

ANNEX A. FIELD RESEARCH SCHEDULE

Zambia GMA Livelihoods Study: Fieldwork Plan
Detailed Schedule for Reconnaissance Protocol Period 19-25 June and
CRB/VAG/Community Participatory Research 27 June to 2 July and 10-17 July

Day	Dates	What	Where	Who
Tue-Sat	6-11 June	Planning schedule and design research instruments	Windhoek	<ul style="list-style-type: none"> Beth and Jon
Tue-Fri	6-10 June	Transport and logistics	Lusaka	<ul style="list-style-type: none"> Chemonics Field Office
Tue-Sat	7-11 June	Institutional > legislation and policy	Lusaka	<ul style="list-style-type: none"> Bethel and Patricia
Tue-Fri	13-17 June	KIIs in agriculture	Selected District HQs	<ul style="list-style-type: none"> John Fynn
Mon-Fri	13-17 June	ZAWA staff contact CRBs, chiefs and other TAs, and other key stakeholders in the GMAs to set meeting and appointment dates and times for week of 19-25 June for the five (5) selected GMAs	5 GMAs Mumbwa Kasonso Busanga Mufunta Mulobezi Bililli Springs	<ul style="list-style-type: none"> ZAWA Extension Officers and other ZAWA staff as required CRB Chairs Chiefs Other key stakeholders in the GMA
Mon	Monday 13 June	Jon, Beth, Graham and Nic arrive in Lusaka	Lusaka	<ul style="list-style-type: none"> Jon, Beth, Nic and Graham
Tues	14 June	Jon and Beth finalising training preparation.	Lusaka	<ul style="list-style-type: none"> Jon and Beth and Lovemore Graham conducting hunting KIIs
Wed	15 June	Three-day training session in Lusaka on the research instruments. <ul style="list-style-type: none"> Introduction to training and GMA LA study Overview of types of research methodology Review of record cover page and introduction for each exercise Participatory exercises for Institutional Analysis Practice Venn Diagram with MCA-Zambia as the institution After 17:00, Nic with Chemonics team for 30 min 	Lusaka	<ul style="list-style-type: none"> Chemonics Team MCA-Zambia staff as available for session 14:30 - 16:00 [3-4] All RAs/Translators

Day	Dates	What	Where	Who
Thurs	16 June	Training: <ul style="list-style-type: none"> • Overview of 5-7 participatory research methods and instruments for collecting livelihood, economic and resource information. • Practice of 4-5 of these. 	Lusaka	<ul style="list-style-type: none"> • Chemonics team members • All RAs/Translators[
Fri	17 June	Training <ul style="list-style-type: none"> • Overview and practice of SWOT analysis method • Overview and practice of running a FGD • Overview of HWC participatory method • Review of all instruments Q&A • Word lists with translated vocabulary: instructions for preparation • Exam • Logistics, including Nic on plans/locators list in case of emergency 	Lusaka	<ul style="list-style-type: none"> • Chemonics Team • As available, organisations (based in Lusaka) involved in support to livelihood development in GMAs, and CBNRM issues/policy, etc. • All RAs/Translators
Sat	18 June	AM: Finalising all instruments and printing copies for CRB Institutional exercises for recce trip PM: Rest	Lusaka	<ul style="list-style-type: none"> • Beth and Jon • Some team members as required

Day	Dates	What	Where	Who
Sun to Sun	19-26 June	<p>Reconnaissance Trip for Protocol, Organisation of Field Research Target Groups and Observation Trip plus CRB Institutional FGD with Venn Diagram and some Key Informant Interviews (KI) with Key Stakeholders</p> <p>In each CRB area, activities will last for a half day and include:</p> <ul style="list-style-type: none"> • Introduce team to chief, CRM members, and other stakeholders • Introduce objectives and overview of study • Discuss and approve field work plan and schedule for coming weeks • Obtain agreement on type of support required to organise all FGDs and KIIs appointments for upcoming fieldwork • FGD and Venn Diagram exercise with CRB • Relevant KIIs with chiefs and other stakeholders 	<p>Mumbwa Kasonso Busanga Mufunta Mulobezi Bililli Springs</p>	<ul style="list-style-type: none"> • Chemonics team members • ZAWA Extension Officers and other ZAWA staff as required and available • Translators: use ZAWA officers (for factual interviews and discussions) and CRB members (for sensitive/institutional CRB discussions) if necessary
Sun	19 June	<p>AM: Rest PM: Travel</p>	Lusaka to Mumbwa GMA	<ul style="list-style-type: none"> • Recce team as above
Mon	20 June	<p>AM: CRB Kabulwebulwe - meet with CRB members chief, and CRB stakeholders PM: CRB Mulendema - met with CRB members chief (was ill), and CRB stakeholders</p>	<p>Mumbwa GMA: Kabulwebulwe at Chief's Palace; Mulendema at ZAWA office</p>	<ul style="list-style-type: none"> • Recce team as above • CRB Kabulwebulwe - CRB members, chief, and CRB stakeholders • Mulendema - CRB members, and CRB stakeholders
Tues	21 June	All Day: Travel	Mumbwa GMA to Kasonso Busanga GMA	<ul style="list-style-type: none"> • Recce team as above

Day	Dates	What	Where	Who
Wed	22 June	AM: CRB Kasempa – meet with CRB members, chief and CRB stakeholders PM: Travel to CRB Mushima Short meeting with CRB Mushima Travel to Mufunta GMA	KB GMA: At Kasempa CRB HQ and Mushima CRB HQ Travel Kasonso Busanga GMA to Mufunta GMA	<ul style="list-style-type: none"> • Recce team as above • CRB Kasempa - CRB members, chief, and CRB stakeholders • CRB Mushima - CRB members, chief, and CRB stakeholders
Thurs	23 June	AM: CRB Kahare – meet with CRB members, chief and CRB stakeholders PM: Travel Mufunta GMA to Itezhi-Tezhi	Mufunta GMA: At CRB HQ of Kahare Travel to Bilili Springs GMA	<ul style="list-style-type: none"> • Recce team as above • CRB Kahare - CRB members, chief, and CRB stakeholders
Fri	24 June	AM: Shezongo CRB-meeting with CRB members, chief and CRB stakeholders PM: Travel Bbilili Springs GMA to Mulobezi GMA possibly camping on the way	Bilili GMA: In Shezongo School or CRB HQ Travel Bilili Springs GMA to Mulobezi GMA	<ul style="list-style-type: none"> • Recce team as above • Shezongo - CRB members, chief, and CRB stakeholders
Sat	25 June	AM: Moomba CRB - meeting with CRB members, chief and CRB stakeholders PM: [If possible] Travel from Moomba / Mulobezi via Mulanga, Dundumwezi to Kalomo	At CRB HQs of Moomba Travel Mulobezi to Kalomo	<ul style="list-style-type: none"> • Recce team as above • CRB Moomba - CRB members, chief, and CRB stakeholders
Sun	26 June	AM: Travel to Siachitema CRB and meet Siachitema CRB and chief PM: Chemonics Team – Rest; RN RAs arrive in Bilili Springs ZAWA staff depart.	Siachitema Palace, or Bbilili Springs GMA	<ul style="list-style-type: none"> • Recce team as above • Siachitema - CRB members, chief, and CRB stakeholders • PM: Tonga, Ila and maybe Kaonde speaking RAs/translators to meet Chemonics team in Bilili Springs GMA to conduct fieldwork with us from 26 June to 3 July (in Bilili Springs and Mumbwa GMAs)
Mon to Sat	27 June – 2 July	<i>Fieldwork starts in Bilili Springs and Mumbwa GMAs</i>	<i>Bilili Springs and Mumbwa GMAs</i>	<ul style="list-style-type: none"> • Chemonics team • Tonga, Ila and maybe Kaonde speaking RAs/translators

Day	Dates	What	Where	Who
Mon	27 June	AM: 4-6 participatory research exercises still to be selected PM: 2-4 participatory research exercises still to be selected	Bilili Springs GMA: CRB 1, VAG 1 catchment area, Community 1	<ul style="list-style-type: none"> • Chemonics team • Tonga and Ila speaking RAs/translators
Tues	28 June	AM: 4-6 participatory research exercises still to be selected PM: 2-4 participatory research exercises still to be selected	Bilili Springs GMA: CRB 1, VAG 1 catchment area, Community 2	<ul style="list-style-type: none"> • As above
Wed	29 June	Travel Bilili Springs GMA to Mumbwa GMA with some 'observation stop-offs' in Nkala GMA and Namwala GMA Tour operator departs; John Aves may arrive with own rented vehicle or public transport Sleep Mukambi Lodge	Bilili Springs GMA to Mumbwa GMA	<ul style="list-style-type: none"> • Chemonics team • Tonga and Ila speaking RAs/translators [up to 8] • Total Numbers up to 15 people; the Mukambi Lodge booking is only for 13 people sharing; so we have to see how many RAs we have and if we have 15 people where and how 2 can be accommodated
Thur	30 June	AM: 4-6 participatory research exercises still to be selected PM: 2-4 participatory research exercises still to be selected	Mumbwa GMA: CRB 1, VAG 1 catchment area, Community 1	<ul style="list-style-type: none"> • As above
Fri	1 July	AM: 4-6 participatory research exercises still to be selected PM: 2-4 participatory research exercises still to be selected	Mumbwa GMA: CRB 1, VAG 1 catchment area, Community 2	<ul style="list-style-type: none"> • As above
Sat	2 July	AM: 2-4 participatory research exercises still to be selected PM: Travel Mumbwa GMA to Lusaka	AM: Mumbwa GMA: CRB 1, VAG 2 catchment area, Community 1 PM: Mumbwa GMA to Lusaka	<ul style="list-style-type: none"> • As above
Sun	3 July	Rest	Lusaka	

Day	Dates	What	Where	Who
Mon to Fri	4-8 July	<ul style="list-style-type: none"> • Write up notes and compiling data/info from Reconnaissance Week, and from the one week in Bilili Springs and Mumbwa; • Review methodology and instruments to see if any changes need to be made before returning to the field to the remaining 3 GMAs. • Lusaka-based and or district-level KIIs as needed by certain Chemonics Team Members 	Lusaka	<ul style="list-style-type: none"> • Chemonics team • Tonga, Ila and Kaonde-speaking RAs/translators
Sat	9 July	Rest	Lusaka	
Sun - Sat	Week of 10-16 July	<p><i>Fieldwork in Kasonso Busanga, Mufunta GMA and Mulobezi GMA</i></p> <p><i>KIIs in selected district towns/HQs</i></p>	<p><i>Kasonso Busanga, Mufunta and Mulobezi GMAs</i></p> <p><i>District towns/HQs</i></p>	<ul style="list-style-type: none"> • Chemonics team • Kaonde speakers 10 -12 July[4] • Lozi and Nkoya speakers 12 – 17 July (for Mufunta and Mulobezi)
Sun	10 July	<p>Long Day: Travel Lusaka to Kasonso Busanga GMA</p> <p>Travel to selected district towns/HQs</p>	<p>Lusaka to Kasonso Busanga GMA</p> <p>District towns/HQs</p>	<ul style="list-style-type: none"> • Chemonics team • Kaonde speakers 10 -12 July
Mon	11 July	<p>AM: 4-6 participatory research exercises still to be selected</p> <p>PM: 2-4 participatory research exercises still to be selected</p>	KB GMA: CRB 1, VAG 1 catchment area, Community 1	<ul style="list-style-type: none"> • As above
Tues	12 July	<p>AM: 2-4 participatory research exercises still to be selected</p> <p>PM: Travel</p>	<ul style="list-style-type: none"> • KB GMA: CRB 1, VAG 1 catchment area, Community 2 • Travel KB GMA to Mufunta GMA 	<ul style="list-style-type: none"> • As above • Kaonde speaking RAs depart Mufunta for Lusaka, while Lozi & Tonga speakers arrive at Mufunta

Day	Dates	What	Where	Who
Wed	13 July	AM: 2 participatory research exercises still to be selected PM: 2 participatory research exercises still to be selected	AM: Mufunta GMA: CRB 1, VAG 1 catchment area AM/PM: Mufunta GMA: CRB 1, VAG 2 catchment area	<ul style="list-style-type: none"> • Chemonics team • Lozi and Nkoya speakers 12 – 17 July (for Mufunta and Mulobezi) • Total Numbers up to 14 for Mufunta and Mulobezi
Thur	14 July	All Day: Travel	Travel Mufunta GMA to Mulobezi GMA	<ul style="list-style-type: none"> • As above
Fri	15 July	AM: 4-6 participatory research exercises still to be selected PM: 2-4 participatory research exercises still to be selected	Mulobezi GMA: CRB 1, VAG 1 catchment area, Community 1 and Community 2	<ul style="list-style-type: none"> • As above
Sat	16 July	AM: 4-6 participatory research exercises still to be selected PM: 2-4 participatory research exercises still to be selected	Mulobezi GMA: CRB 1, VAG 2 catchment area, Community 1	<ul style="list-style-type: none"> • As above
Sun	17 July	All Day: Travel Mulobezi to Lusaka	Mulobezi to Lusaka	<ul style="list-style-type: none"> • As above

ANNEX B. IMPLEMENTED PROGRAM OF RESEARCH/LIST OF PARTICIPATORY GROUPS

Zambia KNP GMA Livelihood Analysis Study Implemented Program of Research														
No.	Date	Time (Hrs)	GMA	District	Chiefdom	Community	Category of Participants	Type of Research Method	No. of Participants			Facilitator	Translator	Note-taker
									T	M	F			
01	20/06	1.25	Mumbwa	Mumbwa	Kabulwebulwe	N/A	CRB Members Males Females	Intro Meeting	8	7	1	Beth Jon	None	All
02	20/06	2.25	Mumbwa	Mumbwa	Mulendema CRB	N/A	CRB Members Males Females	Intro Meeting Venn Diagram	8	5	3	Beth Bethel	None	Bethel
03	22/06	1.00	Kasonso Busanga	Kasempa	Kasempa	Kasempa CRB	CRB Members VAG Members Community Members Males	FGD on Institutional Aspects	7	7	0	Bethel	None	Bethel Jon
04	22/06	1.45	Kasonso Busanga	Kasempa	Kasempa	Kasempa	Traditional Leaders Males	FGD on Lands & NRs	4	4	0	Herbert	None	Chanda
05	22/06	1.00	Kasonso Busanga	Mufumbwe	Mashimi – Mubawbe	N/A	CRB Members ZAWA Officers	Intro Meeting	5	4	1	All	None	All
06	23/06	1.00	Mufunta	Kaoma	Kahare	N/A	CRB Members Traditional Leaders ZAWA Staff	Intro to Study	9	7	2	Jon	None	All
07	23/06	1.00	Mufunta	Kaoma	Kahare	N/A	Traditional Leaders	FGD on Land	3	3	0	Herbert	Kamwaya	Chanda
08	23/06	1.00	Mufunta	Kaoma	Kahare	N/A	CRB Members	Intro Meeting	9	9	0	Jon	None	All
09	24/06	2.00	Bilili Springs	Itezhi Tezhi	Shezongo	Nanzhila	CRB Members VAG Members Farmers Fishers Males & Females Female-headed Households	FGD	8	4	4	Bethel	None	Bethel Jon Graham

Zambia KNP GMA Livelihood Analysis Study Implemented Program of Research

No.	Date	Time (Hrs)	GMA	District	Chiefdom	Community	Category of Participants	Type of Research Method	No. of Participants			Facilitator	Translator	Note-taker
10	24/06	2.30	Bilili Springs (also covers Nkala)	Itezhi Tezhi	Shezongo	N/A	Traditional Leaders Teachers/Principal Males Elderly	FGD on land, property rights, cultural practices	4	4	0	Beth Chanda Herbert	None	All
11	25/06	2.25	Mulobezi	Kazungula	Moomba	Moomba Central	CRB Members VAG Members Males & Female	Intro Meeting & Institutional Aspects	7	6	1	Bethel Beth	None	Bethel Jon Graham
12	25/06	2.00	Mulobezi	Kazungula	Moomba	Moomba Central	Traditional Leaders Males	FGD on Land & NRs	6	6	0	Herbert	None	Chanda
13	26/06	1.00	Bilili Springs	Kalomo	Siachitema	N/A	CRB Members Traditional Leaders	Intro Meeting	12	9	3	Jon	None	All
14	27/06	1.25	Bilili Springs	Kalomo	Siachitema	Siachitema Mission	VAG Members Males & Females	FGD	5	2	3	Bethel	Local translator	Bethel
15	27/06	1.25	Bilili Springs	Kalomo	Siachitema	Siachitema Mission	Community Members Males & Females	Resource Mapping	11	8	3	Jon	Jimmy	Kaela Jon
16	27/06	4.00	Bilili Springs	Kalomo	Siachitema	Siachitema Mission	Community Members Females	Daily Task Analysis Story with a Gap: Access to Livelihood Opportunities Ownership, Control, Access	7	0	7	Beth	Rachel	Munchindu Beth
17	27/06	1.25	Bilili Springs	Kalomo	Siachitema	Siachitema Mission	VAG Members Males & Females	FGD	5	2	3	John Aves	Given Munsanje	John Aves
18	27/06	4.00	Bilili Springs	Kalomo	Siachitema	Siachitema Mission	Farmers	FGD Agric. Seasonal Calendar	17	10	7	Jon	Jimmy	Kaela Jon
19	27/06	1.25	Bilili Springs	Kalomo	Siachitema	Siachitema Mission	Deputy Principal	KII	1	0	1	John Aves	None	John Aves

36	01/07	3.25	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	Community Members Traditional Leaders Farmers Teachers/Principals Elderly Youth Poor Households Males & Females	FGD Daily Task Analysis; Ownership, Control, Access; Assets and Benefits	24	13	11	Beth	Jimmy	Munchindu
37	01/07	1.75	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	Community Members Traditional Leaders Farmers Youth Males & Females	Resource Mapping	21	12	9	Jon	Alfred Chay	Kaela
38	01/07	1.00	Mumbwa	Mumbwa	Lukanga	Lukanga	Community Members Farmers Female-headed Households	Resources Trend Analysis	25	13	12	Jon	Chanda	Kaela
39	30/06	1.25	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	Deputy Head Lukanga Basic School	KII	1	1	0	John Aves	None	John Aves
40	01/07	1.00	Mumbwa	Mumbwa	Kabulwebulwe	N/A	Education Planning Officer	KII	1	1	0	John Aves	None	John Aves
41	01/07	0.75	Mumbwa	Mumbwa	Kabulwebulwe	N/A	Instructor: Mumbwa Youth Training Centre CRB Member	KII	1	0	1	John Aves	None	John Aves
42	01/07	1.00	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	Principal Lukanga Basic School	KII	1	1	0	John Aves	None	John Aves
43	01/07	1.00	Mumbwa	Mumbwa	Kabulwebulwe	Mukambi Lodge Community	Board Member: Mukambi Community School	KII	1	1	0	John Aves	None	John Aves
44	02/07	2.00	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	Farmer 'Non-poor' households Female	Household Case Study	1	0	1	Graham	None	Graham
45	02/07	1.50	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	Community Members Males & Females	Household Case Study	2	1	1	Chanda	Chanda	Chanda
46	02/07	2.00	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	'Wealthy' Household Males & Females	Household Case Study	2	1	1	Beth	Munchindu	Beth

47	02/07	1.30	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	'Poor' Household Male	Household Case Study	1	1	0	Jon	Jimmy	Jon
48	02/07	0.75	Mumbwa	Mumbwa	Kabulwebulwe	Lukanga	'Wealthy' Households Male	Household Case Study (shortened)	1	1	0	Jon	Jimmy	Jon
49	02/07	2.25	Mumbwa	Mumbwa	Kabulwebulwe	Kabulwebulwe Communities	Traditional Leaders Males & Females	FGD Chiefdom Institutional	29	25	4	Bethel	Chali	Kaela
50	02/07	1.50	Mumbwa	Mumbwa	Kabulwebulwe	Kabulwebulwe Communities	Traditional Leaders Males & Females	FGD on Schools	43	37	6	Jon Aves	None	Jon Aves
51a	08/07	1.00	Mufunta	Kaoma	N/A	Kaoma Town	Principal, Kaoma Trade Institute	KII	1	1	0	Jon Aves	None	Jon Aves
51b	08/07	1.00	KNP Northern Area	N/A	N/A	KNP Chunga HQs	ZAWA Officer, ZAWA Chunga HQ	KII	1	1	0	Jon Aves	None	Jon Aves
51c	08/07	1.00	Mufunta	Kaoma	N/A	Kaoma Town	Head, Kaoma Resource Centre	KII	2	1	1	Jon Aves	None	Jon Aves
51d	08/07	1.00	Mumbwa	Mumbwa	Kabulwebulwe	Mumbwa Town	World Vision, Manager	KII	1	1	0	Jon Aves	None	Jon Aves
52	11/07	4.00	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi	Community Members Traditional Leaders Farmers Fishers NR Collectors/ NR Users Children Youth Elderly Males & Females	Seasonal Calendar; Resource Mapping; Resource Trend Analysis	20	7	13	Chanda	Ipanga	Graham
53	11/07	4.25	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi Village Central	Community Members Traditional Leaders Males & Females	Daily Task Analysis; Ownership, Control, Access	24	12	12	Beth	Clive	Beth Clive
54	11/07	1.30	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi Village Central	Parents Community Members Males & Females	FGD Education	13	8	5	John Aves	Francis	John Aves

55	11/07	2.00	Kasonso Busanga	Kasempa	Kasempa	Shimaka VAG Area S13.876 E25.878	Community Members Women's Club Chairperson Males & Females	Transect Walk	5	2	3	Herbert	None	Herbert
56	11/07	0.25	Kasonso Busanga	Kasempa	Kasempa	Kamimbi Village	CRB Community Coordinator Males	KII	1	1	0	Bethel	None	Bethel
57	11/07	1.00	Kasonso Busanga	Kasempa	Kasempa	Kasempa Town	Head Teacher, Kasempa High School	KII	2	2	0	Jon Aves	None	Jon Aves
58	11/07	2.00	Kasonso Busanga	Kasempa	Kasempa	Kamimbi Village	VAG Members Community Members Males & Female	FGD Institutional	16	12	4	Bethel	Justin Kalyati	Bethel
59	11/07	1.00	Kasonso Busanga	Kasempa	Kasempa	N/A	DDCC Males & Female	FGD Institutional	16	12	4	Bethel	None	Bethel
60	12/07	2.50	Kasonso Busanga	Kasempa	Kasempa	Lunga	Mining Chifumpa Managers	FGD	3	3	0	Graham	None	Bethel Chanda
61	12/07	2.00	Kasonso Busanga	Kasempa	Kasempa	Shifwaba	Farmers 'Non-poor' Household Males & Female	Household Case Study	2	1	1	Herbert	None	Herbert
62	12/07	1.75	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi	Farmers 'Poor' Household Males & Female	Household Case Study	2	1	1	Jon Aves	None	Jon Aves
63	12/07	2.50	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi	'Poor' Household Female	Household Case Study	1	0	1	Beth	Clive	Beth
64	12/07	1.00	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi	'Non-poor' Households	Household Case Study	4	2	2	Jon	Ipanga	Jon Ipanga
65	12/07	0.50	Kasonso Busanga	Kasempa	Kasempa	Mukunanshi	'Non-poor' Households	Household Case Study	12	6	6	Jon	Ipanga	Jon Ipanga
66	12/07	2.00	Kasonso Busanga	Kasempa	Kasempa	Lunga	VAG Members Community Members Traditional Leaders Males & Females	Resource Trend Analysis	19	16	3	Chanda	None	Chanda Graham
67	12/07	2.00	Kasonso Busanga	Kasempa	Kasempa	Jifumpa Chief Kasonso Area	VAG Members Males & Females	FGD Institutional	7	4	3	Bethel	Stephen Kinyema	Bethel
68	13/07	2.25	Mufunta	Kaoma	Kahare	Lalafuta VAG Area Kamakokwa	CRB Members VAG Members Males	FGD Institutional	6	6	0	Bethel	Grace	Bethel

69	13/07	2.00	Mufunta	Kaoma	Kahare	Kamakokwa	Community Members Farmers Teachers/ Principals Youth Males & Females	Transect Walk	6	2	4	Herbert	Chisenga	Herbert
70	13/07	1.25	Mufunta	Kaoma	Kahare	Kamakokwa	Community Farmers 4 Mat Makers 7 Beer Brewers Females	Resource Mapping	18	0	18	Graham	Lubinda	Graham
71	13/07	3.50	Mufunta	Kaoma	Kahare	Kamakokwa	Community Members Elderly Males & Females	FGD Cultural Traditions	11	7	4	Beth	Febian	Beth Febian
72	13/07	1.50	Mufunta	Kaoma	Kahare	Kamakokwa	NR Collectors/ NR Users Males	Resource Mapping	14	14	0	Chanda	Chisenga	Chisenga
73	15/07	2.25	Mulobezi	Kazungula	Moomba	Siamwanja	Community Members Females	Daily Task Analysis; Club/Coop Info; Livelihoods	3	0	3	Beth	Lubinda	Beth Grace
74	15/07	1.50	Mulobezi	Kazungula	Moomba	Mulobezi Town	Manager, Zambezi Sawmills Male	KII	1	1	0	Jon	None	Chanda Jon
75	15/07	1.00	Mulobezi	Kazungula	Moomba	Siamwanja	Senior Headman for 1/5 of Moomba Chiefdom	KII	1	1	0	Bethel	Grace	Bethel
76	15/07	3.00	Mulobezi	Kazungula	Moomba	Siamwanja	Community Members Farmers Fishers NR Collectors Males & Females	Resource Mapping; Resource Trend Analysis; Threats Rating; Medicinal NR List	11	7	4	Graham	Febian	Graham
77	15/07	2.25	Mulobezi	Kazungula	Moomba	Siamwanja	Community Members Males	Transect Walk	5	5	0	Herbert	Chisenga	Chisenga

78	16/07	2.00	Mulobezi	Kazungula	Moomba	Lukena	Community Members Males & Females	Ownership, Control, Access; Livelihood Ranking; Assets and Benefits; Income and Expenditure	6	3	3	Beth	Grace	Beth
79	16/07	3.00	Mulobezi	Kazungula	Moomba	Lukena	Community Members Males & Females	Livelihood Ranking	20	6	14	Jon	Lubinda Febian	Febian
80	16/07	3.00	Mulobezi	Kazungula	Moomba	Lukena	Community Members Traditional Leaders Males & Females	Story with a Gap: Access to Livelihood Opportunities	28	17	11	Beth Chanda	Chanda & Local Translator	Beth
81	16/07	2.50	Mulobezi	Kazungula	Moomba	Sifwabantu Village near Lukena Village	Female-headed Household 'Poor' Household Beer Brewer	Household Case Study	1	0	1	Bethel	Grace	Bethel
82	16/07	2.50	Mulobezi	Kazungula	Moomba	Lukena Village	Employed as Hammer Mill Operator Male	Household Case Study	1	1	0	Graham	Chitenga	Graham
83	16/07	2.50	Mulobezi	Kazungula	Moomba	Lukena Village	Self-employed carpenter 'Poor' Household	Household Case Study	9	4	5	Jon	Lubinda	Jon
84	16/07	2.50	Mulobezi	Kazungula	Moomba	Lukena Village	Farmer 'Poor' Household	Household Case Study	3	1	2	Herbert	Febian	Febian

LIST OF KEY INFORMANT INTERVIEWS CONDUCTED

National and District-Level Officers and CRB and VAG Members and Traditional Authorities

The following people were interviewed to obtain additional information on institutional issues pertaining to CRB and central and district-level government links:

- Lubinda M. Aongola, Director Planning & Information Department, MTENR
Phone: +260 211 238772
- Lennox Shimwambwa, District Commissioner, Mumbwa District
- Racheal Chikatala Siachitema, CRB FMC Treasurer, Bilili Springs GMA, Kalomo District
- Lemmy Mantanyani, General Worker, Forestry Department, Kalomo District
Phone: +260 979 311256
- Roy Wakumelo, District Fisheries Officer, Kalomo District
Phone: +260 977 312466
- Kenneth Mulamata, Chikanda VAG Chairperson, Kabulwebulwe CRB, Mumbwa District
- Vincent Ziba, National Coordinator, National CBNRM Forum, Lusaka
- Dr. Nyambe, Coordinator, Community Development Centered Conservation and Development Project, WWF
- mail: nnyambe@wwwfzam.org; phone: +260 211 253749
- Senior Village Headman Sifwabantu, Sifwabantu Village, Moomba Central VAG, Mulobezi CRB, Mulobezi GMA

District Agricultural Officers

Three district agricultural officers (DACOs) were interviewed to obtain information on the status of agriculture in their respective districts:

- Julius Malipa, Mumbwa
- Mr Mwandamina, Shesheke
- Imbuwa Mushebwa, Kaoma

ZAWA Officers and CRB Chairpersons, Village Scouts, and Lodge and Concession Area Managers on Wildlife Resource Trends and Tourism Potential

The following people were interviewed about the wildlife resource in the five GMAs:

Mumbwa

- Ngawo Namukonde, ZAWA Ecologist at ZAWA Management Unit, Chunga
- Lackson Ngandi, ZAWA Senior Ranger
- Edjanvan der Heide, Director of Mukambi Lodge and Plains Camp on Busanga Plains
- Wilson Molowa, Kabulwebulwe CRB Resource Management Chairperson
- Kenneth Molomata, Kabulwebulwe CRB Resource Management Chairperson

Kasonso Busanga

- Ackson Mpasela, ZAWA Wildlife Police Officer
- Alfred Mudanda, Senior Wildlife Police Officer
- Tyron, Manager of Plains Camp in Busanga Plains
- Gilmour Dickson, Concession Manager for Wilderness Zambia

Mufunta

- Zaeed Patel, MVU Hunting Outfitter in the GMA
- Two village scouts (did not get names)
- Ngawo Namukonde, ZAWA Ecologist at ZAWA Management Unit, Chunga

Bilili Springs

- Amos Kaolola, Village Headman
- Tredwell Chingobe, ZAWA Wildlife Police Officer, Dundumwesi Camp

Mulobezi

- Kayowe Kayombo, Senior Wildlife Police Officer
- Lazarus Siazuyuulu, Moomba Community Liaison Officer
- Josius Kavuba, ex-poacher, now Mulobezi Hunting Outfitters Camp Watchman
- Charles Chibila, ZAWA Wildlife Police Officer
- Victor Chikabakani, Moomba Village Scout
- John Munyandi, Moomba Village Scout

Tourism Hunting Outfitters

Some of the hunting outfitters were interviewed to establish their knowledge of and relationship with the CRBs they share their revenue with and the potential for the future development of the hunting industry. KIIs were held with:

- Doug Reynolds, Royal Zambezi Wildlife Safaris, Lunga-Kasonso Hunting Block in eastern Kasonso Busanga
- Barry Cross-Bell, Pro Hunt, who leases the Kasempa-Lunga Luswishi hunting block (western hunting block in Lunga Luswishi GMA)
- Werner van Noordwyk, – Songa Hunting Safaris, who operates in Nawala and Nkala GMA concessions and also buys hunting quota from Mulobezi Hunting Outfitters in Mulobezi
- Zaeed Patel, MVU Hunting Safaris in Mufunta GMA

Tourism Operators and KPOA Members from the KNP

Some of the photographic tourism operators were also interviewed to establish some insight into traditional authorities and their willingness to partner, manage land use, and ways they ensure benefits go to communities. These included:

- Edjan van der Heide, Director of Mukambi Lodge and Plains Camp, Busanga Plains, and also Chairperson of KPOA
- Tyrone, Manager of Busanga Plains Camp
- Gilmour Dickson, Concession Manager for Wilderness Zambia

Mining Operation

To establish the extent of the operations and the environmental and social impacts of the Chifumpa Copper Mine in Lunga (Kasonso Busanga), the following KIIs were conducted:

- Barry Gold, Operations Manager for AAGR (a subsidiary company to JVC mining company in Kitwe) operational sub-contractors
- Impande Melekio, AAGR
- Eric Barrett of JVC and also an honorary game ranger

Saw Mill Operation

A KII was held with the manager of the medium-scale Zambezi Sawmills operation at Mulobezi

- Martin Masheke, Manager, Zambezi Sawmills, Mulobezi

KEY INFORMANT INTERVIEWS CONDUCTED IN LUSAKA FOR KNP GMAS*

Organisation	Name	Position	Telephone	E-mail
African Wildlife Foundation	Harry Van der Linde	African Headquarters		
Central Statistical Office (CSO)	Peter M. Mukuka	Deputy Director – IRD	+260-211-250195 +260-97-775-8590	pmmukuka@zamstats.gov.zm
Central Statistical Office (CSO)	Iven M. Sikanyiti	Geographic Information Officer	+260-211-251377 /85 +260-97-778-4491	isikanyiti@zamstats.gov.zm
Central Statistical Office (CSO)	Goodson Sinyenga	Deputy Director – Economics & Financial Statistics	+260 211 253609 +260 976447012	gsinyenga@zamstats.gov.zm gsinyenga@yahoo.co.uk
Civil Society Environment Fund	Matthew Morley	Fund Manager	+260-211-250495 +260-975-464420	mmorley@csefzambia.org
Department of Agriculture, Technical Services Branch (TSB), EMMA Unit	Rasford Kalamatila	Principal Agricultural Specialist (Mapping & Remote Sensing)	+260-977-606600	
Department of Agriculture, Technical Services Branch (TSB)	Zebron Chirwa	Chief Technical Officer (Mapping & Remote Sensing)	+260-955-915378	
Department of Agriculture, Southern Province	Joy Sinyangwe	Senior Agricultural Specialist (Land Husbandry)	+260-963-446199	
Elephant Pepper Trust, Zambia	Loki Osborn	Director		loki@elephantpepper.org
Elephant Pepper Trust, Zambia	Melvorn Karidozo	Programmes coordinator		mazdzambo@yahoo.co.uk
Famine Early Warning Systems Network (FEWSNET)	Chansa Mushingenge	Country FEWSNET Representative	+260 211 262750/1	cmushingenge@fewsn.net
International Labour Office (ILO)	Jealous Chirove	Senior Technical Advisor, Board Based Wealth & Job Creation	+260-211-252779 +260-211-256895 +260-97-770-5063	chirove@ilo.org
International Labour Office (ILO)	Johanna Silvander	Programme Officer, Decent Work Country Programme and M&E	+260-211-252743 +260-211-252827 +260-96-444-5792	silvander@ilo.org
International Labour Office (ILO)	Thomas Wiechers	Social Security Policy Adviser, Country Office for Zambia	+260-211-252779 +260-97-419-1813	wiechers@ilo.org

* Note: These KIIs were conducted during conducted in April 2011

Organisation	Name	Position	Telephone	E-mail
Independent Consultant	Margaret M.C Machila	Social and Gender Consultant	+260-97-779-7000	margaretmachila@yahoo.com
Millennium Challenge Account – Zambia (MCA – Zambia)	Pamela Kasese Bwalya	Deputy National Coordinator / National Economist	+260-21- 256004/071 +260-97-784-9255	Pamela.bwalya@mcaz.gov.zm Pamela.bwalya@gmail.com
Millennium Challenge Account – Zambia (MCA – Zambia)	Lizzie Peme Tigere	Social & Gender Specialist	+260-211-256004/071 +260-97-780-3367	lizzie.tigere@mcaz.gov.zm
Millennium Challenge Account – Zambia (MCA – Zambia)	Andrew Chilufya	Tourism Specialist	+260-211- 256004/071 +260-97-740-5032	andrew.chilufya@mcaz.gov.zm
Millennium Challenge Account – Zambia (MCA – Zambia)	Masuka Mutenda	Outreach Coordinator	+260-211-256004/071 +260-97-945-4765	masuka.mutenda@mcaz.gov.zm
Millennium Challenge Corporation (MCC)	Jennifer Hruza	DCO/EASA/Contractor – Env specialist		<hruzajl@mcc.gov>
Millennium Challenge Account – Zambia (MCA – Zambia)	Julius Daka	Environmental Specialist	+260-211-256004/071	julius.daka@mcaz.gov.zm
Millennium Challenge Corporation (MCC)	Zaidoon Khouri	Associate Director, Department of Compact Development	+1-202-521-3616 +1-202-459-1484	khouriz@mcc.gov
Ministry of Agriculture and Cooperatives	Michael Isimwaa	Chief Agricultural Statistics and Data Analyst	+260 211 250477 +260 969 291902	mnsimwaa@maff.gov.zm
Ministry of Agriculture and Cooperatives	Julius Malipa	District Agricultural Officer Mumbwa	+260 977 134912	Malipa2005@yahoo.com
Ministry of Agriculture and Cooperatives	Mwandamina	District Agricultural Officer, Sesheke & Mulobezi	+260 977 710606	Mumwa2007@yahoo.com
Ministry of Agriculture and Cooperatives	Imbuwa Mushebwa	District Agricultural Officer, Kaoma	+260 977 393938	mushebwa@yahoo.com
Ministry of Education	Bupe Musonda	Senior Statistics Officer	+260-95-583-5032	bmusonda@moe.gov.zm
Ministry of Energy and Water	Chris Chileshe	Deputy Director, Dept of Water Affairs	+260 966433430	

Organisation	Name	Position	Telephone	E-mail
Ministry of Education	Athanasius M Mulenga	Chief Education Officer (DODE) Directorate of Open Distance Education	+260-211 255 283	ammulenga@moe.gov.zm
Ministry of Education	Boster Mundia Mwendende	Curriculum Development centre	+260-211 254 071	bmmwendende@yahoo.com
Ministry of Forestry	Sitwala Wamunyima	Forestry Resource Officer – ILUA project	+260 977978863	sitwalaw@yahoo.com
Ministry of Livestock and Fisheries Development	Joseph Mubanga	Director Veterinary Services	+260 211 252608	
Ministry of Livestock and Fisheries Development	Francis Mulenga	Chief Veterinary Officer	+260 211 252608	drfmmulenga@yahoo.co.uk
Ministry of Livestock and Fisheries Development	Sinkala	Veterinary Officer	+260 211 229470 +260 979 313526	sinkala@yahoo.co.uk
Ministry of Livestock and Fisheries Development	Liywalii Mataa	Principle Veterinary Research Officer	+260 211 229470 +260 955 990369	lmataa@yahoo.com
Ministry of Mining	Fred Banda	Chief Mining Engineer	+260-211-235363 +260-97-775-0045	fjbanda@yahoo.com
Ministry of Tourism, Environment & Natural Resources (MTENR)	Chiseche M. Mutale	Chief Planner and Gender Focal Person for MTENR	+260-211-229410/13 +260-211-238772 +260-96-676-6275	commutale@mtenr.gov.zm
Ministry of Tourism, Environment & Natural Resources (MTENR)	Godwin Gondwe	Head of Natural Resources	+260 955835416	
Ministry of Tourism, Environment & Natural Resources (MTENR)	Victor Chiiba	Senior Forestry Officer	+260 977499149	
Royal Norwegian Embassy	Moosho L. Imakando	Programme Officer, Environment, Natural Resources & Agriculture	+260-211-252188 +260-95-502-3978	imi@mfa.no emb.lusaka@mfa.no
Royal Norwegian Embassy	Trond Luvda	Wildlife Sector Director	+260-211-252188	
SNV – Netherlands Development Organisation	Corjan van der Jagt	Senior Advisor, Sustainable Tourism	+260-211-255174/5 +260-97-846-9433	cvanderjagt@snvworld.org
SNV -- Netherlands Development Organisation	Jennifer Willis	Director	+260-211-255174/5	jwillis@snvworld.org

Organisation	Name	Position	Telephone	E-mail
Technical Education Vocational & Entrepreneurship Training Authority	Patrick Nkanza	Director General TEVETA	+260-211-251040	pknkanza@teveta.org.zm
Tourism Council of Zambia	Victor Inambwae	Executive Director	+260-211-291788 +260-977-704059	policy.tcz@iconnect.zm
UNDP	Ms. Winnie Musonda	Environmental Adviser		
USAID	Andrew Levin	Economic Growth Team Leader	+260-211-357000 Ext 7146 +260-97-877-0429	alevin@usaid.gov
USAID	Mlotha Damaseke	Agriculture & Natural Resources & Mission Environment Officer	+260-211-357000 Ext 7059 +260-211-357059	mdamaseke@usaid.gov
Wildlife Conservation Society WCS/COMACO)	Ruth Nabuyanda	Programmes Coordinator	+260 211 226082 / 0966433875	ruthnabs@itswild.org
Women and Law in Southern Africa (WLSA)	Hope Kasese	Acting Director		
Woman for Change	Emily Joy Sikazwa	Executive Director	+260-211-224309	wfc@zamnet.zm
Woman for Change	Salome Nakazwe	Programmes Officer – Research and Training	+260-211-224309 +260-97-762-7630	wfc@zamnet.zm
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Woman for Change	Douglas Chipoya	Programme Officer	+260-211-224309	wfc@zamnet.zm
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Worldbank	Gelson Tembo	GMA Livelihoods Study Author	+260 966284638	tembogel@yahoo.com
WWF Zambia	Patrick W. Matakala	Country Director	+260 211 253749	pmatakala@wwfzam.org
WWF Zambia	Nyambe Nyambe	Community Centred Conservation and Development Programme Officer		nnyambe@wwfzam.org

Organisation	Name	Position	Telephone	E-mail
WWF Zambia	Erika Reider	Sioma Ngwezi Programme coordinator		erieder@wwfzam.org
Zambeef	Justo Kopulande	Group Head of Public Relations	+260 211 369000	justok@zambeef.co.zm
Zambia Open Community Schools	Peter Sinyangwe	Programme Manager (ZOC's)	+260-211 253841	petersinyangwe@yahoo.com
Zambia Agricultural Research Institute (ZARI)	Moses Mwale	Deputy Director, Technical Services Branch	+260-966-766395	
Zambia Wildlife Authority (ZAWA)	Edwin Matokwani	Director – General	+260-211-278524	
Zambia Wildlife Authority (ZAWA)	Eston Banda	Director – Finance & Corporate Services	+260-211-278244	
Zambia Wildlife Authority (ZAWA)	James Milanzi	Regional Manager, Western Region	+260-211-800056 +260-97-710-6559	jmsmilanzi@yahoo.co.uk
Zambia Wildlife Authority (ZAWA)	Andrew Izias Phiri	Acting Mgr. GMAs	+260-211-278488 +260-97-812-2619	
Zambia Wildlife Authority (ZAWA)	Wilfred Moonga	Public Relations Officer	+260-97-931-3622	moongaw@zawa.org.zm
Zambia Wildlife Authority (ZAWA)	Zook Muleya	Head of Protected Areas Planning	+260-977-718282	zookmuleya@yahoo.com
Zambia Wildlife Authority (ZAWA)	Liwena Sitali	Programmes Coordinator	+260-95-587-2015	
Zambia Wildlife Authority (ZAWA)	Chris Kaoma	Senior Planning Officer	+260 211 278522	C_kaoma@yahoo.co.uk
Zambia Wildlife Authority (ZAWA)	Chaka H. Kaumba	Systems Analyst (GIS)	+260 977246866	
Zambia Wildlife Authority (ZAWA)	Chansa Moshinge	Head of Res & Conserv	0977 829937 office no 262750/1	cmushinge@fews.net
Zambia Wildlife Authority (ZAWA)	Lucy Tembo	Mumbwa extension officer	+260 977497350	lucyltembo@yahoo.co.uk
Zambia Wildlife Authority (ZAWA)	Likukela Simasiku	Mumbwa Planning Officer		likusim@yahoo.co.uk
Zambia Wildlife Authority (ZAWA)	Chuma Simukonda	Senior Biologist	+260 968399414 / 955952040	chumasimukonda@yahoo.com
Zambia Wildlife Authority (ZAWA)	Austin Mwakifwamba	Extension Officer		jrfwamba@yahoo.co.uk

Organisation	Name	Position	Telephone	E-mail
Zambia Wildlife Authority (ZAWA)	Chiayaze C. Chabala	Planning Officer Land Surveys	+260 211 278522	Chabs83@yahoo.com

ANNEX C. INVENTORY OF LIVELIHOOD ACTIVITIES

ANNEX C. INVENTORY OF LIVELIHOOD ACTIVITIES BY LOCATION, TYPE, AND SEX OF PARTICIPANTS

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
Kasonso Busanga	<ul style="list-style-type: none"> • Livestock - ⇒ Poultry (chickens, ducks, guinea fowl, doves) ⇒ Cattle, sheep, and goats in western part only due to tsetse fly ⇒ Piggery [4]* 	Yes	Yes				Supports Neutral	High Medium
	<ul style="list-style-type: none"> • Agriculture ⇒ Subsistence & semi commercial – maize, groundnuts, cassava, beans, sweet potatoes, millet, sorghum [12] ⇒ Commercial – tobacco [1] 	Yes	Yes				Neutral Threatens	High (Conserv Agric) Medium
	<ul style="list-style-type: none"> • Gardening ⇒ Vegetables 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> • Hunting with licenses 	Yes	No				Supports	Medium
	<ul style="list-style-type: none"> • Forestry product utilisation ⇒ Timber ⇒ Poles ⇒ Fibre ⇒ Firewood ⇒ Charcoal 	Yes Yes Yes Yes Yes	No No Yes Yes Yes	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ High ⇒ High ⇒ High ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Building ⇒ Building ⇒ For curing tobacco ⇒ Both 	<ul style="list-style-type: none"> • Local & Outside ⇒ Copper-belt ⇒ Local ⇒ Local ⇒ Local ⇒ Local 	Threatens Threatens Threatens Threatens Threatens	Medium Medium Medium Low High

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> • Collection of plant resources (NTFPs) ⇒ Wild fruits ⇒ Munkoyo roots ⇒ Mushrooms ⇒ Lusala (relish) ⇒ Grass ⇒ Bee hunting/honey collection 	Yes	Yes	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ High ⇒ High ⇒ D/K ⇒ High ⇒ High 	<ul style="list-style-type: none"> • Both ⇒ Consumed ⇒ Beverage ⇒ Relish ⇒ Consumed ⇒ Building ⇒ Food/beer 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local 	Supports Supports Threatens Neutral Neutral Threatens	High Medium High Medium High Low
	<ul style="list-style-type: none"> • Beekeeping [5] 	Yes		⇒ High	⇒ Food/beer	⇒ Local	Supports	High
	<ul style="list-style-type: none"> • Mushroom cultivation [2] 						Supports	Medium
	<ul style="list-style-type: none"> • Collection of caterpillars 		Yes				Threatens	Medium
	<ul style="list-style-type: none"> • Fishing (weirs, nets, spears, and hook & line; baskets, glass bottles) [8] ⇒ Barbel ⇒ Bream 	Yes	Yes	<ul style="list-style-type: none"> • Declining ⇒ Low ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Both 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local 	Neutral Threatens	Medium Medium
	<ul style="list-style-type: none"> • Fish farming [2] 	Yes	Yes	⇒	⇒		Supports	High
	<ul style="list-style-type: none"> • Mining – copper ⇒ Small-scale and commercial mining ⇒ 3 mines, total of approximately 50 employees on piecework basis 	Yes	No	⇒ High	<ul style="list-style-type: none"> ⇒ 2 small mines ⇒ 1 large commercial mine 	Copperbelt & International	Threatens	High
	<ul style="list-style-type: none"> • Crafts (basketry, woodcarving, pottery) [4] 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> • Carpentry [3] 	Yes	No				Neutral	Medium
	<ul style="list-style-type: none"> • Hammer mills [1] 	Yes					Neutral	Medium
	<ul style="list-style-type: none"> • Formal employment (lodges, safari companies, copper mine, with CRB as Village Scouts) [6] 	Yes	No				Supports	High

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> Safari hunting employment [1] 	Yes	No				Supports	Medium
	<ul style="list-style-type: none"> Game ranching (employment) [2] 1 company to increase wildlife numbers for hunting (antelopes, lions, elephants) 	Yes	No				Supports	Medium
	<ul style="list-style-type: none"> Informal employment 						Neutral	High
	<ul style="list-style-type: none"> Small-scale enterprises (shops, bicycle repair, fatcakes/fritters sales) [1] 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> Trading (cooking equipment, clothes) [1] 	No	Yes				Neutral	Medium
Mufunta	<ul style="list-style-type: none"> Agriculture - Small & large scale <ul style="list-style-type: none"> ⇒ Maize, sorghum, millet ⇒ Paprika, tobacco, cotton 						Threatens Threatens	High (Conserv. Agric.) High
	<ul style="list-style-type: none"> Cassava, sweet potatoes 						Neutral	High
	<ul style="list-style-type: none"> Forestry product utilisation <ul style="list-style-type: none"> ⇒ Timber ⇒ Poles ⇒ Fibre ⇒ Firewood ⇒ Charcoal 	Yes Yes Yes Yes	No No Yes Yes	<ul style="list-style-type: none"> Declining <ul style="list-style-type: none"> ⇒ Good ⇒ Good ⇒ Good ⇒ Low ⇒ High 	<ul style="list-style-type: none"> Both <ul style="list-style-type: none"> ⇒ Both ⇒ Building ⇒ Building ⇒ For curing tobacco ⇒ Both 	<ul style="list-style-type: none"> Local & Outside <ul style="list-style-type: none"> ⇒ China ⇒ Timber Co. ⇒ Local ⇒ Local ⇒ Local ⇒ Local & Lusaka 	Threatens Threatens Threatens Threatens Threatens	Medium Medium Medium Low High

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> • Collection of plant resources (NTFPs) ⇒ Wild fruits ⇒ Munkoyo roots ⇒ Mushrooms ⇒ Lusala ⇒ Grass ⇒ Bee hunting/honey collection 	No	Yes	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ High ⇒ Good ⇒ D/K ⇒ High ⇒ High 	<ul style="list-style-type: none"> • Both ⇒ Consumed ⇒ Beverage ⇒ Consumed ⇒ Beverage ⇒ Building ⇒ Food/beer 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local 	<ul style="list-style-type: none"> Supports Supports Threatens Neutral Neutral Threatens 	<ul style="list-style-type: none"> High Medium High Medium Medium High Low
	<ul style="list-style-type: none"> • Beekeeping [2] 	Yes	Yes	⇒ High	⇒ Food/beer	⇒ Local	Supports	High
	<ul style="list-style-type: none"> • Fishing ⇒ Barbel ⇒ Bream 	Yes	Yes	<ul style="list-style-type: none"> • Declining ⇒ Low ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Both 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local 	<ul style="list-style-type: none"> Threatens Neutral Threatens 	<ul style="list-style-type: none"> Low Medium Low
	<ul style="list-style-type: none"> • Mining 	N/A	N/A	No mining	N/A	N/A	Neutral	Low
	<ul style="list-style-type: none"> • Hunting with licenses 	Yes	No				Supports	High
	<ul style="list-style-type: none"> • Beverages (non-alcoholic) 	No	Yes				Neutral	Medium
	<ul style="list-style-type: none"> • Making crafts & carvings 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> • Trading 						Neutral	High
Mulobezi	<ul style="list-style-type: none"> • Agriculture – Mostly subsistence & some semi-commercial ⇒ Maize, cassava, millet, sorghum, sweet potato, beans, groundnuts ⇒ No cotton or tobacco 	Yes	Yes				Threatens	High
	<ul style="list-style-type: none"> • Livestock ⇒ Cattle ⇒ Goats ⇒ Pigs ⇒ Chickens & eggs 	Yes	Yes	Many cattle have died – tsetse fly	<ul style="list-style-type: none"> • Both ⇒ Both 	<ul style="list-style-type: none"> • Local & Outside ⇒ Living-stone 	<ul style="list-style-type: none"> Neutral Neutral Neutral Supports 	<ul style="list-style-type: none"> High High High Medium High

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> • Gardening ⇒ Vegetables 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> • Forestry product utilisation ⇒ Timber ⇒ Poles ⇒ Fibre ⇒ Firewood ⇒ Charcoal 	Yes	No	<ul style="list-style-type: none"> • Declining ⇒ Good 	<ul style="list-style-type: none"> • Both ⇒ Both 	<ul style="list-style-type: none"> • Local & Outside ⇒ Zambezi Saw Mills & Machita ⇒ Local ⇒ Local ⇒ Local ⇒ Living-stone & Shesek e 	<ul style="list-style-type: none"> Threatens Threatens Neutral Threatens Threatens 	<ul style="list-style-type: none"> High High Low Medium Medium
	<ul style="list-style-type: none"> • Collection of plant resources (NTFPs) ⇒ Wild fruits ⇒ Munkoyo roots ⇒ Mushrooms ⇒ Lusala (relish) ⇒ Grass ⇒ Bee hunting/honey collection ⇒ NRs for craft-making 	No	Yes	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Consumed ⇒ Both 	<ul style="list-style-type: none"> • Local & Outside ⇒ Local ⇒ Local & Living-stone & Lusaka ⇒ Local ⇒ Local ⇒ Local ⇒ Local 	<ul style="list-style-type: none"> Supports Supports Threatens Neutral Neutral Neutral Threatens Neutral 	<ul style="list-style-type: none"> High Medium High (cultivation) Medium Medium High Low Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	• Beekeeping [2]	Yes	Yes	⇒ Very few	⇒ Food/beer	⇒ Local		
	• Fishing (weirs, spears, nets, hook & line; thrust and scoop seine) ⇒ Barbel ⇒ Bream	Yes	Yes	• Declining ⇒ Low ⇒ Low	• Both ⇒ Both ⇒ Both	• Local ⇒ Local ⇒ Local	Threatens Neutral Threatens	Low Medium Medium
	• Hunting by community members with licenses	Yes	No				Supports	High
	• Mining	N/A	N/A	No mining	N/A	N/A	N/A	Low
	• Formal employment & piece work in the tourism industry, safari hunting & other sectors ⇒ 2 safari hunting companies	Yes	No				Supports	Medium
	• Retail shops	Yes	Yes				Neutral	Medium
	• Crafts (woodwork, tools)	Yes	Yes				Neutral	Medium
	• Carpentry [2]	Yes	No				Threatens	High
	• Hiring out cattle for transport [1]	Yes	No				Neutral	Medium
	• Herding for others for pay [1]	Yes	No				Supports	Low
	• Trading (including cross border)		Yes				Neutral	Medium
Sichifulo	• Agriculture -Subsistence & semi-commercial – maize, millet, sorghum, cassava, sweet potato, beans, groundnuts, leafy vegetables						Threatens	High (Conserv Agric)
	• Gardening						Neutral	High
	• Livestock rearing						Neutral	High
	• Harvesting of non-timber forest products (honey, fruits, mushroom, thatching grass)						Supports	High
	• Formal employment & piece work in the tourism & other industries						Supports	Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> Crafts 						Supports	Medium
Bilili Springs								
	<ul style="list-style-type: none"> Agriculture -Subsistence & semi-commercial ⇒ Maize, groundnuts, soy beans, cow peas, beans, sweet potatoes, sunflowers, tobacco 	Yes	Yes				Threatens	High (Conserv Agric)
	<ul style="list-style-type: none"> Livestock rearing ⇒ Cattle ⇒ Goats ⇒ Piggery ⇒ Chickens 			⇒ Cattle dying from Corridor Disease			Neutral Neutral Neutral Supports	High High High Medium High
	<ul style="list-style-type: none"> Gardening ⇒ Vegetables (especially Chifusa VAG area) [1] ⇒ Fruit trees [3] 	Yes	Yes				Neutral Neutral	High Medium
	<ul style="list-style-type: none"> Forestry ⇒ Timber (very limited low-level production) ⇒ Poles ⇒ Fibre ⇒ Firewood ⇒ Charcoal production 	Yes Yes Yes Yes Yes	No No Yes Yes Yes	<ul style="list-style-type: none"> Declining ⇒ Low ⇒ Low ⇒ Low ⇒ Low ⇒ High 	<ul style="list-style-type: none"> Both ⇒ Both ⇒ Building ⇒ Building ⇒ For curing tobacco ⇒ Both 	<ul style="list-style-type: none"> Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local 	Threatens Threatens Neutral Threatens Threatens	Medium Medium Low Low Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> • Collection of plant resources (NTFPs) ⇒ Wild fruits ⇒ Munkoyo roots ⇒ Mushrooms ⇒ Lusala (relish) ⇒ Grass ⇒ Bee hunting/honey collection 	Yes	<ul style="list-style-type: none"> Yes Yes Yes Yes Yes No 	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ Low ⇒ Low ⇒ Low ⇒ High ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Consumed ⇒ Beverage ⇒ Consumed ⇒ Consumed ⇒ Building ⇒ Consumed 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local ⇒ Local 	<ul style="list-style-type: none"> Supports Supports Threatens Neutral Neutral Threatens 	<ul style="list-style-type: none"> High Medium High Medium Medium High Low
	<ul style="list-style-type: none"> • Beekeeping [1] 	Yes	Yes	⇒ Some	⇒ Food/beer	⇒ Local	Supports	High
	<ul style="list-style-type: none"> • Fishing (using spears, weirs) [1] ⇒ Barbel ⇒ Bream 	Yes		<ul style="list-style-type: none"> • Declining ⇒ Low ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Both 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local 	<ul style="list-style-type: none"> Threatens Threatens 	<ul style="list-style-type: none"> Medium Low
	<ul style="list-style-type: none"> • Fishing (using thrust & scoop seine baskets) [1] 		Yes				Threatens	Low
	<ul style="list-style-type: none"> • Hunting with licenses 	Yes	No	No hunting	No hunting	N/A	N/A	N/A
	<ul style="list-style-type: none"> • Mining 	N/A	N/A	No mining	No mining	N/A	N/A	N/A
	<ul style="list-style-type: none"> • Piece work 						Neutral	Medium
	<ul style="list-style-type: none"> • Formal employment (very little) 						Neutral	Low
	<ul style="list-style-type: none"> • Tourism 	N/A	N/A	No lodges	No lodges		Supports	Low
	<ul style="list-style-type: none"> • Retail and grocery shops 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> • Hammer mills [1] 	Yes					Neutral	High
	<ul style="list-style-type: none"> • Beer brewing [3] 		No		Both	Local	Neutral	Medium
	<ul style="list-style-type: none"> • Fatcakes [1] 	No	Yes				Neutral	Medium
	<ul style="list-style-type: none"> • Crafts (baskets, mats, fishing baskets and traps, woodwork, drums, pottery, leatherwork, grass brooms, tools, blacksmith) 	Yes	Yes				Neutral	Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
Nkala	<ul style="list-style-type: none"> Livestock – cattle, goats, sheep, pigs, guinea pigs, rabbits, chickens, ducks, doves 						Neutral	Medium
	<ul style="list-style-type: none"> Agriculture Subsistence & semi-commercial – Cassava, maize, bulrush millet, sorghum, beans, groundnuts, sunflower, cotton, paprika, cucumber, pumpkin, bananas, sugar cane, vegetables 						Threatens	Medium
	<ul style="list-style-type: none"> Gardening 						Neutral	High
	<ul style="list-style-type: none"> Forestry <ul style="list-style-type: none"> ⇒ Timber ⇒ Collection of fire wood 						Threatens Threatens	Low Low
	<ul style="list-style-type: none"> Collection of wild fruits & roots 						Neutral	Medium
	<ul style="list-style-type: none"> Fishing 						Threatens	Low
	<ul style="list-style-type: none"> Piece work 						Neutral	Low
Namwala	<ul style="list-style-type: none"> Livestock – cattle, goats, sheep, pigs, sheep, chickens, duck, guinea fowls, ducks 						Neutral	Medium
	<ul style="list-style-type: none"> Agriculture Subsistence & semi commercial <ul style="list-style-type: none"> ⇒ Maize, cotton, sweet potato, groundnuts, cassava 						Threatens	High (Conserv Agric)
	<ul style="list-style-type: none"> Gardening 						Neutral	High
	<ul style="list-style-type: none"> Forestry <ul style="list-style-type: none"> ⇒ Timber ⇒ Collection of fire wood ⇒ Charcoal production 						Threatens Threatens Threatens	Medium Low Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> Collection of wild fruits, thatch grass, roots & mushroom, honey 						Neutral	Medium
	<ul style="list-style-type: none"> Hunting 						Supports	High
	<ul style="list-style-type: none"> Fishing 						Threatens	High
	<ul style="list-style-type: none"> Beer brewing 						Neutral	Low
	<ul style="list-style-type: none"> Trading 						Neutral	Medium
	<ul style="list-style-type: none"> Piecework 						Neutral	Medium
	<ul style="list-style-type: none"> Formal employment to a lesser extent 						Neutral	Medium
Mumbwa	<ul style="list-style-type: none"> Agriculture: Subsistence & semi-commercial (selling of surplus) <ul style="list-style-type: none"> ⇒ Maize, groundnuts, soy beans, cow peas, beans, sunflower, cotton 	Yes	Yes: "More than men"				Threatens	High (Conserv Agric)
	<ul style="list-style-type: none"> Cotton <ul style="list-style-type: none"> ⇒ 2 cotton buying companies 'contact farming' give inputs and buy cotton 	Yes	Yes				Threatens	High
	<ul style="list-style-type: none"> Gardening <ul style="list-style-type: none"> ⇒ Vegetables 	Yes	Yes				Neutral	High
	<ul style="list-style-type: none"> Livestock rearing 						Neutral	Medium
	<ul style="list-style-type: none"> Hunting with licenses 	Yes	No				Supports	High

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	<ul style="list-style-type: none"> • Forestry product utilisation ⇒ Timber ⇒ Poles ⇒ Fibre ⇒ Firewood ⇒ Charcoal production 	Yes	No	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ Good ⇒ Good ⇒ Good ⇒ High 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Building ⇒ Building ⇒ For curing tobacco ⇒ Both 	<ul style="list-style-type: none"> • Local & Outside ⇒ Mumbwa Town & Lusaka ⇒ N/A ⇒ N/A ⇒ N/A ⇒ Mumbwa Town 	Threatens	Medium
	<ul style="list-style-type: none"> • Collection of plant resources (NTFPs) ⇒ Wild fruits ⇒ Munkoyo roots ⇒ Mushrooms ⇒ Lusala (relish) ⇒ Grass ⇒ Bee hunting/honey collection 	No	Yes	<ul style="list-style-type: none"> • Declining ⇒ Good ⇒ Low ⇒ Low ⇒ Low ⇒ High ⇒ High 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Food/beer ⇒ Relish ⇒ Both ⇒ Building ⇒ Both 	<ul style="list-style-type: none"> • Local ⇒ Local & lodges ⇒ N/A ⇒ Local ⇒ Local ⇒ N/A ⇒ Lusaka 	Supports	High
	<ul style="list-style-type: none"> • Mushroom cultivation [1] 						Supports	Medium
	<ul style="list-style-type: none"> • Beekeeping [5] 	Yes	Yes				Supports	High
	<ul style="list-style-type: none"> • Fish farming [3] 						Supports	Medium
	<ul style="list-style-type: none"> • Fishing ⇒ Barbel ⇒ Bream 	Yes		<ul style="list-style-type: none"> • Declining ⇒ Low ⇒ Low 	<ul style="list-style-type: none"> • Both ⇒ Both ⇒ Both 	<ul style="list-style-type: none"> • Local ⇒ Local ⇒ Local 	Threatens	Medium
	<ul style="list-style-type: none"> • Sales of dried fish bought at Kafue Flats 	Yes	No				Neutral	Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	• Mining – small-scale semi-precious stones	N/A	N/A	No commercial mining			Threatens	Low
	• Hammer mill 1						Neutral	Medium
	• Carpentry [2]	Yes	No				Threatens	Medium
	• Tailoring/sewing [2]	No	Yes				Neutral	Medium
	• Crafts	Yes	Yes				Neutral	Medium
	• Fatcakes [1]	No	Yes				neutral	Low
	• Beverages (non-alcoholic) [1]	No	Yes				Neutral	Low
	• Piecework						Neutral	Medium
	• Formal employment (safari hunting)	Yes	No				Neutral	High
	• No photographic / lodge tourism employment						Supports	High
Lunga Luswishi	• Livestock - small scale						Neutral	Medium
	• Agriculture -Subsistence & semi commercial						Threatens	High
	• Gardening						Neutral	High
	• Hunting						Supports	High
	• Forestry ⇒ Timber ⇒ Collection of fire wood						Threatens Threatens	Medium Low
	• Collection of wild fruits, thatch grass, roots, mushroom, honey, caterpillars, <i>chikanda</i> tubers						Threatens	High
	• Artisanal fishing						Supports	Medium
	• Copper mining at a very small scale						Neutral	Low
	• Crafts (basketry and carving)						Neutral	Medium

GMA	Type of Livelihood Activity	Sex of Livelihood Participant		For Livelihoods Involving Natural Resources: Current Status of Natural Resource Based on Availability	Use of Natural Resource: Used Locally and/or Traded (Sold or Bartered)	Where Marketed	Currently Supports or Threatens Sustainable Land use or Conservation of Biodiversity	Interest in/or Potential for Scaling up: High, Med, Low **
		Male	Female					
	• Formal & informal employment						Neutral	Medium

Note: As we did not do field research in Sichifulo, Nkala, Namwala or Lunga Luswishi, the information for this comes from ZAWA (undated) and the available GMA GMPs, and thus these GMAs have less information than the five GMAs where the field research took place. * The number in [] refers to the number of times this activities was cited by the different groups/KIIs during the fieldwork, and place in this table as an indication of prominence or 'weight' of that particular activity for the GMA. ** 'Scaling-up' refers to potential for expansion of activity in the Development Zones and outside the GMAs.

ANNEX D. RESULTS OF FINANCIAL AND ECONOMIC ANALYSIS

ANNEX D

Summarized Results of Selected Enterprise Models

1. Bilili Small Scale Maize
2. Kasonso Busanga Small Scale Maize
3. Mumbwa Small Scale Cotton
4. Mumbwa Small Scale Beekeeping
5. Kasonso Busanga Small Scale Fishing
6. Mulobezi Small Scale Furniture
7. Mulobezi Medium Scale Saw Timber
8. Kasonso Busanga Wildlife Viewing
9. Mulobezi Safari Hunting
10. General CRB Business Model

FINANCIAL/ECONOMIC MODEL - BILILI SMALL SCALE MAIZE - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Land Extent	Hectares	1	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	6,305	6,305
Private Gross Income	119%	7,491	7,491
Variable Private Costs	-	3,737	3,737
Fixed Private Costs	-	1,348	1,348
Net Private Income	38%	2,406	2,406
Land Rental	-	-	-
Resource Royalty	-	-	-
Private Rate of Return (@ 10 Years)	-	-	14%
Private Net Present Value (@ 10%, @ 10 Years)	-	2,400	2,400
Total Economic Capital	-	5,897	5,897
Financial Gross Income	166%	9,774	9,774
Economic Costs	68%	4,008	4,008
Gross Value Added to National Income	98%	5,766	5,766
Net Value Added to National Income	87%	5,128	5,128
Economic Rate of Return (@ 10 Years)	-	-	31%
Economic Net Present Value (@ 10%, @ 10 Years)	-	14,258	14,258
Economic Capital Cost/Job	-	-	15,972
Domestic Resource Cost Ratio	-	-	0.20
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	(2,283)
		: on Tradable Inputs	(144)
		: on Domestic Factors	(295)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	(2,722)
		: on Net Present Value (10 Years)	(11,858)

FINANCIAL/ECONOMIC MODEL - KASONSO BUSANGA SMALL SCALE MAIZE - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Land Extent	Hectares	1	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	2,015	2,015
Private Gross Income	297%	5,993	5,993
Variable Private Costs	-	2,394	2,394
Fixed Private Costs	-	1,861	1,861
Net Private Income	86%	1,737	1,737
Land Rental	-	-	-
Resource Royalty	-	-	-
Private Rate of Return (@ 10 Years)	-	-	15%
Private Net Present Value (@ 10%, @ 10 Years)	-	1,654	1,654
Total Economic Capital	-	1,915	1,915
Financial Gross Income	401%	7,688	7,688
Economic Costs	167%	3,195	3,195
Gross Value Added to National Income	235%	4,493	4,493
Net Value Added to National Income	225%	4,309	4,309
Economic Rate of Return (@ 10 Years)	-	-	43%
Economic Net Present Value (@ 10%, @ 10 Years)	-	13,949	13,949
Economic Capital Cost/Job	-	-	5,186
Domestic Resource Cost Ratio	-	-	0.21
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	(1,695)
		: on Tradable Inputs	(92)
		: on Domestic Factors	(785)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	(2,573)
		: on Net Present Value (10 Years)	(12,295)

FINANCIAL/ECONOMIC MODEL - MUMBWA SMALL SCALE COTTON - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Land Extent	Hectares	1	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	6,305	6,305
Private Gross Income	100%	6,300	6,300
Variable Private Costs	-	2,733	2,733
Fixed Private Costs	-	1,548	1,548
Net Private Income	32%	2,019	2,019
Land Rental	-	0	0
Resource Royalty	-	0	0
Private Rate of Return (@ 10 Years)	-	-	13%
Private Net Present Value (@ 10%, @ 10 Years)	-	1,588	1,588
Total Economic Capital	-	5,897	5,897
Financial Gross Income	139%	8,218	8,218
Economic Costs	53%	3,142	3,142
Gross Value Added to National Income	86%	5,076	5,076
Net Value Added to National Income	75%	4,438	4,438
Economic Rate of Return (@ 10 Years)	-	-	30%
Economic Net Present Value (@ 10%, @ 10 Years)	-	12,463	12,463
Economic Capital Cost/Job	-	-	15,972
Domestic Resource Cost Ratio	-	-	0.24
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	-1,918
		: on Tradable Inputs	-105
		: on Domestic Factors	-396
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	-2,418
		: on Net Present Value (10 Years)	-10,875

FINANCIAL/ECONOMIC MODEL - MUMBWA SMALL SCALE BEEKEEPING - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Land Extent	Hectares	2,000	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	4.41	8,829
Private Gross Income	306%	13.50	27,000
Variable Private Costs	-	4.36	8,712
Fixed Private Costs	-	3.81	7,628
Net Private Income	121%	5.33	10,660
Land Rental	-	0.00	-
Resource Royalty	-	0.00	-
Private Rate of Return (@ 10 Years)	-	-	27%
Private Net Present Value (@ 10%, @ 10 Years)	-	13.01	26,010
Total Economic Capital	-	4.15	8,304
Financial Gross Income	434%	18.03	36,052
Economic Costs	134%	5.55	11,104
Gross Value Added to National Income	300%	12.47	24,948
Net Value Added to National Income	288%	11.94	23,888
Economic Rate of Return (@ 10 Years)	-	-	62%
Economic Net Present Value (@ 10%, @ 10 Years)	-	44.54	89,082
Economic Capital Cost/Job	-	-	14,993
Domestic Resource Cost Ratio	-	-	0.14
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	(9,052)
		: on Tradable Inputs	(330)
		: on Domestic Factors	(3,846)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	(13,228)
		: on Net Present Value (10 Years)	(63,072)

FINANCIAL/ECONOMIC MODEL - KASONSO BUSANGA SMALL SCALE FISHING - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Concession Extent	Hectares	2,000	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	0.30	595
Private Gross Income	420%	1.25	2,500
Variable Private Costs	-	0.47	941
Fixed Private Costs	-	0.35	702
Net Private Income	144%	0.43	857
Land Rental	-	0.00	-
Resource Royalty	-	0.00	-
Private Rate of Return (@ 10 Years)	-	-	22%
Private Net Present Value (@ 10%, @ 10 Years)	-	0.82	1,634
Total Economic Capital	-	0.28	557
Financial Gross Income	560%	1.56	3,122
Economic Costs	220%	0.61	1,224
Gross Value Added to National Income	341%	0.95	1,898
Net Value Added to National Income	328%	0.91	1,825
Economic Rate of Return (@ 10 Years)	-	-	50%
Economic Net Present Value (@ 10%, @ 10 Years)	-	3.11	6,226
Economic Capital Cost/Job	-	-	3,017
Domestic Resource Cost Ratio	-	-	0.18
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	(622)
		: on Tradable Inputs	(36)
		: on Domestic Factors	(311)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	(968)
		: on Net Present Value (10 Years)	(4,591)

FINANCIAL/ECONOMIC MODEL 1 - MULOBEZI SMALL SCALE FURNITURE - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Land Extent	Hectares	2,000	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	0.63	1,252
Private Gross Income	185%	1.16	2,320
Variable Private Costs	-	0.41	819
Fixed Private Costs	-	0.31	623
Net Private Income	70%	0.44	878
Land Rental	-	0.00	-
Resource Royalty	-	0.00	-
Private Rate of Return (@ 10 Years)	-	-	21%
Private Net Present Value (@ 10%, @ 10 Years)	-	0.87	1,745
Total Economic Capital	-	0.57	1,143
Financial Gross Income	203%	1.16	2,316
Economic Costs	93%	0.53	1,060
Gross Value Added to National Income	110%	0.63	1,256
Net Value Added to National Income	102%	0.59	1,171
Economic Rate of Return (@ 10 Years)	-	-	30%
Economic Net Present Value (@ 10%, @ 10 Years)	-	1.58	3,165
Economic Capital Cost/Job	-	-	6,194
Domestic Resource Cost Ratio	-	-	0.30
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	4
		: on Tradable Inputs	(31)
		: on Domestic Factors	(267)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	(293)
		: on Net Present Value (10 Years)	(1,420)

FINANCIAL/ECONOMIC MODEL - MULOBESI SAW TIMBER - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL	
Concession Extent	Hectares	20,000	
ITEM	% of TCI	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	94	1,873,910
Private Gross Income	288%	270	5,400,000
Variable Private Costs	-	93	1,855,411
Fixed Private Costs	-	105	2,096,228
Net Private Income	77%	72	1,448,361
Land Rental	-	-	-
Resource Royalty	-	41	810,000
Private Rate of Return (@ 10 Years)	-	-	19%
Private Net Present Value (@ 10%, @ 10 Years)	-	143	2,858,625
Total Economic Capital	-	93	1,856,573
Financial Gross Income	314%	292	5,832,000
Economic Costs	81%	75	1,509,103
Gross Value Added to National Income	233%	216	4,322,897
Net Value Added to National Income	227%	211	4,218,303
Economic Rate of Return (@ 10 Years)	-	-	78%
Economic Net Present Value (@ 10%, @ 10 Years)	-	834	16,676,640
Economic Capital Cost/Job	-	-	83,804
Domestic Resource Cost Ratio	-	-	0.18
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output	(432,000)
		: on Tradable Inputs	453
		: on Domestic Factors	(2,338,394)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income	(2,769,941)
		: on Net Present Value (10 Years)	(13,818,015)

FINANCIAL/ECONOMIC MODEL - KASONSO BUSANGA WILDLIFE VIEWING TOURISM - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM		UNITS			TOTAL
Concession Extent		Hectares			24,100
Concession Stock		Large Stock Units (LSU)			344
Annual Visitor Days (VD)		Number			3,121
ITEM	% of TCI	ZK'000/VISITOR DAY	ZK'000/LSU	ZK/HECTARE	ZK'000
Total Private Capital (TCI)	-	1,873	16,989	243	5,846,624
Private Gross Income	110%	2,068	18,756	268	6,454,751
Variable Private Costs	-	888	8,053	115	2,771,245
Fixed Private Costs	-	883	8,010	114	2,756,667
Net Private Income	16%	297	2,693	38	926,840
Local Community Income	11%	211	1,917	27	659,564
Land Rental	-	6	57	1	19,762
Resource Royalty	-	83	750	11	258,190
Private Rate of Return (@ 10 Years)	-	-	-	-	12%
Private Net Present Value (@ 10%, @ 10 Years)	-	-	-	31	755,088
Total Economic Capital	-	1,772	16,065	229	5,528,780
Economic Gross Income	126%	2,226	20,182	288	6,945,500
Economic Costs	77%	1,363	12,361	177	4,254,022
Gross Value Added to National Income	49%	862	7,821	112	2,691,478
Net Value Added to National Income	39%	699	6,337	90	2,180,921
Economic Rate of Return (@ 10 Years)	-	-	-	-	46%
Economic Net Present Value (@ 10%, @ 10 Years)	-	-	-	468	11,288,537
Economic Capital Cost/Job	-	-	-	-	197,456
Domestic Resource Cost Ratio	-	-	-	-	0.53
Policy Analysis Matrix	: Effects of Policy / Market Imperfections				(490,748)
					: on Tradable Inputs 680,299
					: on Domestic Factors (1,443,632)
	: Net Effects of Policy / Market Imperfections				: on Annual Net Income (1,254,082)
					: on Net Present Value (10 Years) (10,533,449)

FINANCIAL/ECONOMIC MODEL - MULOBETZI SAFARI HUNTING TOURISM - BASE CASE 2011

TABLE 16: SUMMARY OF RESULTS

ITEM		UNITS			TOTAL
Concession Extent		Hectares			112,800
Concession Stock		Large Stock Units (LSU)			2,242
Annual Visitor Days (VD)		Number			330
ITEM	% of TCI	ZK'000/VISITOR DAY	ZK'000/LSU	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	7,223	1,063	21	2,383,479
Private Gross Income	208%	14,988	2,206	44	4,946,043
Variable Private Costs	-	3,887	572	11	1,282,722
Fixed Private Costs	-	8,440	1,242	25	2,785,349
Net Private Income	37%	2,661	392	8	877,972
Local Community Cash Income					1,222,081
Land Rental	-	513	75	2	169,200
Resource Royalty	-	1,649	243	5	544,065
Private Rate of Return (@ 10 Years)	-	-	-	-	14%
Private Net Present Value (@ 10%, @ 10 Years)	-	-	-	9	979,658
Total Economic Capital	-	7,055	1,039	21	2,328,221
Economic Gross Income	204%	14,406	2,121	42	4,754,136
Economic Costs	109%	7,706	1,134	23	2,542,846
Gross Value Added to National Income	95%	6,701	986	20	2,211,290
Net Value Added to National Income	83%	5,869	864	17	1,936,880
Economic Rate of Return (@ 10 Years)	-	-	-	-	59%
Economic Net Present Value (@ 10%, @ 10 Years)	-	-	-	72	8,150,457
Economic Capital Cost/Job	-	-	-	-	194,018
Domestic Resource Cost Ratio	-	-	-	-	0.41
Policy Analysis Matrix	: Effects of Policy / Market Imperfections		: on Output		191,906
			: on Tradable Inputs		517,041
			: on Domestic Factors		(1,767,856)
	: Net Effects of Policy / Market Imperfections		: on Annual Net Income		(1,058,908)
			: on Net Present Value (10 Years)		(7,170,799)

FINANCIAL/ECONOMIC MODEL - GENERAL CRB BUSINESS MODEL - BASE CASE 2010

TABLE 19: SUMMARY OF RESULTS

ITEM	UNITS	TOTAL		
Land Extent	Hectares	284,000		
GMA Stock	Large Stock Units (LSU)	771		
ITEM	% of TCI	ZK'000/LSU	ZK'000/HECTARE	ZK'000
Total Private Capital (TCI)	-	1,153	3.13	889,575
Private Gross Income	127%	1,459	3.96	1,125,554
Variable Private Costs	-	442	1.20	341,357
Fixed Private Costs	-	556	1.51	428,757
Net Private Income	40%	461	1.25	355,441
Community Private Income	71%	819	2.22	631,441
Land Rental	-	-	-	-
Resource Royalty	-	-	-	-
Project Private Rate of Return (@ 10 Years)	-	-	-	10%
Community Private Rate of Return (@ 10 Years)	-	-	-	26%
Project Private Net Present Value (@ 10%, @ 10 Years)	-	-	(0.26)	(74,860)
Community Private Net Present Value (@ 10%, @ 10 Years)	-	-	4.53	1,285,202
Total Economic Capital	-	1,090	2.96	841,089
Economic Gross Income	144%	1,575	4.28	1,215,173
Economic Costs	70%	763	2.07	588,275
Gross Value Added to National Income	75%	813	2.21	626,898
Net Value Added to National Income	63%	691	1.88	532,700
Economic Rate of Return (@ 10 Years)	-	-	-	28%
Economic Net Present Value (@ 10%, @ 10 Years)	-	-	5.84	1,657,380
Economic Capital Cost/Job	-	-	-	14,256
Domestic Resource Cost Ratio	-	-	-	0.43
Policy Analysis Matrix	: Effects of Policy / Market Imperfections	: on Output		(89,618)
		: on Tradable Inputs		(12,403)
		: on Domestic Factors		(75,238)
	: Net Effects of Policy / Market Imperfections	: on Annual Net Income		(177,259)
		: on Net Present Value (10 Years)		(1,732,239)

ANNEX E. SWOT ANALYSIS OF INSTITUTIONAL MODELS

ANNEX E: SWOT ANALYSIS OF INSTITUTIONAL MODELS

The following individual institutional SWOT (Strengths, Weakness, Opportunities and Threats) Analyses were conducted during the Research Training Workshop held during 15-17 June, 2011 in Lusaka. More than 15 organizations were invited by MCA-Zambia and Chemonics to attend this session, and the following participated on Friday, 17 June:

- Jeremy Pope, The Nature Conservancy (TNC)
- Dale Lewis, COMACO
- Mwape Skhlongo, WWF
- Corjan Vanderjagt, SNV
- Ricky Kalaluka, Open Africa
- Doug Reynolds, Royal Zambezi Wildlife

The SWOT exercises were facilitated by the following Chemonics team members, while the Rural Net Research Assistants (RAs) trainees took notes:

- Jonathan Barnes, Team Leader/Economist
- Beth Terry, Gender/Social Scientist
- Graham McCullough, Wildlife Biologist and Ecologist
- Bethel Nakaponda, Institutional Specialist
- Herbert Mwanza, Land Use Specialist
- Chanda Besa, Forester and Natural Resources Specialist

A. Community Markets for Conservation (COMACO)

Community Markets for Conservation (COMACO) is a limited-by-guarantee, non-profit company overseen by Wildlife Conservation Society (WCS). COMACO works in close consultation with Community Resources Boards (CRBs) of Luangwa Valley, Producer Group Cooperatives, District Council authorities, and key government institutions, such as Zambia Wildlife Authority. It uses a market-based approach that finds economic solutions for rural small-scale farmers and encourages improved farming technologies. COMACO uses a business approach to incentivize farmers to resist poaching and adopt farming practices good for their land and resources.

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • Good institutional structure at community level (bulk depots, COMACO Co-ops, etc.). • Strict control on transactions. • COMACO team comprised of highly skilled staff. • Good relations with farmers. • CRB members are also in COMACO advisory committee and are involved from grassroots level. • Good reputation. • Long-term planning and transparency. • Outstanding models of how to run a business. • Has institutional structure where training is done to educate farmers. • Long-term investment and implementation for sustainability. • Has strong interest in conservation. • Interventions/grants conditional on no poaching. • Committed staff. • Highly diverse from a geographic and sector perspective to spread risks. • Strong market chains. • Good products. • Brings business efficiency to development. • Fast growing – good momentum. 	<ul style="list-style-type: none"> • Many still needing COMACO in GMAs. • Willing to offer help and advice to upcoming organizations. • Potential for cross subsidization. • Able to administer and continue to learn from their model.
WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Time needed to build and test organizational integrity. • Conditioned in a manner in which they address farmers. • Subject to enter into wrong agreements. • Unable to expand on current cash flow (35% subsidized) and hence dependent on loans. 	<ul style="list-style-type: none"> • Corrupt competitors. • High risk of going bankrupt. • Immigration threat. • Greediness amongst community members, especially leaders such as chiefs and headmen.

B. The Kafue Trust and The Nature Conservancy

The Kafue Trust is a registered charity that provides support for the Kafue National Park and surrounding communities. Its mission is to utilize professional and financial resources for park management, wildlife research, training for natural resource conservation, and development of sustainable livelihood enterprises.

In similar vein, The Nature Conservancy (TNC) focuses on critical lands and waters in Kenya, Tanzania, Zambia, Namibia, and Mozambique. It works in partnership with government and local conservation organizations to increase the scale of its impact, creates and implements conservation strategies that provide benefits for people and nature, and transfers technical tools, skills, and resources to partner organizations and project.

In Zambia, TNC partners with the Kafue Trust and ZAWA to foster conservation action plans and share techniques to increase wildlife populations and enhance economic opportunities for local communities. These include enhanced fire management and increased security to curb poaching.

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none">• International experience and access to technical support.• Have financial resources to mobilize quickly and engage with ZAWA by supplementing ZAWA activities.• Knowledgeable about Zambia and have representation in the U.K.	<ul style="list-style-type: none">• Park wildlife yields much potential for the organizations.• Availability of land and trees for further development.• Access to different partner organizations.• Fundraising for ZAWA through support programs.
WEAKNESSES	THREATS
<ul style="list-style-type: none">• Financial incapability and small size of organization mean that it is dependent on financial support. (Kafue Trust)• Excessive bureaucracy prevents the organization from operating efficiently. (TNC)	<ul style="list-style-type: none">• Area is too vast to manage within a short period of time.• Financial shortages in the national park.• Consensus-building is difficult with multiple organizations.

C. Royal Zambezi Wildlife Safaris

Royal Zambezi Wildlife Safaris offers big game safaris and lodging accommodations in the Lunga Busanga concession found in Kasonso Busanga and Lunga Luswishi GMAs and in the Chiawa concession area. The company is owner-run and operated. Owner Doug Reynolds and his wife Shareen, together with Adrian Read, collectively have more than 45 years experience in the hunting and safari industry.

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • Lunga-Busanga (L-B) concession is the only one in the area – a lot of value and potential for hunting. • Have another concession in lower Zambezi. • Good game in their L-B concession. • Contribute to anti-poaching in their area – also support ZAWA officers with food, tents and salaries. • Contribute USD10,000 to community and do follow-up on how the money is utilized by 5 or 6 VAGs. • Pay a minimum of 60% of their quota to ZAWA whether hunted or not – they have met this obligation every year. Accounted for approx USD100,000 last year. 	<ul style="list-style-type: none"> • KNP very expensive to operate in, so GMA presents a cheaper opportunity for new operators. • Changes in the Wildlife Act to facilitate new and appropriate PPPs in the area. • Potential to zone area properly and enforce the different land uses accordingly (e.g. hunting vs photographic areas). Put fences if need be. • Take each GMA and deal with them individually, as they are all very different – better planning will result. • Improved security will lead to more investment and improved contributions to local livelihood improvement activities, e.g. HWC.
WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Level of poaching and encroachment into the Kasonso Busanga (KB) area. • Hunters and guides also in the KB area. • Quota not based on potential, but population. • Took over the concession from Africa Experience 7 years ago and had to buy the Wilderness Lodge and Lunga River Lodge to make viable. • Only seasonal access to Busanga plains. • Invested heavily in infrastructure and bought existing lodge that was there. • No legal framework to establish a proper partnership with the community themselves. • Traditional fishing rights by the community in the KB concession, as part of the relocation agreement. Open to abuse and related poaching in area. • Very little presence and control by ZAWA. • Zoning not properly identified/done – no consulting of stakeholders done. • ZAWA not adequately distributing the revenue to communities and their needs. 	<ul style="list-style-type: none"> • No security of tenure – lease up next year and no idea when/if they will regain area; ZAWA might reduce lease tenure period. • No incentive to invest in infrastructure; therefore reduced operational effectiveness and efficiency. • Chiefs can issue land on title in the concession for photographic purposes. Poses big conflict with hunting. • The Kaonde people are not farmers – they survive on hunting, fishing, and honey – poaching will increase. • More encroachment will reach critical threshold of resource exploitation. • Quotas not done properly and will lead to reduction in some species, e.g. there are animals that do not occur in the area – little understanding from ZAWA. • ZAWA to take stronger control of revenue and its distribution.

D. SNV

SNV is a non-profit, international development organisation, established in the Netherlands. SNV has had a presence in Zambia since 1964 and therefore has contacts with government, civil society, and provincial, district, and ministerial departments. SNV works in Western, Northwestern, Northern, and Central Provinces. It has offices in Kasama, Mongu, Solwezi, and Lusaka, and has provincial teams who, in turn, have specialized teams that work in 8-12 districts. SNV's largely local consultants aim to develop trust with communities by helping in service provision and working with entrepreneurs. SNV works with stakeholders and pays attention to governance, accountability, and how policies can be encompassed in provinces in relation to CBNRM. Because communities need skills and capacity building, SNV is involved in vocational training, especially where youth and women are concerned. The organization strives for environmental sustainability through encouraging efficient programs that minimize environmental impact.

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • Uses a demand-driven, participatory approach that gives the community a voice at the local level. • Empowers local people through service provision. • Links national level issues to local/district level issues. • Long term development process facilitation (not short term project thinking). • Builds longer term relationship between farmers and various buyers. • Has wide network of contacts with government, NGOs, private sector, local and international service providers, and other international development partners. • Has presence in provinces and districts with multi-disciplinary team. • Builds capacity of local service providers and small-scale farmers. • Supports agricultural activities that minimize environmental effects. • Lobbies for removal of value chain constraints. 	<ul style="list-style-type: none"> • Many organizations are willing to support climate change programs, especially regarding renewable energy. Farming of alternative energy products (such as <i>Jatropha</i> for oil) could be a viable option and yield by-products such as soap. Renewable energy investments could give opportunities for additional entrepreneurship and diversify the market. • Linking of local institutions to those that provide funds. • Opportunity for economic activities to be introduced in rural areas using available resource by-products and less advanced technology to produce cheaper products.

WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Process of establishing and implementing interventions can be slow due to the approach. • The richer among the small-scale farmers are the more likely to jump for business opportunities; thus the impact of SNV on poor farmers is not seen. • Focus on market and conducting activities as a business may not benefit the poorest of the poor. • People or organizations are not willing to invest or pay for SNV services since it takes time for them to understand SNV's role. • It is difficult to associate success of project to SNV, since its intervention is indirect. 	<ul style="list-style-type: none"> • There has been a reduction in development funding. There are a lot of value chain people involved that may not be willing to take part in the projects. • Established private sector and entrepreneurs may not be willing to work with rural farmers and local small enterprises. • Some government policies interfere with the market, especially in the long-run. For instance, farm input support program and FRA. • Reliance on private sector to support projects is risky. • Budget allocation of government to tourism sector is minimal. • Reduced SNV government funding has increased dependence on external funding, which might not be sustainable • Government policies and budgets may not match their priority pronouncements (affecting enabling environments).

D1. The World Wildlife Fund (WWF)

The World Wide Fund for Nature has been in existence since 1960 (now called the World Wildlife Fund) and has over a hundred branches. It is a global movement for nature conservation; and in Zambia usually operates under customary land, controlled by chiefs. It mainly seeks to reduce the deleterious effects of human impact on nature. It is also committed to natural resource management, such as with forest and wildlife resources.

WWF also works with communities and operates long-term projects that work with government, the private sector, and community members. Its scale is conservation work, and 40% of its global fund is to support the community.

WWF strives to work with others who are involved in livelihood work at the global, national, and international levels. WWF is particularly focused on protecting species that are unique and endangered, and on environmentally sound water systems that protect fish species.

WWF strives for continuous innovation and is committed to Natural Resource Management in protected reserves and buffer areas, such as GMAs.

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • Global program/framework (on which thinking and planning is based). • Competent planning and qualified personnel. • Goodwill from stakeholders; well-connected to stakeholders. • Long history and experience with conservation issues. • Committed to address conservation, forestry, and environmental projects. 	<ul style="list-style-type: none"> • Many potential funders for potential future funding. • Engagement at the lower level – could play more of a facilitating role at community level. • High potential to develop the KNP, spin-off opportunity. • Has many opportunities for funding, just need to link at local and international levels and act as facilitator. • Freshwater programs in wetlands. • Private sector engagement. • Leveraging networks, can find creative solutions to problems. • Potential to increase livelihoods project. • Potential to cultivate its on-the-ground presence and mentor other organizations.
WEAKNESSES	THREATS
<ul style="list-style-type: none"> • Limited capacity to tackle the conservation problems in terms of skills and finances. • Difficulties in where (what level) to engage. • Conservation programs packaged in two-year timeframe – not enough time to have any impact. • Intervention design is not always appropriate. • Consistency between projects – needs to improve projects from lessons learned. • Institutional arrangement. • WWF perceived by people/communities as a wildlife/conservation-based NGO that does not focus on communities. 	<ul style="list-style-type: none"> • The wetlands are threatened because of lack of proper policies (local threats, agriculture, land, industries, and pollution). • WWF does not have the tools to address high levels of poverty. • Inadequate political will both at local and international levels [no equity and fairness]. • Political interference. • Communities are not adequately empowered.

E. Open Africa

“Started in 1995, Open Africa is a social enterprise under the patronage of Nelson Mandela with a vision of sustaining livelihoods across Africa by offering life enriching journeys to all involved – communities, travelers, partners and the earth.” Open Africa focuses on tourism marketing by enabling communities mostly in rural and marginalized areas to cluster their tourism attractions into ‘off-the-beaten-track’ self-drive travel routes. The routes include various attractions and services, such as businesses, lodges, restaurants, historical and nature sites, and wildlife. By marketing these routes Open Africa provides awareness to travelers and tourists about “the splendors of rural Africa.” In turn by traveling these routes, travelers support local tourism-based enterprises, which helps to sustain jobs and livelihoods while enhancing conservation efforts by local communities. Open Africa creates awareness and markets the routes through www.openafrica.org, tourism and travel fairs and expos, and through other print media. To date, there are 60 travel routes in six countries, with more than 2,400 community-based businesses and 30,000 jobs started or sustained (Open Africa brochure, 2010). Open Africa currently works in six countries in southern Africa (Lesotho, Mozambique, Namibia, South Africa, Swaziland and Zambia). In Zambia, Open Africa partners with Kafue Private Operators Association (KAPOA) and is planning a route for KNP and the surrounding GMAs.

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none"> • Experienced in six countries in southern Africa. • Does not initiate projects/routes but gets invited by interested organisations (NGOs and private sector) and communities. • Has core funding from a sponsor – Corporate Social Investment based in South Africa – and additional funding from other sponsors – Anglo American, Standard Bank, Ford Foundation etc. • Has a partnership with <i>Country Life</i> magazine where this monthly South African magazine provides a professional photographer and writes articles profiling the various routes. Open Africa provides transport to the photographer and writers. • Skilled in helping to develop the route models and obtain funding to promote them. • Consults with all relevant stakeholders. • Helps to ‘break barriers’ for those who do not have the money to do their own marketing. 	<ul style="list-style-type: none"> • Creating traveler routes through the KNP and surrounding GMAs in partnership with KAPOA will help to market KNP and provide much needed awareness of this park and the surrounding GMAs (GKNP). These routes will link with KAZA via Kavango and Caprivi Regions in Namibia and western Zambia. • If this effort can be supplemented with any new initiatives supported by MCC (including infrastructure improvements e.g. road upgrading) it should go a long way to improve conditions and awareness of the GKNP for travelers. • Provides an opportunity for CRBs and community members to expand/improve existing enterprises and to develop new enterprises (e.g. craft production and sales, cultural attractions, cultural villages) that will attract more tourists and enhance livelihoods. • Invited by World Bank Global Environmental Fund (GEF) to develop the route in GKNP. • By focusing on a ‘flagship’ species or feature (e.g. endemic wildlife, bird or plant species; popular scenic or cultural feature), there are opportunities to enhance biodiversity or conservation or cultural value.

Note: Because the Open Africa representative arrived late for this exercise, the facilitator could only obtain information about Open Africa, and did not have time to conduct the SWOT Analysis exercise with the representative. Thus, this SWOT table was compiled afterwards by the facilitator alone and could only include ‘strengths’ and ‘opportunities’ as the facilitator was not in position to list ‘weaknesses’ or ‘threats’.

**ANNEX F.RESULTS OF ZAMBIA CBNRM SYSTEM FOCUS GROUP
DISCUSSION**

Annex F

Results of Zambia CBNRM System Focus Group Discussion

1. Community-based Natural Resource Management (CBNRM); Focus Group Discussion (FGD)

1.1 Background

- Date/Location:
 - Friday July 12, 2011
 - Blue Crest Lodge, Lusaka
- Facilitators:
 - Jonathan Barnes, Team Leader/Economist
 - Beth Terry, Gender/Social Scientist
 - Bethel Nakaponda, Institutional Specialist
 - Herbert Mwanza, Land Use Specialist
- Attendees:
 - Jeremy Pope, The Nature Conservancy (TNC)
 - Dale Lewis, COMACO
 - Mwape Skhilongo, WWF
 - Corjan Vanderjagt, SNV
 - Ricky Kalaluka, Open Africa
 - Doug Reynolds, Royal Zambezi Wildlife

1.2 Summary Points

- CBNRM has not been successful in Zambia thus far; the challenges outweigh the successes.
- Not enough revenue funnels down to the communities.
- No clarity on the benefits from CBNRM among communities.
- Not enough custodianship of natural resources (community empowerment) among communities.
- Only 50% of revenue from resources goes back to the community, so in effect, the community are taxed half of the revenue from managing and utilizing their own resources.
- Fundamental issue of food security is not being addressed, and this is the first line of defense in the struggle against unsustainable natural resource use.
- Models that address food-security, such as COMACO, have been successful at reducing poaching significantly.
- Incentives are required at the household level.
- Unrealistic to expect the community to run with CBNRM without support.
- ZAWA is faced with trying to generate revenue from the same resources it tries to preserve in order to sustain a highly expensive wildlife protection and community outreach operation.
- CRBs require serious capacity building in many aspects of their natural resource management and utilization.
- Need to diversify livelihood options through means such as alternative energy sources and improved agricultural techniques. However, approaches should not be overly technical.
- CRBs are currently not the right 'vehicle' to drive CBNRM. First and foremost, they are not an enterprise and sustainable natural resource management needs to be run like a business so that it promotes entrepreneurship.

- There is not enough support from ZAWA to assist CRBs. Long-term institutional financial and capacity building support to CRBs is essential if the program is to work. Namibia is a good example of how NGO support has been crucial in CBNRM success.
- Improvements in policy and legislation are required to facilitate CRB empowerment in partnership agreements, natural resource management, and enterprise development.
- Effective land use zoning is crucial if the GMAs are to serve their purpose, and alternative livelihood activities in GMA development zones need to be conducted under conditions that the communities control and regulate.
- There was a recommendation to experiment with handing a GMA over to the community along with complete ownership of its natural resources and the benefits accruing to the communities.
- CRBs need to be accountable and audited by independent support networks.
- There is a need to replenish wildlife stocks in the GMAs in order to see the real benefits from wildlife-based tourism in many of the GMAs.

1.3 Details noted from the FGD

- Jon Barnes: Has CBNRM been successful in Zambia?
- Jeremy Pope (TNC): Define success; is it economic, democratic, policy?
- Jon Barnes: Ok, has CBNRM been effective in reducing pressure on natural resources, such as poaching in the GMAs?
- Dale Lewis (COMACO) – Communities have seen benefits from CBNRM through hunting revenues, but these benefits are decreasing and the common perception is that there are reduced benefits from GMAs. Communities are creating pressure on CRBs to identify the benefits of GMAs. The problem is that initially the benefits of GMAs were not explained to the communities properly. For instance, what kind of benefits (at what level) would accrue to communities at a social level or household level. There has also been conflict between hunting operators and communities.
- Mwape Skhilongo (WWF): There has been some CBNRM success, but there are many more challenges. The potential is there based on what WWF has seen here and in other areas. There needs to be clarification of the benefits and it shouldn't be too wildlife focused. Also, where CRBs have formed to realize the benefits of GMAs, there is not enough revenue being generated; 50% of the revenue generated is not going far enough to satisfy the community. There is a need, also, to look at other alternative revenue generating activities, with clear guidelines for natural resource use, e.g. forestry benefits. The households are still benefiting much more from agriculture and this is unlikely to change. Nonetheless, he said, ***“50% is still only half of the revenue communities receive from their resources!”*** He estimated CBNRM to be 30% successful in Zambia.
- Jeremy Pope (TNC): GMAs were set up as buffer areas for the KNP, but there is very little wildlife left due in part to increased encroachment in these areas and in part to other activities out-competing wildlife-based revenue activities, such as cotton growing. There is a desperate need for improved zoning, such as hunting blocks to be separated from other activities. There can't be overlapping activities with wildlife. The question is how we hold back this encroachment and development.

- Corjan Vanderjagt (SNV): The function of the buffer zones has not been successful at decreasing poaching. Hunters are still seeing a decrease in wildlife numbers in the GMAs and therefore CBNRM is not working and household livelihoods are not improving from wildlife-based activities. There is a heavy reliance on natural resource use within the GMAs and the KNP. There needs to be an improvement of CBNRM to realize increased benefits and link it to improved natural resource management. The ecological buffer zone is being undermined by increased agricultural activities as a result of food security needs. The COMACO model is a good one because it is based on an economic mindset and addresses the real needs of the people to improve their sustainable development of the natural resources.
- Ricky Kalaluka (Open Africa): There are no benefits coming from wildlife in the Western Province; no hunting concessions. Therefore, there is increased exploitation of wildlife and other NRs like timber, and this will increase.
- Herbert Mwanza: In reports of some of the GMAs there appears to be larger numbers of game in some of the GMAs in Zambia compared to that of the national parks, such as Bangueru. Is this not indicating that wildlife is indeed recovering in GMAs?
- Jeremy Pope (TNC): This is the case in some areas of Kafue Flats NP too. There needs to be a decrease in the number of cats in the GMA concessions to allow the antelope populations to increase. He suggests that the situation at Bangueru is a result of the physical inaccessibility of the swamps. There is no hunting revenue there as there are no hunting concessions. There may be a decrease in bushmeat hunting or increase in fishing that accounts for these stable game populations.
- Mwape Skhilongo (WWF): Growth in wildlife population levels is not being realized in the GMAs. There may be increases in numbers, but there is still increased off-take so the population increase is being checked. There are other factors at play too, such as cultural factors. There is a need to give the communities more custodianship over their resources.
- Jon Barnes: Have the communities been empowered enough to make them want to protect their resources, or is this element missing?
- Dale Lewis (COMACO): There is a fundamental issue here; CBNRM versus the CRB model according to ZAWA, and what ZAWA's objectives are as per the Wildlife Act. There is need for a revision in the 'model' to adopt the principles of CBNRM. In hindsight, it was unrealistic to assume that community farmers should know what to do with their wildlife. In some cases, maybe it's a fluke that the wildlife still exists in a stable population, such as with Kafue Flats. The underlying issue is that poverty is still a huge problem. The first line of defense should be to secure farmers with livelihoods, and not to rely on the ZAWA wardens and their anti-poaching activities, which should be the second or third line of defense. ZAWA needs to work with other players, and more openly. COMACO would love to move forward a lot more in terms of CBNRM.
- Jeremy Pope (TNC): The revenue benefits are decreasing. There is a need to change policy regarding CRBs and their structure, relations, and power. The role of the councils/local government in rural infrastructure is also critical to ensure sufficient planning and infrastructure is in place for the system to work. CRBs are expected to take on this role of infrastructure improvement, which is unrealistic and decreases the potential to improve livelihoods.

Government needs to support the wildlife sector and help ZAWA and the CRBs. There is, for example, no similar expectation from the agricultural sector, which puts ZAWA in an unfair position.

- Jonathan Barnes: The ADMADE Lepande Project seemed to be slightly different and more successful?
- Dale Lewis (COMACO): Yes, it was something different. We need to be thinking outside the box. In this project there was more oversight by National Parks (as it was at the time, not ZAWA), which helped enormously in terms of accountability and supervision of the scouts. They also recognized the role of the chiefs more. The weakness was, and still is, that village scouts were not going to arrest residents for poaching. There was a continuous increase in poaching throughout the project, despite all the workshops. There was still a need to eat and ADMADE didn't address the issue of food security. ZAWA has criticized COMACO for not being wildlife focused. There is still a lot of skepticism about the focus on agriculture as an indirect way to reduce poaching. But, ***“If you artificially provided food, watch what happened to snaring, it dropped by 50%.”*** There is also a land use issue; the pressure from other sectors on the GMAs is huge and serious.
- Jeremy Pope (TNC): If we could match wildlife revenue generation with that of other land uses, we would make progress.
- Corjan Vanderjagt (SNV): In Botswana, the Wildlife Management Areas (WMAs) have been leased out as hunting concession areas in the marginal areas. In the western Kalahari, they experienced that the Bushmen (San) communities realized they were gaining from the benefits of hunting. They also realized they were not giving up their access to wildlife as they were getting the meat from the hunted animals, which was shared among the community and directly benefited the households. They got both financial revenue and meat and were happy. Then the wildlife scouts realized that the Bushmen were selling all their local hunting licenses and quotas dropped. This drove the people back to poaching after just two years of success. The hunting quota decrease made it uncompetitive and non-viable. ***“Incentives at the household level are the key to successful CBNRM.”***
- Dale Lewis (COMACO): After the CONASSA project ended, the community went in and vandalized the community lodge that was built in Sichifulo. There was not enough communication with and sensitizing of the community about the sustainable benefits of tourism, and the role of the CRB in realizing these benefits for the community. This was a good example of how CBNRM has been unsuccessful in Zambia.
- Jeremy Pope (TNC): The quota system was unrealistic when it was first introduced by ZAWA and now ZAWA has had to decrease the quotas as the game populations were badly depleted. Three percent of the population is widely regarded as the maximum safe off-take level. The problem is the current populations are not large enough to sustain the required number of animals for the hunters in many of the GMAs. There is a need to let the populations recover.
- Dale Lewis (COMACO): Even though there have been 1800 guns given up by GMA residents in COMACO's area, the buffalo population is still decreasing. Why? ZAWA controls the quotas and its number of last minute quota allocations is a serious issue. ZAWA is under financial strain, you can understand its need to generate revenue. ***“The business of saving natural resources would be***

an attractive one to the community, but it's not their business." ZAWA runs a very expensive operation and they are committed. Again, there is need for a revision of the model.

- Jeremy Pope (TNC): There is also a need for speed in meeting the expectations of the communities. It is a tragedy that funds owed to the communities are often withheld because ZAWA is financially stretched!
- Mwape Skhilongo (WWF): ZAWA refuses to decrease quotas as the need for revenue is there. Getting back to Jon's question of whether there is community ownership, no! There are critical needs in order to get them on board. There needs to be clarity on what the benefits are from conserving their natural resources and what they can and can't do. Also the question of "**Who owns the animals?**" needs to be addressed. There should be some kind of transfer of ownership, such as by handing the quota to the community in partnership with JVPs.
- Dale Lewis (COMACO): For the MCC investment to work, there needs to be a more affordable way to manage the resources. This investment is a good opportunity to make some conditions that can change the approach/model. For example, during ADMADDE US\$3 million was enough to lure the government into sharing revenue with the communities. This investment could potentially facilitate more changes to improve CBNRM.
- Corjan Vanderjagt (SNV): MCC should not adopt the CBNRM approach, as the investment will not be enough to meet/satisfy everyone's needs and expectations, such as of more effective hunting operations. There is, instead, a need to focus on alternative livelihood strategies that are not wildlife based. What is there left to focus on? We need to look at agricultural activities and see what can be done in combination/around these activities to improve livelihoods. SNV feels there is a need to look at alternative renewable energy sources and create spin-off enterprises to improve economics, as well as conservation benefits, such as by decreasing the dependency on charcoal. Creating biofuel is an example, such as through the use of agricultural byproducts and creating an overlap between agriculture and small enterprise activities.
- Jeremy Pope (TNC): Where's the control in encroachment and who is going to enforce the zonation of the GMAs? While not ruling out tourism, there is a need for more to satisfy the communities.
- Dale Lewis (COMACO): GMAs are inherently more attractive to the poor as they are richer in natural resources and provide a source of stability in their lives. "**Desperate communities are very difficult to control and certainly not motivated to wildlife conservation!**" Certain steps are needed to improve livelihood opportunities through, for example, small enterprises. However, one needs to caution against anything too technical. Keep commodities basic and limited to certain areas so there is control and no incentive to cross zone boundaries.
- Corjan Vanderjagt (SNV): There needs to be household level small enterprises, not community enterprises. There are one or two badly encroached GMAs, which are poor. They need to be provided with alternative activities.
- Dale Lewis (COMACO): Trying to move communities according to zonation is a big no-no. This will create negative feelings and counter-act objectives. It needs to be pro-active, for example through preventing further encroachment using well-enforced 'last line' approaches to stop further encroachment. There should be conditions attached to certain activities carried out in the GMAs, such as regulations on the amount and size of tobacco fields.

- Ricky Kalaluka (Open Africa): The main reason for CRBs not working is the centralization of natural resource management. Traditionally, in the Western Province, Liawa Plains was a park as far back as the 1800's and the communities were always there living inside it. The Chief had strict rules and regulations on resource use, such as when and where fishing would take place. Traditional management systems have been mostly dissolved by government ownership, authority, and regulations, and now the communities are complaining about HWC in their area because the wildlife are increasing in numbers. The traditional authority, therefore, should have more control over wildlife management. Also, the government should stop allocating concessions in GMAs. Mukambi, for instance, is perceived as a government – private partnership. The share in revenue should be going to communities, not the government, like in Namibia. Indeed, Public Private Partnerships in hunting concessions should be between the community and the hunters and not involve ZAWA. The communities still perceive the GMAs to be ZAWA-owned. They should be more involved in planning and fundraising like in Namibia. It will take some time to get the communities capacity up to scratch for this to happen, but it will make CBNRM happen.
- Dale Lewis (COMACO): It is important to distinguish the relative difference in human population density in the GMAs in Zambia, compared with that of GMAs in Namibia. There are fewer people to be sustained in Namibia GMAs and more of a share in wildlife revenue. It's more complicated in Zambia; we need to be more realistic.
- Ricky Kalaluka (Open Africa): Communities themselves should be making the decisions about the concessionaire/private partner, not the government.
- Jeremy Pope (TNC): There are a lot of game ranches in Namibian community areas. The government and the communities set the quotas and the communities sign the agreements with the private partner with some help and guidance from government and supporting NGOs. The support from the NGOs (since the 80's) has been a really important factor. With a lot of money and capacity input. It's a partly subsidized process of institutional building and changing the mindset of the communities. Wildlife will always be a state resource, but the communities have custodial rights of the wildlife resource so that they can sell whatever game to whomever, whenever they want. Governments still issue 'shoot and sell' licenses for cropping/culling on the farms.
- Dale Lewis (COMACO): It would be really interesting and valuable to conduct a pilot experiment and hand over one GMA completely to the community, with all rights to natural resource use.
- Mwape Skhilongo (WWF): This would be important because the communities should be able to deal with the private sector alone to agree on quotas, etc.
- Corjan Vanderjagt (SNV): How are the zones developed in Namibian conservancies?
- Jonathan Barnes: Management Plans (MPs) are normally done before they can become conservancies, with help from NGOs to develop the MPs, including the zoning. Conservancies are more like businesses. The question is could CRBs function as a managed community wildlife enterprise if the GMA was handed over to them? Would their structure and capacity be sufficient?

- Doug Reynolds (Royal Zambezi Wildlife): In Kasonso-Busanga the CRB represents six VAGs so there are a lot of different development needs. They also need a lot of capacity such as help with administration and disbursement of funds. There is a lot of mismanagement. A shift toward more community ownership and NR management would be good. They would certainly need help and support with setting quotas and developing MoUs with operators for example.
- Beth Terry: What capacity building is needed?
- Doug Reynolds (Royal Zambezi Wildlife): There needs to be people selected from each VAG so there is good representation, but there is a need for training in, specifically, accounting, administration, management, and regulation enforcement. And there is a need to police the CRBs to make sure they are on the right track and are accountable.
- Jonathan Barnes: NGOs provide this support and capacity building role in Namibia.
- Mwape Skhilongo (WWF): The expectations of the community regarding responsibility are way too high. Without capacity building, we are not doing anything to support CRBs to do what the law requires or allows them to do. Also the bureaucracy surrounding the process of securing this NGO support is very cumbersome. There are about ten manuals / applications to go through before a CRB can secure this support. The policy should be improved to facilitate this support.
- Jonathan Barnes: Does the legislative framework allow for this, or does it need to change?
- Mwape Skhilongo (WWF): A lot can happen now to improve the situation, which is already allowed for in the policy. For example, the policy says all revenue should go to the CRBs. The CRBs are not currently doing what the law states they should. For instance, they should be audited by properly qualified independent accounting firms. To expect ZAWA to do this is unrealistic and wrong.
- Dale Lewis (COMACO): Agreed, there is a lot of room in the current policy for improvements. It is key though that there is a willingness among the various stakeholders to try new models and forge better relationships with the communities. But who makes the decision about how the money runs back down to the community? There also needs to be an improved relationship between CRBs and farmers. Farmers need to have input and their needs addressed. This would really benefit community utilization of funds and take the responsibility pressure off the CRBs. There is no agricultural program being implemented on the ground in the GMAs.
- Corjan Vanderjagt (SNV): Who is going to support CRBs on an institutional level? There is no unit in ZAWA that is adequate. They need to be trusted by the community, especially with revenue. The CRB is not the right legal entity!
- Bethel Nakaponda: How can we incorporate multi-use activities in the structural, operational, or functional framework of CRBs?
- Jeremy Pope (TNC): GMAs have in the past been combined. How can we recover the situation and maintain revenues? We need more game ranches in which training centers could be established and maximum productivity would be achieved. Also there is the possibility of re-introduction of rare species and restocking populations from these ranches. They would also comprise useful buffer zones along the KNP boundary if positioned correctly. They would also

promote spin-off activities in the meat and leather trades. There is a massive market for bush meat.

- Dale Lewis (COMACO): Poaching is a not a nice livelihood. ***“Poachers don’t make a lot of money from poaching and they are always on the run. Turning them into farmers is 30% cheaper than arresting them.”*** 30% of poachers are arrested at least once.
- Jeremy Pope (COMACO): Predators will stay longer in an area that is being poached. Therefore the natural prey is reduced and HWC increases, so there is pressure on livestock and any restocking of game in these depleted areas. There is a need to reduce the cat populations in order to let the game recover quickly.

Final remarks:

- Corjan Vanderjagt (SNV): Is it the whole community that benefits from CBNRM? There is very little benefit at the household level. There is a fear that ZAWA won’t listen to these recommendations; there is not much interest or incentive to change because its benefits would decrease.
- Mwape Skhilongo (WWF):This discussion has been extremely useful in bringing out an open discussion on the major issues surrounding CBNRM in Zambia. The Wildlife Act is currently under review over the next two months. This kind of forum discussion would be hugely beneficial in that process.
- Jeremy Pope (TNC): ZAWA might accept recommendations where there’s consensus among stakeholders. It’s usually ‘us against them,’ but a dialogue and constructive discussion in a similar forum would be very useful in reaching a common understanding and widely acceptable solution. There needs to be low key discussions with ZAWA, not too formal. ***“The Kafue as an independent business centre – there are huge opportunities, but also risks that need to be discussed and accounted for in moving forward.”***

ANNEX G. ADDITIONAL RESEARCH FINDINGS

Annex G.1. Ceremonies, Rituals, and Celebrations Practiced in the Communities and Chiefdoms of the Ila, Tonga, Nkoya, and Kaonde

Type of Activity	Local Name	Types of Participants	Description
Ila Culture			
Ceremony to remember a battle of the 1880s	<i>Kaponde</i>	A few men in the middle dancing. Women in a circle around the men, singing and clapping.	Held to remember the Ila movement from the West (Lealui) and end of external battles in the early 1800s. Named after the first chief of the Ila. Held on 25 August each year – the month of the Kaponde.
Initiation ceremony for girls	<i>Chisungu</i>	Girls Elderly women Community members	Celebration after the three-month period ¹ of initiation isolation comes to an end and the girls are presented to the public. ‘Seven-day beer’ is brewed and served. Dancing, singing and playing of drums by both men and women to call everyone together and to announce that the girl initiates ‘have come of age’. Girls come out of the isolation hut and kneel down to everyone participating in the celebrations. Public celebration after the <i>lobola</i> bride price (<i>lubono</i>) has been agreed upon, typically 5-10 head of cattle or K1-2 million. Men playing drums and <i>namalwa</i> ‘hippo’ drum. Women singing and dancing. In distant past, the bride wore goat skins with beads sewn onto the skins. In the recent past, she wore a nice <i>shitenge</i> cloth and beads around her neck. Currently a white dress in ‘western fashion’ is worn.
Wedding ceremony	<i>Chikwati</i>	Community members Men Women	
Tonga Culture			
Harvest ceremony	<i>Lwiinde</i>	Community members Men Women	Dancing and singing to thank God for a good harvest.
Celebration after a hunt	<i>Shumbwa</i>	Community members Men Women	In the past to honor and celebrate a man who killed a lion.
Celebration after a hunt	<i>Siluye</i>	Community members Men Women	In the past to honor and celebrate a man who killed a leopard.
At funerals and initiation ceremonies		Community members Men Women	Kudu horn ‘trumpet’ is played to honor the dead, or to honor the initiates presented to the public.

¹ According to FGD participants, the three-month period of isolation was the norm in the past. In recent years, this is no longer done, so that girls are not being kept out of school. Typically the initiation occurs during the month-long school holiday.

Type of Activity	Local Name	Types of Participants	Description
Nkoya Culture Ritual to exorcise demons	Various names for same activity: <i>Mwendalutaka</i> <i>Mwendanjangula</i> <i>Kaluwe</i> <i>Mumbatuke</i>	Traditional doctor/exorcist/diviner; Person with demon who pays for activity (K50,000-200,000); Other community members who want to be healed; Men and women from the community	Traditional doctor provides medicine for person with demon. Doctor, who wears a white scarf on the head, white cloths around the waist, and white beads around neck, goes into a type of trance to divine the demon and to “see the heartbeat of the person paying for the exorcise.” Many men playing drums and women singing and clapping.
Initiation ceremony for girls	<i>Luhwa Iwa</i> <i>kankanga</i>	Girl initiates; Elderly women from the community; Community members for public ceremony	Celebration after three-month period of initiation isolation comes to an end. The girls are carried out by older women and presented to the public. Beer is brewed and served. Dancing, singing and playing of drums by both men and women to call everyone together and to announce that the girl initiates ‘have come of age’.
Initiation ceremony for girls	<i>Mukanda</i>	Boy initiates; Elderly men from the community; Community members for public ceremony	Celebration after circumcision and six-month period of initiation isolation comes to an end. The boys are presented to the public with woven fiber tied around their waists. Fibers are removed and boys are dressed in new clothes. Beer is served to all.
Succession ceremony	<i>Bushwana</i>	Community leaders; Widow/widower of deceased Headman/Headwoman; Community members	All night long ceremony after a headman or headwoman dies to carry on name of family and to select new headman or headwoman. Pestle sticks are lined up on ground and beaten with wooden or metal sticks; also drumming, singing and dancing by public shaking rattles made from gourds filled with maize seeds.
Ritual after a woman has had a miscarriage	<i>Kashowe</i>	Woman who had miscarriage; Traditional doctor; All children in the community	After fetus is buried, a special shelter called <i>ntanda</i> is built for the woman at sunset. The woman stays in the shelter by herself until the new moon appears. She is provided with two pieces of metal to strike together in case she needs any help. After the new moon appears, she leaves the shelter and it is burned down. She and all the children in the community are given traditional medicine for TB (with the belief that anyone who has miscarried is coughing a lot).

Type of Activity	Local Name	Types of Participants	Description
Celebration after a hunt; Currently with no hunting of big game, this ceremony still takes place after the harvest typically in July or August	<i>Kazanga</i>	Nkoya chiefs; Babies from the royal family; Subjects of the chiefdom; Community members; Visitors from all over Zambia and also the UK and Europe	Famous ceremony held near the chief's palace to celebrate a successful hunt of a lion, leopard or elephant. Traditional maize, millet, or honey beer is served in a human skull. The hunter and all the babies of the royal family are served this beer while being surrounded with the human skulls stuck on poles of warriors who have died in battle. Chiefs march in dancing while royal drums are played.

* Source: FGDs participants on Ila culture in Shezongo Chiefdom, Bilili Springs GMA; on Ila culture in Kabulwebulwe Chiefdom, Mumbwa GMA; on Tonga culture in Siachitema Chiefdom, Bilili Springs GMA; and on Nkoya culture FGD with Kamakokwa community members in Kahare Chiefdom, Mufuntu GMA.

Annex G.2. Craft Products Made in the GMAs and the Types of Raw Materials Utilised

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Type of Craft Item	Local Name	Made by	Used by	NR Used Local Name	NR Used Scientific Name
Ila Culture*					
Basket: Large twined carrying/collecting basket for harvesting crops	?Ishiko	Women	Women	Muchinga or Malala palm	<i>Hyphaene petersiana</i>
Basket: Serving coiled or twined basket/platter; modern use for collecting church offering. Larger version is also used for collecting cereal cobs during harvest.	Intumba Cisuwo	Women	Women	Malala palm Red brown dye from bark of roots of: Nahwa Munyi/ Mwii (T)	<i>Hyphaene petersiana</i> <i>Berchemia discolor</i>
Fishing basket: Large scoop-seine basket	Mahiko	Both	Typically women but also sometimes men	Reeds Bound with bark fibre	<i>Phragmites australis</i> <i>Brachystegia</i> spp. <i>Julbernardia</i> spp.
Fishing basket: Thrust basket used when water is receding	Mahumbo	Both	Both	Muchinga (T) Mutembwe (T)	
Fishing basket: Valve basket fish trap	Moono Ishiko	Both	Both	Mabu reeds Intunduti reeds Inshiko tree branches	
Fishing weir	Ikanga	Men	Men		
Fishing spear	Myuumba	Men	Men		
Wooden drum – single ended and double ended	Ngoma (generic name) Malimba (single-ended) Shitendewa (double-ended)	Men	Both, but mostly men	Musewe (T)(I) Mulombe Mupapa Moonga In the past, lion skin for the drum head. Currently, cow or goat skin.	<i>Brachystegia spiciformis</i> <i>Brachystegia</i> spp.

Type of Craft Item	Local Name	Made by	Used by	NR Used Local Name	NR Used Scientific Name
Wooden 'hippo' drum; inserted reed is stroked rather than drum being hit on skin hide. Hippo drum is played while talking, singing, and telling stories about warriors, for example.	Namalwa	Men	Men	Musewe (T)(I) Mulombe Mupapa Moonga	<i>Brachystegia speciformis</i> <i>Brachystegia</i> spp.
Tonga Culture*					
Basket: Large open twilled and twined winnowing (when grinding maize with two grinding stones) and carrying basket	Cisuwo	Women	Women		
Basket: Large twined or coiled carrying/collecting basket for harvesting crops	Zizongo	Women	Women	Malala palm fibre for wrapping the coil and for twining	<i>Hyphaene petersiana</i>
Basket: Small twined or coiled basket to carry seeds when planting	Cinzuma Tusuwo	Women	Women	Malala palm fibre for wrapping the coil	<i>Hyphaene petersiana</i>
Mat: Twilled sleeping mat	Matete	Both	Both	Reeds	<i>Phragmites australis</i>
Mat: Sewn sleeping mat	Masanga Maaso	Both	Both	Grass	
Mat: Door mat		Old women	Both	Mukusa wild sisal	
Fishing basket: Large scoop-seine basket with handles used to pull fish towards fisher	Mahiko	Both	Typically women but also sometimes men	Reeds Bound with bark fibre	<i>Phragmites australis</i> <i>Brachystegia</i> spp. <i>Julbernardia</i> spp.
Fishing basket: Valve basket fish trap, used in running water/streams/rivers	Moono	Both	Both	Branches	
Fishing basket: Valve basket set in a weir	Kasabini Kanyandi	Men	Men	Mufufuma (I) Muwama (?Muwana)	<i>Securidaca longipedunculata</i> <i>Pavetta schumanniana</i>
Fishing spear		Men	Men		
Fishing bow and arrow for big bream and barbel		Men	Men		

Type of Craft Item	Local Name	Made by	Used by	NR Used Local Name	NR Used Scientific Name
Fishing net				Handmade with twine bought in shop	
Fishing pole, line and hook		Men	Men	Pole made from mucinga (?muzinga) (T) tree branches	? <i>Ricinodendron rautanenii</i>
Wooden container for storing seeds from current harvest for next planting	Chikooko Ndikooko	Men	Both	Musewe (T)(I) Muombo, Mubombo (T)(L)(I)(K)	<i>Brachystegia spiciformis</i> <i>Brachystegia manga</i> <i>Brachystegia boehmii</i> <i>Brachystegia</i> spp.
Wooden stool	Imbwalakasa	Men	Both	Musamba (K) Musewe (T)(I)	<i>Brachystegia longifolia</i> <i>Brachystegia wangermeena</i> <i>Brachystegia spiciformis</i>
Mortar and pestle		Men	Women		
Wooden stirring/cooking stick	Myungo	Men	Women	Mupeta Kwale Mungula (T) Mabebe	<i>Faurea speciosa</i>
Wooden handles for axes, adzes, hoes		Men	Both	Musiwe (T) Muwanga (N) Siachubula Muumba (T)(I) Sandwe (T)(I) Muombo, Mubombo (T)(L)(I)(K)	<i>Brachystegia manga</i> <i>Pericopsis angolensis</i> <i>Julbernardia globiflora</i> <i>Brachystegia boehmii</i>
Spear (handle)		Men	Men	Muchinga (T) Mulihya (?Mulilila) (T) Kaluba Murigili	<i>Ozoroa reticulata</i> <i>Lansea discolor</i>

Type of Craft Item	Local Name	Made by	Used by	NR Used Local Name	NR Used Scientific Name
Wooden drum: Single ended and double ended	Ngoma	Men	Both, but mostly men	Musewe (T)(I) Mulombe Mupapa Moonga In the past, lion skin for the drum head. Currently, cow or goat skin.	<i>Brachystegia spiciformis</i> <i>Brachystegia</i> spp.
Wood 'hippo' drum; inserted reed is stroked rather than drum being hit on skin hide. Hippo drum is played while talking, singing, and telling stories about warriors, for example.	Namalwa	Men	Men	Musewe (T)(I) Mulombe Mupapa Moonga	<i>Brachystegia spiciformis</i> <i>Brachystegia</i> spp.
Bow and stick musical instrument	Kalumbu	Men	Men		
Shaker/rattle musical instrument	Tusakalala	Men	Both	Made with wood and grass or with oil tins or plastic bottles	
Banjo with strings	'Banjo'	Men	Men		
Trumpet horn		N/A	Both	Kudu horn	
Nkoya Culture					
Basket: Winnowing basket	Ntumba	Women	Women	Root fibre from muhamba tree	
Basket: Large coiled basket used to collect/carry grain harvest and for brewing beer	Ntumba	Women	Women	Kaharanyimwa grass for inside of coil and for wrapping coil	
Basket: Basket sieve	Mushalo	Both	Women	Grass	
Sieve: 'Modern' sieve made with wood and wire mesh	Shefa	Men	Women	Wood and wire mesh	
Mat: Twilled sleeping mat	Matete	Both	Both	Reeds	<i>Phragmites australis</i>
Sleeping mat				Nkolokoko grass; sewn with root fibre from muhamba tree	

Type of Craft Item	Local Name	Made by	Used by	NR Used Local Name	NR Used Scientific Name
Fishing basket: Large scoop-seine basket	Lishiño	Men	Women	Reeds Bound with bark fibre	<i>Phragmites australis</i> <i>Brachystegia</i> spp. <i>Julbernardia</i> spp.
Fishing basket: Thrust basket	Lingunde Chongo	Men	Men		
Fishing basket: Valve basket fish trap	Mutewe	Men	Both		
Fishing weir with valve baskets attached to wooden poles in streams or floodplains; especially good for catching barbel	Kanguwa	Men	Men		
Fishing 'small fence' trap, formed into a circle with a small opening for fish to enter but unable to get out; baited with nshima mealie porridge	Lilela	Men	Both		
Fishing stick: long wooden pole with many worms secured on the bottom of the pole, and thrust into the water	Ngulungunja Ndombwe	Women	Women		
Fishing pole, line and hook		Men	Both		
Wooden drum				Mulombe Mututume Munga Kabulwe-bulwe	
Wooden stool				Mulombe Mututume	
Wooden mortar				Musheshe	
Bow and arrow				Bow and arrow shaft: Mulombe	
Axe					
Cooking/stirring stick					
<i>Kaonde Culture</i>					
Fishing basket: Valve basket set in a weir		Men	Men		
Fishing pole, line and hook		Men	Men		

* Source: FGDs participants on Ila culture in Shezongo Chiefdom, Bilili Springs GMA; on Ila culture in Kabulwebulwe Chiefdom, Mumbwa GMA; for Tonga culture in Siachitema Chiefdom, Bilili Springs GMA; for Nkoya culture FGD with Kamakokwa community members in Kahare Chiefdom, Mufuntu GMA and with Lukena community members in Moomba Chiefdom in Lulobezi GMA; for Kaonde culture FGD with Mushima CRB members (Kasonso Busanga GMA) and some ZAWA staff; Cunningham and Terry 2006, Smith and Allen 2004, Storrs 1995.

Annex G.3. ZAWA Training Syllabus for Village Scouts for 2011 Intake at Chunga Wildlife Training School

No.	Programme	Dates and Duration
1	Physical Training <ul style="list-style-type: none"> • Road run • Exercise • Games e.g. football, rugby, volleyball • Exercise to keep the trainees fit • Foot drills • Arm drills • Funeral drills 	Throughout the Course
2	Military Skills <ul style="list-style-type: none"> • Types of military weapons • Other weapons • Stripping and assembling • Aiming and shooting • Handling and care of firearms 	First Week of Course
3	Anti-Poaching <ul style="list-style-type: none"> • Types of anti-poaching operations: Short patrols, Long patrols, Roadblocks, Search, Investigations and Village Sweep • Preparation for Operations • Patrol Equipment 	First Week of Course
4	Field Tactics <ul style="list-style-type: none"> • Ambushes • Movement by day, Ghostwalk • Patrol formations e.g. Cow head formation 	Second Week of Course
5	Operation Area <ul style="list-style-type: none"> • Raking the area • Identifying the watering points • Allocation of base camp • Identifying the poachers camp 	Second Week of Course
6	First Aid Training <ul style="list-style-type: none"> • Golden rule of first aid • Snake bites and scorpion sting • Poisoning (types and treatments) • Fractures and joint injuries HIV/AIDS Awareness	23-25 February 2011
7	Supervisory Visits <ul style="list-style-type: none"> • Meet the recruits • Meeting with Jeremy Pope to discuss concerns from CRBs in regard to Village Scouts employment 	27-28 February 2011

No.	Programme	Dates and Duration
8	Prosecutions <ul style="list-style-type: none"> • Court procedures • Types of evidence • Witnesses • Wildlife Act • Recording statement • Identification of trophies • Seizing exhibits • Warn and caution statements • Charge sheet • Cross examinations • Human rights 	First Week of March 1-3 March 2011
9	Investigations <ul style="list-style-type: none"> • Definition • Types of investigations • Undercover investigations • Informers 	Second Week of March 7-9 March 2011
10	Hunting and Monitoring <ul style="list-style-type: none"> • Definition • Types of hunting areas in Zambia • Types of hunting • Types of licenses • Roll of Village Scouts in monitoring • Quota setting 	Second Week of March 10-12 March 2011
11	CBNRM <ul style="list-style-type: none"> • Definition • Formation of CRBs • Function of CRBs • Relationship between ZAWA and the CRBs 	Third Week of March 14-16 March 2011
12	Radio Communication <ul style="list-style-type: none"> • Definition • Types of radios • Handling and care of radios • Major components of radios • Types of transmission • Phonetic Alphabet used in sending the messages. • Effective communications 	Third Week of March 17-19 March 2011
13	Basic Principles of Wildlife Management <ul style="list-style-type: none"> • Definition • Types of protected areas • Value of wildlife • Conflict between man and wildlife • Human encroachment 	Fourth Week of the Course 21-23 March 2011
Basic Wildlife Ecology		
14	Ornithology <ul style="list-style-type: none"> • Morphological features of a bird • Basic classification of birds • Common birds in Zambia • Game birds in Zambia • Protected birds in Zambia • Birds as pest and their control • Adaptation of birds to man habitats 	Fourth Week of March 24-26 March 2011

No.	Programme	Dates and Duration
15	Herpetology and Amphibian Biology <ul style="list-style-type: none"> • Basic classifications of reptiles • Snakes, lizards, tortoise, etc. • Reptiles classified as protected animals • Crocodiles and their distribution in Zambia • Human – crocodile conflicts and their mitigation 	28-30 March 2011
16	Botany/ Rangeland Ecology <ul style="list-style-type: none"> • Introduction to common vegetation communities in Zambia • Plant identifications • Plant specimen collection and preservations • Plant and soil conservation 	31 March – 3 April 2011
17	Fire Management <ul style="list-style-type: none"> • Definition of fire • Types of fire • Management of fires/Prescribed burning • Fire as a management tool • Fire control 	Third Week of April 21-23 April 2011
18	GPS <ul style="list-style-type: none"> • Basic function of the GPS • Marking positions and waypoints • Entering the coordinates in the GPS • Using the GPS as a compass • Basic principles of map reading 	Fourth Week of Course
19	Basic Principles of Administrations <ul style="list-style-type: none"> • Introduction to human resource management • Disciplinary procedure, offences and penalties • Communication channels • Organisation chart • Staff recruitment and selection • Staff appraisal 	Fourth Week of Course 18-20 April 2011
20	Rehearsals for Pass out Parade	Fifth Week 25-30 April 2011

Annex G.4. KNP GMA Population Data from 2010 Census Enumeration Areas (EAs) falling within the GMAs

GMA	Kasonso Busanga	Mufunta	Mulobezi	Sichifulo	Bilili Springs	Nkala	Namwala	Mumbwa	Lunga Luswishi	Average	Totals
Size (km ²)	7,780	5,417	3,570	3,600	3,080	194	3,600	3,370	13,340	-	
Population Estimates Total from GMPs	12,890	40,021	9,004	13,000	22,831	19,787	35,232	33,526	8,320	-	
Population Estimates Total from 2000 Census Ward Data	13,428	42,679	1,644	6,759	61,599	4,000	12,732	19,819	24,470	-	
Population Estimates Total from 2010 Census EA Data	5,226	22,759	2,752	2,243	46,184	N/A*	N/A*	11,454	8,199	-	
Pop density/km ²	0.672	4.201	0.771	0.623	14.995	-	-	3.399	0.615	-	
Households (no.) from 2010 Census EA Data	1,072	4,543	587	390	7,884	N/A*	N/A*	2,008	1,712	-	
Household size (ave.)	4.9	5.0	4.7	5.8	5.9	-	-	5.7	4.8	5.24	36.68
Males (no.) from 2010 Census EA data	2,600	11,493	1,323	1,133	22,338	N/A*	N/A*	5,624	4,207	-	
Females (no.) from 2010 Census EA data	2,626	11,266	1,429	1,110	23,846	N/A*	N/A*	5,830	3,992	-	
Males (%) from 2010 Census EA data	0.50	0.50	0.48	0.51	0.48	-	-	0.49	0.51	0.50	3.48
Females (%) from 2010 Census EA data	0.50	0.50	0.52	0.49	0.52	-	-	0.51	0.49	0.50	3.52
Ratio males per 100 female	0.99	1.02	0.93	1.02	0.94	-	-	0.96	1.05	0.99	6.91

* N/A = Not provided by MCA

Annex G.5. KNP Population and Cropping Data GKED GMAS

Locality		Population	Household Size	Households	Households (hhs) Growing Crops		Beneficiaries	Crop Production	Area Cropped	GMA Extent	Crop Land
Zone	GMA	Number of Persons	Number of Persons	Number of hhs	Proportion of hhs	Number of hhs	Number of Persons	Average Ha/hh	Hectares	Hectares	Proportion
Eastern	Mumbwa	11,454	5.7	2,008	95%	1,908	10,881	1.8	3,434	337,000	1.02%
Eastern	Namwala*	12,732	5.2	2,430	95%	2,308	12,095	1.8	4,155	360,000	1.15%
Northwestern	Kasonso Busanga	5,226	4.9	1,072	95%	1,018	4,965	1.8	1,833	778,000	0.24%
Northwestern	Lunga Luswishi	8,199	4.8	1,712	95%	1,626	7,789	1.8	2,928	1,334,000	0.22%
Southern	Nkala*	4,000	5.2	763	95%	725	3,800	1.8	1,305	19,400	6.73%
Southern	Bilili	46,184	5.9	7,884	95%	7,490	43,875	1.8	13,482	308,000	4.38%
Southern	Sichifulo	2,243	5.8	390	95%	371	2,131	1.8	667	360,000	0.19%
Southern	Mulobezi	2,752	4.7	587	95%	558	2,614	1.8	1,004	357,000	0.28%
Southern	Mufunta **	22,759	5.0	4,543	95%	4,316	21,621	1.8	7,769	541,700	1.43%
TOTAL		92,790	5.3	16,846	95%	16,004	84,312	1.8	28,807	4,395,100	0.66%

* 2010 census data not provided by CSO - population estimates from 2000 census ward data used - average household size used is average for 2010 census enumeration area (EA) data

** Mufunta is given as part of Southern zone in concept note - but I believe it should be included in the Eastern zone - very poor access to the south from there, but easy access to Lusaka via tarred road

ANNEX H. TABLE OF NATURAL RESOURCES

Natural Resources used as Food, Beverages, Fruit, and Medicinal

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Scientific / English name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Anisophyllea boehmii</i>	Mufungo (B)	Kasonso Busanga	Fruits	Edible fruits (harvested for commercial purposes)
<i>Azanza garckeana</i>	Mukole (B) Chinga (B) Muneko (L) Mkole (N) Muneko (T) Mutobo (I)	All over	Fruit Leaves Roots	Edible fruit Spinach & salt Medicine to treat earache, or as an anti-emetic
<i>Bobgunnia madagascariensis</i>	Ndale (B)(K) Mushakashala (L) Muchelekete (N) Mulundu (T)(I)	All over	Powdered pods	Medicine for diarrhoea, or to induce abortion & epilepsy
<i>Boscia albitrunca</i>	Mululwe (T)	Bilili Springs, Mufunta Mulobezi Mumbwa	Roots or bark, tea infusion	Used for preventing malaria and to treat stomach illness
<i>Brachystegia spiciformis</i>	Muputu (B) Mutuya (L) Mumanga (K) Musewe (T)(I) Mputi (N)	All over	Flowers Bark Roots	Nectar attracts bees for honey & traditional hives Coffins & tanning hides giving them red colour, traditional beehive making Medicine for gonorrhoea, stomach pains, dysentery & bilharzia
<i>Cassia abbreviata</i>	Mululwe (L)	Kasonso Busanga Mufunta Mumbwa	Bark	Medicine for malaria
<i>Combretum Zeyheri</i>	Mukenge (L) Mufula (L) Kadale (N) Kalama (N) Mufuka (B)(K) Mulama (B)(K) Musense (LV) Muhuhu (LV) Mukutabulonga (T) Musende (T) Muzyula (I)	All over	Flowers Leaves	Nectar attracts bees for honey Medicine for diarrhoea & smallpox
<i>Combretum molle</i>		Mumbwa	Tea infusion of the leaves	Stomach illness

Scientific / English name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Dalbergia nitidula</i>	Kalongwe (B) Kafundula (K) Mukonkoto (L) Ndelele (T) Kabulasese (N) Mukandanjase (I)	All over	Roots Flower	Medicine for diarrhoea, dysentery & porridge to treat constipation Nectar attracts bees for honey
<i>Diplorhynchus condylocarpon</i>	Mtowa (N)(T) Mutowa (N)(T) Mwengi (B)(K) Mwenge (B)(K) Mulia (L) Mulya (L) Muli (LV) Munto (I)	All over	Fruit Fruit & roots	Medicine for stomach ache & black water fever Treatment for TB, gonorrhoea & leprosy
<i>Julbernardia Globiflora</i>	Mpasa (B) Kamponi (N) Mwanza (L) Muumba (I)(T) Sandwe (I)(T)	North, east & west	Flower Bark	Nectar attracts bees for honey Medicine for constipation
<i>Julbernardia paniculata</i>	Mutondo (B)(K)(N)(L)(I)	All over	Flower Bark	Good trees for bees: nectar attracts bees for honey Traditional beehives Medicine for syphilis, trachoma of the eyes & dysentery
<i>Lannea discolor</i>	Kaumbu (B) Kabumbu (B) Mubumbu (L)(I) Mungongwe (T) Kabumbu (N)	Southern & eastern districts	Fruit Bark	Edible & store water for when you are thirsty Medicine for diarrhoea
<i>Parinari Curatellifolia</i>	Mpundu (B)(K) Mupunda (B)(K) Mubula (L) Mbula (N) Mpunda (N) Mula, Mbula mbula (T)	All over	Fruit	Porridge Sweet beer
<i>Pericopsis angolensis</i>	Mubanga (B)(K)(L)(I) Muwanga (N)	All over	Leaves Bark & roots	Medicine to bath with to drive out troublesome spirits & headaches Medicine to bathe eyes For pulmonary troubles
<i>Periostigma spp.</i>		Mumbwa	Bark powder in tea	Increase milk lactation
<i>Pseudolachnostylis Maprouneifolia</i>	Musangati (B) Musole (K) Mukunya(L)(T) Msolo (N)	All over	Roots	Treatment for female infertility or to stimulate appetite, for diarrhoea or pneumonia & good luck

Scientific / English name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Pterocarpus Angolensis</i>	Mulombwa (B)(N) Mukulakula (K) Ndombe (K) Mukula (T) Mukwa (L)	All over	Resin/sap Roots	Medicine for sores or ringworm & ash for inflamed skin Gonorrhoea or worms
<i>Rhynchosia</i> spp.	Munkoyo	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Roots	Sweet beer Beverage Edible tuber
<i>Sansevieria</i> spp.	Ilambwe (T)	Mumbwa	Stems and roots	For appetite and de-worming livestock and people
<i>Securidaca longipedunculata</i>	Mwinda (L) Muinda (L) Mupapi (B) Bwazi (T)(N) Mpuluka (N) Mufufuma (I)	All over	Flower Bark Roots	Fragrance attracts bees for honey production Soap & oil Medicine for diseases of the stomach
<i>Strychnos innocua</i>	Mulungi (B) Mulungikome (B) Mukunkampompo (K) Munkolokolo (K) Muzimbikolo (L) Kabulukulu (N) Kambeli (N) Kamwelalumba (N) Mteme (N) Mtulutulu (N) Kalungi (T) Muteme (T) Mutu (T)	All over	Fruit	Edible fruit Sweetener in porridge
<i>Strychnos</i> spp.	Kapwi (K) Mubila (L) Akasongole (B) Mauii (T) Mantomba (T)	Bilili Springs Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Fruits	Edible fruits (harvested for commercial purposes)
<i>Syzygium guineense</i>	Msombo	Kasonso Busanga Lunga Luswishi Mumbwa Namwala	Fruits	Edible fruits (harvested for commercial purposes)

Scientific / English name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Terminalia sericea</i>	Mulilankonko (B) Namwinshi (B) Kalumekakabesha (B) Muhonono (L) Gonondo (N) Mutwamaila (T)	All over	Roots	Medicine to relieve stomach problems & as an eyewash
<i>Uapaca kirkiana</i>	Musuku (B)(K)(L)(N)(T)(I) Msuku (B)(K)(L)(N)(T)(I) Mupopolo (LV)	All over	Flower Fruit Roots	Nectar attracts bees for honey Jam, fruit stew & sweet beer Medicine to cure indigestion
<i>Uapaca</i> spp.	Masuku Mukusu (K) Msuku (LV) Nundu (T)	Bilili Springs Kasonso Busanga Lunga Luswishi Mufunta Mumbwa	Fruits	Edible fruits (harvested for commercial purposes)

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Natural Resources used for House/Hut Construction (Wood and Thatch), Carpentry, and Woodcarving

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Scientific name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Azelia quazensis</i>	Mupapa (T)	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole Seeds	Timber Crafts: stools Earrings & necklaces
<i>Azanza garckeana</i>	Mukole (B) Chinga (B) Muneko (L) Mkole (N) Muneko (T) Mutobo (I)	All over	Bole Branches	Small pieces of furniture Bows Tool handles
<i>Baikiaea plurujuga</i>	Mukusi (L) Mukushi (T)	Mulobezi	Bole and offcuts from saw mill	Construction
<i>Brachystegia boehmii</i> <i>B. manga</i>	Musewe (T)(I) Mubombo (T)(L)(I)(K)	Bilili Springs Mumbwa	Bole Branches	Wooden handles for axes, adzes, hoes
<i>Brachystegia spiciformis</i> <i>B. boehmii</i> <i>B. longifolia</i>	Musewe (T)(I) Mulombe Mupapa Moonga	Bilili Springs Mumbwa	Bole	Wooden drums – single ended, double ended, and ‘hippo’ drums Wooden containers Stools
<i>Colophospermum mopane</i>	Mupane (L)(T) Mwane (L)(T)	Bilili Springs	Bole Bark	Timber Poles Fibre
<i>Diplorhynchus condylocarpon</i>	Mtowa (N)(T) Mutowa (N)(T) Mwengi (B)(K) Mwenge (B)(K) Mulia (L) Mulya (L) Muli (LV) Munto (I)	All over	Bole Branches	Small pieces of furniture Arrows, spoons & other small items Roofing poles
<i>Dalbergia nitidula</i>	Kalongwe (B) Kafundula (K) Mukonkoto (L) Ndelele (T) Kabulasese (N) Mukandanjase (I)	All over	Bole Branches	Timber Fencing posts Tool handles Walking sticks
<i>Julbernardia globiflora</i>	Mpasa (B) Kamponi (N) Mwanza (L) Muumba (I)(T) Sandwe (I)(T)	North, east & west	Bole	Tool handles Mortars Canoes

Scientific name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Lannea discolor</i>	Kaumbu (B) Kabumbu (B) Mubumbu (L)(I) Muchinga (T) Mungongwe (T) Kabumbu (N)	Southern & eastern districts	Bole Branches	Fishing floats Mortars Crafts Spears
<i>Parinari Curatellifolia</i>	Mpundu (B)(K) Mupunda (B)(K) Mubula (L) Mbula (N) Mpunda (N) Mula (T)	All over	Bole	Canoes Timber Rafters
<i>Pericopsis angolensis</i>	Mubanga (B)(K)(L)(I) Muwanga (N) Muzwa malowa (T)	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole	Timber Poles Stools Wooden handles for axes, adzes, hoes
<i>Pseudolachnostylis maprouneifolia</i>	Musangati (B) Musole (K) Mukunya(L)(T) Msolo (N)	All over	Bole	Carpentry & joinery
<i>Pterocarpus angolensis</i>	Mulombwa (B)(N) Mukulakula (K) Ndombe (K) Mukula (T) Mukwa (L)	Bilili Springs Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole	Timber Construction poles (houses, fencing) Carpentry (furniture) Carving (stools, wood turnery) Canoes
<i>Sclerocarya birrea</i>	Mungongo (T)	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole	Carving (stools, etc.) Canoes
<i>Terminalia sericea</i>	Mulilankonko (B) Namwinshi (B) Kalumekakabesha (B) Muhonono (L) Gonondo (N) Mutwamaila (T)	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole	Timber & construction Poles Yokes
<i>Uapaca kirkiana</i>	Musuku (B)(K)(L)(N)(T)(I) Msuku (B)(K)(L)(N)(T)(I) Mupopolo (LV)	All over	Bole Branches	Hut poles Planks Spoons
<i>Loudetia sp.</i>	Bwizi (T) Nsono (K) Mwiila (LV)	Mufunta Mumbwa, Namwala, Nkala	Stems	Classic thatching (especially used by lodges)
<i>Hyparrhenia rufa</i>	Mwanga (L)	All over	Stems	Common thatching grass used for roofs and walls of outhouses/huts.

Scientific name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Hyparrhenia filipendula</i>	Mwanga (L)	All over	Stems	Fine thatching grass for roof thatching
<i>Hyperthelia dissoluta</i>		Bilili Mulobezi	Stems	Yellow thatching grass for roof thatching and hut walls

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Natural Resources used for Energy Production

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Scientific name	Local name	Area Utilised	Part Utilized	Products made
<i>Bobgunnia madagascariensis</i>	Ndale (B)(K) Mushakashala (L) Muchelekete (N) Mulundu (T)(I)	All over	Bole	Firewood
<i>Brachystegia</i> spp.	Mumba (T)	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole Branches	Charcoal
<i>Diplorhynchus condylocarpon</i>	Mtowa (N)(T) Mutowa (N)(T) Mwengi (B)(K) Mwenge (B)(K) Mulia (L) Mulya (L) Muli (LV) Munto (I)	All over	Bole Branches	Good firewood
<i>Julbernardia paniculata</i>	Mutondo (B)(K)(N)(L)(I)	Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole Branches	Fuel Timber & hut poles Tool handles
<i>Pseudolachnostylis maprouneifolia</i>	Musangati (B) Musole (K) Mukunya(L)(T) Msolo (N)	All over	Bole	Charcoal & firewood
<i>Pericopsis angolensis</i>	Mubanga (B)(K)(L)(I) Muwanga (N)	All over	Bole Branches	Firewood & charcoal
<i>Securidaca longipedunculata</i>	Mwinda (L) Muinda (L) Mupapi (B) Bwazi (T)(N) Mpuluka (N) Mufufuma (I)	All over	Bole Branches	Charcoal
<i>Terminalia sericea</i>	Mulilankonko (B) Namwinshi (B) Kalumekakabesha (B) Muhonono (L) Gonondo (N) Mutwamaila (T)	All over	Bole Branches	Firewood & charcoal
<i>Terminalia</i> spp.		Kasonso Busanga Lunga Luswishi Mufunta Mumbwa Namwala	Bole Branches	Charcoal

Natural Resources used for Basketry

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Scientific name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Berchemia discolor</i>	Nahwa Munyi (T) Mwii (T)	Bilili Springs Mumbwa	Bark of roots	Red brown dye
<i>Brachystegia spiciformis</i>	Muputu (B) Mutuya (L) Mumanga (K) Musewe (T)(I) Mputi (N)	All over	Bark Roots	Mats Bark cloth Fibre for twined baskets Fishing baskets Fishing nets & bags
<i>Combretum zeyheri</i>	Mukenge (L) Mufula (L) Kadale (N) Kalama (N) Mufuka (B)(K) Mulama (B)(K) Musense (LV) Muhuhu (LV) Mukutabulonga (T) Musende (T) Muzyula (I)	All over	Roots	Fishing nets & traps Baskets Ornaments Yellow dye
<i>Cyperus papyrus</i>		Kasonso Busanga	Stems	Sleeping mats
<i>Dalbergia nitidula</i>	Kalongwe (B) Kafundula (K) Mukonkoto (L) Ndelele (T) Kabulasese (N) Mukandanjase (I)	All over	Bark Roots	Red dye
<i>Friesodielsia obovata</i>	Muchinga-chinga (T)	Kasonso Busanga Lunga Luswishi Mumbwa Namwala Mufunta	Stems Branches	Fish traps Maize storage containers/barns Hut rafters Toilet walls
<i>Grewia flavescens</i>		Kasonso Busanga Mumbwa Namwala	Stems Branches	Winnowing baskets Fish traps
<i>Hyphaene petersiana</i>	Malala (T)	Bilili Springs	Unopened leaves	Various twined and coiled baskets
<i>Julbernardia globiflora</i>	Mpasa (B) Kamponi (N) Mwanza (L) Muumba (I)(T) Sandwe (I)(T)	North, east & south	Bark	Black dye Brown dye Fibre for twined baskets and fishing baskets
<i>Pavetta schumanniana</i>	Muwana	Bilili Springs Mumbwa	Bark Branches	Fishing valve baskets

Scientific name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Phragmites australis</i>	Matete (T)	Bilili Springs Kasonso Busanga Lunga Luswishi Mumbwa Mufunta Namwala	Reed stems	Twilled sleeping mats Fences Ceiling boards Fishing rods
<i>Securidaca longipedunculata</i>	Mwinda (L) Muinda (L) Mupapi (B) Bwazi (T)(N) Mpuluka (N) Mufufuma (I)	All over	Bark Branches	Fishing valve baskets
<i>Terminalia sericea</i>	Mulilankonko (B) Namwinshi (B) Kalumekakabesha (B) Muhonono (L) Gonondo (N) Mutwamaila / Mulombe (T)	All over	Roots	Yellowish dye Blue dye

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Natural Resources Miscellaneous Uses

Language Code: I = Ila, K = Kaonde, L = Lozi, LV = Luvale, T = Tonga, and B = Bemba, N = Nyanja

Scientific name	Local name	Area Utilised	Part Utilized	Products Made or Use
<i>Bobgunnia madagascariensis</i>	Ndale (B)(K) Mushakashala (L) Muchelekete (N) Mulundu (T)(I)	All over	Powdered pods	Fish poison
<i>Brachystegia spiciformis</i>	Mputu (B) Mutuya (L) Mumanga (K) Musewe (T)(I) Mputi (N)	All over	Roots	Fish poison
<i>Pterocarpus angolensis</i>	Mulombwa(B)(N) Mukulakula (K) Ndombe (K) Mukula (T) Mukwa (L)	All over	Bark Resin	Fish poison

FISH OF THE KAFUE RIVER

English Name	Scientific Name	African Name
Bottlenose	<i>Mormyrus lacera</i>	Ndikusi
Bull-dog	<i>Gnathonemus macrolepidotus</i>	Nembele
Churchill	<i>Petrocephalus catostoma</i>	
Castelnaus Stone-basher	<i>Marcusenius castelnaui</i>	
Small-scaled Minnow	<i>Kneria auriculata</i>	
Pike	<i>Hepsetus odoe</i>	Mulumezi
Silverfish	<i>Petersuis rhodesiensis</i>	Ncenga
Silver Robber	<i>Micralestes acutidens</i>	Ncenga
Stripe tailed Robber	<i>Alestes lateralis</i>	Chitaka
Multi banded Citharind	<i>Nannocharax multifasciatus</i>	Ncenga
Banded Citharind	<i>Nannochorax rp, Nov</i>	Ncenga
Striped mudsucker	<i>Labeo annectens</i>	Linyonga
Mudsucker	<i>Labeo cylindricus</i>	Linyonga
Yellowfish	<i>Barbus marequensis</i>	Mpifu
Spot-tail Barb	<i>Barbus afrovernaya</i>	Ncenga
Many spotted Barb	<i>Barbus barotseensis</i>	Ncenga
Thick striped Barb	<i>Barbus eutaenia</i>	Ncenga
Red banded Barb	<i>Barbus fasciolatus</i>	Ncenga
Sickle fin Barb	<i>Barbus haasianus</i>	Ncenga
Plain Barb	<i>Barbus labialis</i>	Ncenga
Spotted Barb	<i>Barbus lineomaculatus</i>	Ncenga
Multi striped Barb	<i>Barbus multilineatus</i>	Ncenga
Serrated spine spot Barb	<i>Barbus paludinosus</i>	Ncenga
Smooth spine spot Barb	<i>Barbus poechi</i>	Ncenga
Dot tailed Barb	<i>Barbus puellus</i>	Ncenga
Thin striped Barb	<i>Barbus tangandensis</i>	Ncenga
Twin striped Barb	<i>Barbus viviparus</i>	Ncenga
Red eyed Barb	<i>Barbus aurantiacus</i>	Ncenga
Square jawed Barb	<i>Coptosto mabarbus wittei</i>	Ncenga
Silver Barbel	<i>Schilbe mystus</i>	Lubange
Sharp toothed Barbel	<i>Clarias mossambicus</i>	Mbuli
Blunt toothed Barbel	<i>Clarias mellandi</i>	Mbutwami
Snake Barbel	<i>Clarias theodora</i>	Milonge
Blotched Barbel	<i>Clarias stappersii</i>	Chineke
Suckermouth Catlet	<i>Chilonglanis neumanni</i>	

English Name	Scientific Name	African Name
Squeaker	<i>Synodontis macrostigma</i>	Sinonge
Spotted Catlet	<i>Leptoglanis rotundiceps</i>	
Zambia Top Minnow	<i>Nothobranchius taeniopygus</i>	
Common Top Minnow	<i>Aplocheilichthys johnstoni</i>	Ncenga
Striped Top Minnow	<i>Apolocheilichthys katangae</i>	Ncenga
Green headed Bream	<i>Tilapia macrochir</i>	Mu
Three-spot Bream	<i>Tilapia andersonii</i>	Njinji
Red-breasted Bream	<i>Tilapia melanopleura</i>	Mbufu
Banded Bream	<i>Tilapia sparrmanii</i>	Situu
Thin-faced Bream	<i>Serranochromis angusticeps</i>	Mushuna
Purple-faced Bream	<i>Serranochromis macrocephala</i>	Mjenga
Yellow-belly Bream	<i>Serranochromis robustus</i>	Nembwe
Brown-spot Bream	<i>Serranochromis thumbergi</i>	Mununge
Green Bream	<i>Sargachromis codringtoni</i>	Seo
Pink Bream	<i>Pelmatochromis robustus</i>	Seo
Charlottes Bream	<i>Haplochromis carlottae</i>	Mbuma
Frederics Bream	<i>Haplochromis frederici</i>	Mbilila
Dwarf Bream	<i>Haplochromis philander</i>	Nfindu
Climbing Fish	<i>Ctenopoma multispinis</i>	Nkomo
Spiny Eel	<i>Mastacemblalus mellandi</i>	Mutome

ANIMAL SPECIES LIST

English Name	Scientific Name	Type of Human Wildlife Conflict (HWC)
Primates		
Vervet Monkey	<i>Cercopithecus aethiops</i>	Maize and groundnuts (Mumbwa)
Bushbaby	<i>Galago moholi</i>	
Yellow Baboon	<i>Papio cynocephalus</i>	Maize, groundnuts and pumpkin damage (Mulobezi), Maize and groundnuts (Bilili Springs) Maize and groundnuts (Mumbwa)
Chacma Baboon	<i>Papio ursinus</i>	
Carnivores		
Lion	<i>Panthera leo</i>	One mortality of cattle herder (Mulobezi)
Leopard	<i>Panthera pardus</i>	Occasional kill of livestock (Bilili Springs)
Spotted Hyaena	<i>Crocuta crocuta</i>	Occasional kill of livestock (Bilili Springs)
Cheetah	<i>Acinonyx jubatus</i>	
African Wild Dog	<i>Lycaon pictus</i>	Occasional kill of livestock (Bilili Springs)
Caracal	<i>Caracal caracal</i>	
Side-striped Jackal	<i>Canis adustus</i>	Eats cotton buds (Mumbwa) Groundnuts (Mufunta)
Serval	<i>Leptailurus serval</i>	
Common Genet	<i>Genetta genetta</i>	
Wildcat	<i>Felis silvestris</i>	
African Civet	<i>Civettictis civetta</i>	
Mongoose		
Otter	<i>Aonyx capensis</i>	
Honey Badger	<i>Mellivora capensis</i>	Raids Beehives (Mumbwa)
Striped weasel	<i>Poecilogale albinucha</i>	
Odd-toed ungulates		
Black Rhinoceros	<i>Diceros bicornis</i>	
Zebra	<i>Equus burchellii</i>	
Even-toed ungulates		
Cape Buffalo	<i>Syncerus caffer</i>	
Bushpig	<i>Potamochoerus larvatus</i>	Maize crop raider (Kasonso Busanga), Maize, sorghum, millet and pumpkin damage (Mulobezi), The worst perpetrator of all crop raiding (Bilili Springs)
Giraffe	<i>Giraffa camelopardalis</i>	
Hippopotamus	<i>Hippopotamus amphibius</i>	Maize and garden raider along rivers (Kasonso Busanga), Maize, sorghum and gardens on Mawezi River (Mulobezi) Maize and gardens (Kasonso Busanga)
Warthog	<i>Phacochoerus africanus</i>	Maize, cotton, groundnuts (Mumbwa)
Antelope		
Blue Wildebeest	<i>Connochaetes taurinus</i>	

English Name	Scientific Name	Type of Human Wildlife Conflict (HWC)
Bushbuck	<i>Tragelaphus scriptus</i>	
Common Duiker	<i>Sylvicapra grimmia</i>	Raids maize and groundnuts (Bilili Springs) Maize and groundnuts (Mumbwa) Maize and groundnuts (Mufunta)
Blue Duiker	<i>Cephalophus monticola</i>	
Yellow-backed Duiker	<i>Cephalophus silvicultor</i>	
Red Forest Duiker	<i>Cephalophus natalensis</i>	
Eland	<i>Tragelaphus oryx</i>	
Kudu	<i>Tragelaphus strepsiceros</i>	Maize, sorghum, millet damage (Mulobezi), Maize and groundnuts (Bilili Springs) Maize (Mumbwa)
Impala	<i>Aepyceros melampus</i>	
Klipspringer	<i>Oreotragus oreotragus</i>	
Lechwe	<i>Kobus leche</i>	
Lichtenstein's Hartebeest	<i>Alcelaphus lichtensteinii</i>	
Oribi	<i>Ourebia ourebi</i>	
Puku	<i>Kobus vardonii</i>	
Sable	<i>Hippotragus niger</i>	
Roan	<i>Hippotragus equinus</i>	
Sharpe's Grysbok	<i>Raphicerus sharpei</i>	
Sitatunga	<i>Tragelaphus spekii</i>	
Reedbok	<i>Redunca arundinum</i>	
Steenbok	<i>Raphicerus campestris</i>	
Tsessebe (Topi)	<i>Damaliscus lunatus</i>	
Waterbuck	<i>Kobus ellipsiprymnus</i>	
Other mammals		
Aardvark	<i>Orycteropus afer</i>	
Rock Hyrax	<i>Heterohyrax brucei</i>	
Elephant	<i>Loxodonta africana</i>	Maize crop raider (Kasonso Busanga) Maize, sorghum, millet and pumpkin damage (Mulobezi), Occasional maize and other crop raiding (Bilili Springs) Maize and cotton (Mumbwa) Maize and gardens (Kasonso Busanga) Maize and tobacco (Mufunta)
Pangolin	<i>Manis temminckii</i>	
Reptiles		
Crocodile	<i>Crocodylus niloticus</i>	
Monitor lizard	<i>Varanus niloticus</i>	
Chameleon		
Rock python	<i>Phython sebae</i>	

LIST OF BIRD GROUPS

English Name	Scientific Name	Type of Human Wildlife Conflict (HWC)
Non-passerines		
Ostriches		
Grebes		
Pelicans		
Cormorants		
Darters		
Bitterns		
Hérons & Egrets		
Hammerkop		
Storks		
Shoebill		
Ibises & Spoonbills		
Flamingos		
Ducks		
Geese & Swans		
Hawks, Kites & Eagles		
Secretary-bird		
Falcons		
Pheasants & Partridges		Franklin raid young maize and cotton crops (Mumbwa)
Guineafowl		
Buttonquails		
Cranes		
Rails, crakes, gallinules, & coots		
Finfoots		
Bustards		
Jacanas		
Painted snipe		
Avocets & Stilts		
Thick-knees		
Pratincoles & Coursers		

English Name	Scientific Name	Type of Human Wildlife Conflict (HWC)
Plovers & Lapwings		
Sandpipers & allies		
Gulls & Terns		
Skimmers		
Sandgrouse		
Pigeons & Doves		
Parrots, Macaws & allies		Black cheeked Lovebirds raid maize fields (Mulobezi)
Turacos		
Cuckoos		
Barn owls & other Owls		
Nightjars		
Swifts		
Mousebirds		
Trogons		
Kingfishers		
Bee-eaters		
Typical Rollers		
Hoopoes		
Woodhoopoes		
Hornbills		
Barbets		
Honeyguides		
Woodpeckers		
Passerines		
Broadbills		
Pittas		
Larks		
Swallows & Martins		
Wagtails & Pipits		
Cuckoo-shrikes		
Bulbuls		
Thrushes & allies		

English Name	Scientific Name	Type of Human Wildlife Conflict (HWC)
Cisticolas & allies		
Old World warblers		
Old World flycatchers		
Wattle-eyes		
Monarch flycatchers		
Babblers		
Chickadees & Titmice		
Trecreepers		
Penduline tits		
Sunbirds & Spiderhunters		
White-eyes		
Old World Orioles		
Shrikes		
Bushshrikes & allies		
Helmetshrikes		
Drongos		
Crows		
Jays		
Ravens & Magpies		
Starlings		
Weavers & allies		
Waxbills & allies		
Indigobirds		
Weavers & allies		
Buntings		
Finches		
<u>Sparrows</u>		