of CRBs could take place within the current policy and legal framework for CBNRM in Zambia given the commitment of key stakeholders such as ZAWA and the commitment of sufficient resources to facilitate change. However, such transformation of CRBs alone is not sufficient to lead to CBNRM success. Without some fundamental policy and legal reforms, CBNRM in Zambia is unlikely to succeed. The current policy and legal framework has not provided sufficient incentives for sustainable natural resource management and has not provided sufficient proprietorship over resources to encourage investment in management by poor rural communities.

It is recognized that ZAWA to a large extent depends on income derived from hunting activities within GMAs. It is for this reason that Zambia has instituted a revenue sharing approach with CRBs. However, the current system of revenue collection by ZAWA and sharing with communities does not provide for viable CBNRM, and it is essential that the revenues that currently accrue to ZAWA be acquired from elsewhere.

Preliminary recommendations provided below are centered on creating the necessary policy, legal and institutional environment for successful CBNRM. Recommendations for investment in livelihoods development are made with the assumption that this will be possible.

## **B. Preliminary Recommendations**

The preliminary recommendations that follow are divided into three categories: CBNRM development, specific livelihood enhancement projects, and selected support projects. The length of investment, "short term" (up to two years), "medium term" (up to five years), and "long term" (longer than five years); level of importance for the success of GKNP project; likely size of the investment; and suggested source(s) of funding is also included for each specific recommendation. Specific recommendations for CBNRM development are presented first below:

### **B1. CBNRM Development**

- 1. Search for and secure, through project funding, an 'honest broker' development partner to drive and support a pilot CBNRM programme for GKNP.** An appropriate partner would be an NGO or private entity with the willingness to commit to an all embracing programme working with all KNP GMAs for the duration of the Compact, and possibly beyond. No suitable organization which could fill this role was identified in Zambia during the Livelihoods Analysis. An international conservation NGO with a sound track record in developing CBNRM would be recommended. A private investor with experience in managing parks with CBNRM components in

2. partnership arrangements with government could also be an appropriate partner. **A critical requirement would be the ability to provide or access the right leadership and funding in the long run. [Short term, high importance, large investment, MCC funds]**

Through the CBNRM project management contractor, and negotiation with ZAWA, the Departments of Forestry and the Department of Fisheries, MCC should work to:

3. **Ensure the registration of each CRB as a legal entity.** CRBs should be registered under company or trust status under common law with a properly qualified secretariat to manage the day to day operations and with a clearly defined membership. Membership statutes must **ensure that women are given equal opportunity to serve on the board and be members [Short term, high importance, moderate investment, MCC funds].**
3. **Carry out training and capacity building for the female and male CRB members, female and male VAG members and other stakeholders.** Training and capacity building activities are needed to build appropriate skills to manage their operations and to operate effectively as a business, to manage finances, to tender for, engage with and contract with joint venture partners in tourism, forest use, fish use and other natural resource use **[Short term, high importance, large investment, MCC funds].**
4. **Ensure that ZAWA delegates appropriate responsibility for the wildlife stocks in GMAs to the CRBs.** CRBs should have custodial rights, within a set of conditions, such as, that land allocation, natural resource and fire management plans, quota setting, selection of joint venture investment sites, be done in consultation with the support and guidance of ZAWA's extension service and Unit Leaders **[Short term, high importance, small to moderate investment, MCC funds].**
5. **Ensure enforcement of the policy allowing CRBs to directly engage with and negotiate co-management agreements** in consumptive, and non-consumptive tourism, develop and implement management plans for their wildlife, develop or refine and further develop the General Management Plans for their GMAs, and collaborate with ZAWA on quota setting, and appoint and direct the operations of village scouts and proposed resource monitors, who should be comprised mainly of women. **[Short term, high importance, small investment, MCC funds].**
6. **Ensure that The Department of Forestry assigns control and management of the GMA forest resources to the relevant CRBs.** CRBs should serve as Joint Forest Management Community Trusts, with the establishment of Village Resource Management Committees (VRMCs) at village level **[Short term, high importance, small investment, MCC funds].**
7. **Ensure enforcement of the policy that enables the CRBs to develop land management plans.** CRBs, with support from government, should develop for themselves forest management plans, fire management plans, to enter into possible joint venture agreements with private sector forest users, and to integrate forest management and land allocation within the General Management Plans for GMAs **[Short term, high importance, small investment, MCC funds].**

8. **Ensure that the Department of Fisheries applies policy to facilitate establishment by CRBs of Fisheries Management Areas and Fisheries Management Committees.** CRBs should establish these where relevant in the GMAs, and committees should be given the power to manage and regulate use of the resource, and integrate fisheries management into the General Management Plans for GMAs [**Short term, high importance, small investment, MCC funds**].
9. **Work with the Chiefs (as patrons) and the traditional authority structures to develop the new registered CRB structures and make sure they are sensitized to the new role and responsibilities of the CRBs** [**Short to medium term, high importance, moderate investment, MCC funds**].
10. **Ensure that the District Forest and Fisheries Officers and ZAWA through the DDCCs coordinate to facilitate the effective implementation of the above-mentioned developments using the CRBs as the entry point to the communities** [**Short to medium term, high importance, small investment, MCC funds**].
11. **Ensure that the CRBs decentralize decision making.** Decisions regarding management of resources and use of funds should be decentralized to the village level for wildlife, forest, and fisheries resources through the VAGs incorporating the VRMCs [**Short to medium term, high importance, moderate investment, MCC funds**].
12. **Set-up systems of accountability.** CRBs and village level bodies, facilitated by government extension officers and unit leaders, should develop systems of accountability according to their constitutions, allowing for elections, regular meetings, and auditing of accounts. **Such systems must ensure that women are given equal opportunity to stand in elections and are empowered to gain the confidence and skills to compete with the largely male candidates standing for elections.** [**Short term, high importance, moderate investment, MCC funds**].
13. **Ensure that all rents/royalties from joint ventures in wildlife, forestry and other natural resources accrue to the CRBs for use in the GMAs.** This will require finding alternative funding sources for ZAWA. For example, the project may initially consider paying for part or all of ZAWA extension services and housing. Receipt of all rents from resource use in the GMAs is essential for the financial viability of CRB business operations, and making natural resource use in the GMAs more competitive with agriculture. [**Short term, high importance, large investment, MCC and or Government funds**].
14. **Encourage/facilitate a full review of ZAWA's income generation potential.** Investigate new and innovative ways of raising income for ZAWA with the aim of enabling increased income to reach communities [**Short term, high importance, moderate to large investment, MCC funds**].
15. **Try to ensure that an increasing portion of rents from existing alienated land (where statutory tenure has been acquired) in GMAs are paid to communities via the CRBs.** Ensure that Chiefs recognize that CRBs, as business entities with custodial rights over resources in the GMAs, should have the first right to statutory leases in any application, and should then be able to acquire leases and sublease the land or site to investors [**Short term, high importance, small investment, MCC funds**].

16. **Expand the role of village scouts** to incorporate monitoring and protection of non-wildlife resources such as forests, fish, and non-timber forest resources [**Short term, high importance, moderate to large investment, MCC funds**].
17. **Develop and train a cadre of female resource monitors to complement the village scout cadre**, to monitor the use of natural resources and support sustainable management practices [**Short term, high importance, moderate to large investment, MCC funds**].
18. **Work with CRBs and traditional authorities and ZAWA to plan and incorporate possible reclassification of land in GMAs according to the REMNPAS proposals.** The possible developments of a partnership park in the Ramsar site of Kasonso Busanga GMA, and game reserves in Nkala and Lunga Luswishi GMAs need to be explored by communities and incorporated into their GMA general management plans if appropriate [**Short to medium term, high importance, moderate investment, MCC funds**].
19. **Work with the CRBs and traditional authorities and selected interested development partners to plan and develop community-based pilot initiatives in conservation zones of all GMAs.** Examples of partners include African Wildlife Foundation, African Parks, and REMNPAS. [**Short term, high importance, moderate to large investment, MCC funds**].
20. **Contribute to legislative and policy revision.** Influence reform, such as the current wildlife act review, and propose amendments to existing laws of policies which would entrench and harmonize the current policies and recommended policy changes being implemented in the pilot GKNP CBNRM program. Security and flexibility should be the hallmark of these changes, ensuring that community rights are recognized in law, and ensuring that CRBs can respond as business entities to market and other forces. The law should enable ZAWA and the Departments of Forestry and Fisheries, to withdraw the rights of the CRBs if persistent abuse of rights occurs, and after due steps have been taken to rectify this. Changes should follow the specific suggestions made in the Analysis Section of this report (Section V). [**Short term, high importance, moderate investment, MCC funds**].

## **B2. Enhancing Livelihood Activities**

All the recommendations above relate to the conditions needed for CBNRM to work in the GKNP setting. As such they are regarded as essential for the project, and should be of first priority. If community control of resources is in place it will become possible for MCC to invest in livelihood activities that can enhance livelihoods with sustainability in line with overall project objectives. Please find recommendations below for investment in sustainable livelihoods activities:

Through the CBNRM contractor, MCC should invest in a number of livelihood enhancement projects:

21. **Develop conservation agriculture for all GMAs.** This project should focus on maize, cotton, gardening, and supplementary crops such as sweet potato and others that will

contribute to enhanced food security. In line with the GMA general management plans it should be restricted to development zones and GMA communities outside the GMAs. **Projects should be designed to ensure women's' equitable participation** in use of household income from crops [**Short to medium term, moderate to high importance, moderate investment, MCC funds or leverage NGO funds**].

22. **Develop small to medium-scale beekeeping, and honey marketing in local and urban markets.** Building on the base of honey hunting and traditional beekeeping holds significant potential. This is important in making use of the extensive miombo woodland areas which have low income generation potential. Projects should be designed to ensure women's' equitable participation. [**Short to medium term, high importance, small investment, MCC funds or leverage NGO funds**].
23. **Develop fish production** in rivers, streams and dambos in all GMAs with low capital fish farming techniques, building on traditional fishing. The project could explore supporting the small-scale fishing industry on Lake Itzhi Tezhi to check viability of commercial intensification through fisheries management and possibly caged fish farming. Projects should be designed to ensure women's' equitable participation. [**Medium term, moderate to high importance, small investment, MCC funds**].
24. **Development of joint venture by CRBs, with public-private-partnership, concessions and/or game ranches.** These should be unfenced, with provision of protection, and with tourism as a primary objective, but also meat production, and close to park borders. They would have an important role in securing core wildlife stocks for later dispersal and use through tourism ventures [**Short to medium term, high importance, small investment, MCC funds, or leverage private funds**].
25. **Develop small-scale timber pit sawing, and small-scale carpentry enterprises, with sale of furniture in regional urban markets.** This should be done in all GMAs but most effort should focus on Mulobezi GMA, where off-cuts, supplied free from the commercial sawmill, can be used as the resource for an extensive small-scale carpentry program with attendant skills enhancement and marketing in urban markets. Projects should be designed to ensure women's' equitable participation in these enterprises, even if woodworking is traditional seen as 'men's work'. [**Short to medium term, high importance, small investment, MCC funds or leverage private funds**].
26. **Establish joint ventures between CRBs and commercial sawtimber enterprises in GMAs** with some remaining potential for commercial saw timber production (Mulobezi), so that rents can accrue to CRBs and small-scale timber exploiters from the community can sell raw material [**Short term, high importance, small investment, MCC funds**].
27. **Develop sustainable *munkoyo* harvesting, processing, and marketing by women in all GMAs.** It should include an experimental feasibility study on *munkoyo* propagation. The production and marketing component should be expanded to embrace other NTFP resource such as mushrooms, wild fruits, and product processing to add value. [**Short to medium term, high importance, moderate investment, MCC funds**].
28. **Examine the social, physical, and economic feasibility of controlled, sustainable use of woodlands for charcoal production within the context of the pilot GMA**



**CBNRM program, and managed by the CRBs.** Currently charcoal production tends to be poorly controlled and destructive. The aim is to apply common property management to the problem in GMAs. An initial low key assessment might be followed by scaling up. **[Short term, high importance, small to moderate investment, MCC funds]**

- 29. Develop cultural tourism, with particular focus on women. Included in this is craft development and marketing,** making use of traditional natural resource products as well as craft products from recyclable waste material such as plastic bottles, glass and tin cans from tourism lodges. **[Medium term, moderate importance, small investment, MCC funds]**
- 30. Support and develop various village-level entrepreneurial activities** which develop skills and enhance incomes including bicycle repair services; brick-making; sewing, tailoring and other textile design products; knitting; orchard and wild fruit and vegetable produce processing; and poultry production, goat breeding and piggeries (using ethical breeding methods). Part of this project should include the establishment of or support to existing credit and savings clubs, and market development training. **In particular activities should include those with focus on women. [Medium term, low importance, small investment, MCC funds].**
- 31. Promote development of the COMACO model, for market development for selected agricultural and natural resource products in selected GMAs and in selected GMA zones, as well as the open areas outside GMAs.** Where possible market services should be spatially restricted with those for crops restricted to development zones or neighboring open areas. An aim should be to minimize subsidies in the long run and capture economies of scale **[Short to long term, moderate importance, large investment, MCC funds or leverage other funds].**
- 32. Investigate the feasibility of extracting rents from commercial mining and prospecting operations.** This should include examination of the legal, policy and institutional environment, and the willingness of mining companies to make social responsibility investments in the GMAs, within the framework of the GKNP project **[Short to long term, moderate importance, large investment, MCC funds or leverage other funds].**

### **B3. Projects in Support of Livelihoods Development**

- 33. Develop integrated skills in all GMAs.** This project should be initiated by the CBNRM contractor, working with one or more relevant strategic institutional partners (such as Youth Resource Centers, International Institute for Community Development, African Child Policy Forum, or the like). Existing basic, community, or technical schools might be used. Focus should be on developing the necessary vocational/livelihood skills and functional literacy competencies of adolescent girls, both male and female youth, adult women, disabled and other vulnerable groups, such as pregnant teens and teen parents (male and female), female-headed households, child-headed households, households with OVC, and poor households. Education content should include business skills and artisan skills training, interwoven with literacy and numeracy skills training. **[Short to long term, high importance, large investment, MCC funds and leverage other funds].**

34. **Conduct scientific inventories and mapping of key natural resources in the GMAs**, including forest inventory, wildlife survey, non-timber forest products, fish, to develop the basis for sustainable use and to support community resource monitoring. This should include the development of a user friendly and dependable land use and natural resource information system that supports decision making at all levels [**Short term, high importance, moderate to large investment, MCC funds**].
35. **Install and develop a community natural resource monitoring system**, using the Namibian MOMS approach, with village scouts and village resource monitors, as part of the CRB conservation management. [**Short to medium term, high importance, small investment, MCC funds**].
36. **Conduct research and development on the potential for payments for ecosystem services**, in particular the potential for capturing carbon payments through REDD+ and the potential for capturing payments from downstream users of Kafue river water. [**Long term, high importance, moderate investment, MCC funds**].
37. **Upgrade key roads and other infrastructure in the GMAs**, linking to tourism infrastructure upgrades planned for the National Park. This should focus on access to the areas with potential for non-consumptive tourism such as the Busanga plain extension in Kasonso Busanga GMA, the Mulobezi GMA, with attention to the use of the historical Mulobezi railway to link the Mulobezi area to the Victoria Falls, and the western Nanzhila plain edge of the Bilili GMA. [**Short to medium term, high importance, large investment, MCC funds**].
38. **Develop a long term financing plan for the 'honest broker' support provided during the MCC compact by the CBNRM contractor**. Sources of possible support including GRZ, international donor budgets, private corporate social responsibility budgets, such as those of mining houses, and payments from markets for ecosystem services such as REDD+ should be examined. [**Medium term, high importance, moderate investment, MCC funds**].
39. **Leverage support from NGOs to supply schools in the GMAs with books and materials**, which are in short supply. [**Medium term, low importance, moderate investment, leverage other funds**].
40. **Leverage NGO support for women's and human rights** for awareness training and advocacy including addressing cases of property grabbing and domestic violence. [**Short term, high importance, small investment, leverage other funds**].

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