

THE ROLE OF TROPHY HUNTING

OF ELEPHANT

IN SUPPORT OF THE

ZIMBABWE CAMPFIRE PROGRAM

DECEMBER 2016

**Prepared by
CAMPFIRE Association
Mukuvisi Woodlands
Harare**



1 CONTENTS

Acronyms and Abbreviations	i
Executive Summary.....	ii
1 Introduction	1
2 Overview of Community Based Natural Resources Management in Zimbabwe.....	2
2.1 The CAMPFIRE Program.....	2
3 Sustainable Use and Utilization of CAMPFIRE Resources and Revenues	5
3.1 Numbers, distribution and regional trends of elephant in Zimbabwe	6
3.2 Elephant quota allocation and utilisation.....	7
3.3 Income Generation from Sport Hunting of elephants and other Key Species	9
3.3.1 Income received by Outfitters	9
3.3.2 Income from Trophy Fees	10
3.3.3 Other Income to RDCs.....	10
3.3.4 Benefit sharing: RDC vs Wards.....	11
4 Use of funds by RDCs and Wards.....	12
4.1 Profile of Rural District Councils	13
4.1.1 Characteristics of the CAMPFIRE Districts	14
4.1.2 Human resources and equipment employed at the District Level	14
4.1.3 RDC expenditure	16
4.2 Profile of CAMPFIRE Producer Wards.....	16
4.2.1 Human Resources, Patrol Effort and Equipment.....	17
4.2.2 Human and Wildlife Conflict and Problem Animal Control	17
4.2.3 Beneficiaries of CAMPFIRE Income at the Ward Level	19
5 Impact of the Suspension of Elephant Trophy Imports to the United States on THE CAMPFIRE Program.....	22
6 The Way Forward.....	23
7 Annex 1: Examples of Social Services Projects supported by CAMPFIRE funds at the District and Ward level.....	26
8 References	30

ACRONYMS AND ABBREVIATIONS

AA	Appropriate Authority
CA	CAMPFIRE Association
CAMPFIRE	Community Areas Management Program for Indigenous Resources
CCG	CAMPFIRE Collaborative Group
DNPWLM	Department of National Parks and Wildlife Management
ESA	Endangered Species Act
FWS	United States Fish and Wildlife Service
RDCs	Rural District Councils
SOAZ	Safari Operators Association of Zimbabwe
USAID	United States Agency for International Development
ZPHGA	Zimbabwe Professional Hunters and Guides Association
ZPWMA	Zimbabwe Parks and Wildlife Management Authority

Acknowledgements

This report has been prepared on behalf of the CAMPFIRE Association by Vernon Booth, with support from Safari Club International Foundation. The input from all CAMPFIRE Managers and Internal Auditors in the respective RDCs is greatly appreciated. The CAMPFIRE Association also acknowledges the help provided by Mr. Kennedy Chiremba with data analysis.

Cover photo: Lin Berrie, Chilo Lodge, Mahenya CAMPFIRE Area

EXECUTIVE SUMMARY

In April 2014, the United States Fish and Wildlife Service (FWS) suspended the import of elephant trophies taken in Zimbabwe. In March 2015, the suspension was extended to include future hunting seasons. For it to reverse this decision, the FWS must make a finding that the killing of the animal whose trophy is intended for import would enhance the survival of the species in the wild. The Zimbabwe Parks and Wildlife Management Authority (ZPWMA) defended its position and provided the FWS with significant amounts of information and data related to elephant management. While this is acknowledged, the FWS was still of the opinion that its concerns had not been addressed, and identified six areas where additional information was required.

The CAMPFIRE Association has taken these into consideration, especially the issues regarding “excessive retention of generated funds by Rural District Councils”, and how much revenue elephant sport-hunting provides and how much of that comes from U.S. hunters. This document addresses part of the information requested by the FWS under “Revenue Utilization” to demonstrate that by allowing the importation of trophies taken by U.S. hunters, the survival of elephants in Zimbabwe would be enhanced. To support this position, the CAMPFIRE Association outlines the evolution of the CAMPFIRE Program, describing the extent of its coverage and the impact that it has had on wildlife conservation in Communal Areas of Zimbabwe.

Evidence from the 2014 national elephant survey is provided to show that Zimbabwe has a substantial elephant population that is managed sustainably through an adaptive quota setting mechanism. Data from 9 CAMPFIRE Districts that participated in this audit of CAMPFIRE revenue shows that approximately 60% of the allocated elephant quota is utilized and that the majority of hunters (53%) originate from America. These hunters have contributed US\$9 million towards the CAMPFIRE Program during the period 2010-2015 compared to US\$8 million by the 40 other nations.

The income generated from trophy fees in the last 6 years (2010 – 2015) is approximately US\$11.4 million of which elephant trophy fees contributed 65%, while a further US\$4 million has come from the sale of hides, concession fees and other sundry income. These funds have been distributed to CAMPFIRE communities in various Wards who received approximately 57% (range 39% - 77%) of the Trophy Fees. A standardized tool designed to gather baseline data has provided information on the physical and human parameters of the 9 participating Districts including how and on what the revenues from hunting have been utilized. At the District level, approximately 80% of the funds are used to support the administration and management of the CAMPFIRE program, including investment on law enforcement. In contrast, 55% of revenues provided to the producer Wards are channeled towards supporting social services such as schools, clinics and other programs that benefit the community.

The cost of living with wildlife, and particularly elephants, is shown through providing data on the scale of crop damage (7,000ha over 6 years) that has a significant impact in terms of its monetary value on rural communities who face food insecurity and deep poverty (average income US\$1 a day). 96 human lives were lost to wildlife attacks, with elephant accounting for more than half of those deaths. Yet despite these challenges, communities still retain a high level of tolerance for elephants, but this support is rapidly dissipating as a result of the loss of income from trophy hunting. This places almost two million hectares of wild land at risk, including the risk of increasing retaliatory killing through poisoning and illegal wildlife crime.

A way forward is discussed outlining how the resumption of trophy imports can offset the challenges facing the CAMPFIRE program and through this, enhance the conservation of elephant outside of the protected areas.

1 INTRODUCTION

In April 2014, the United States Fish and Wildlife Service (FWS) suspended the import of elephant trophies taken in Zimbabwe. The suspension was extended to include future hunting seasons on March 26, 2015. In May 2015, the Assistant Director (International Affairs) from the United States Fish and Wildlife Service (FWS), Mr. Byron Arroyo, wrote to the (then) Minister of Environment, Water and Climate outlining the reasons why the Service made a determination on 26th March 2015 that it was unable to authorize the import of elephant trophies taken in Zimbabwe in future. This is further explained in detail in the “Enhancement Findings for African Elephant Taken as Sport-hunted Trophies in Zimbabwe during 2014” published on the 7/22/14 (see reference FWS/AIA/DMA).

The FWS make the point that for it to authorize imports of sport-hunted African elephant trophies into the USA, the Service must be able to determine that the requirements of the special rule for the African elephant under the U.S. Endangered Species Act (ESA) have been met (see 50 CFR 17.40(e)(3)(iii)C). Specifically, the FWS must make a finding that the killing of the animal whose trophy is intended for import would enhance the survival of the species in the wild.

In defense of this, the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) provided the FWS with significant amounts of information and data related to elephant management. The FWS also communicated with various stakeholders including the Safari Operators Association of Zimbabwe (SOAZ), Zimbabwe Professional Hunters and Guides Association (ZPHGA), the CAMPFIRE Association, as well as individual professional hunters and outfitters, and independent scientific researchers.

The FWS acknowledged this input but still believed the data received did not fully address the questions regarding how elephants are managed in Zimbabwe, and how, by allowing the importation of trophies taken by U.S. hunters, that the survival of elephants in Zimbabwe would be enhanced. Six areas were identified where additional information was required. These are:

- 1: Updated Elephant Management Plan with formalized targets or indicators
- 2: Current elephant population data and the impact of hunting on the elephant population
- 3: Levels of poaching and prevention, including MIKE and PIKE data
- 4: Regulation and enforcement, particularly regarding the use of funds generated by U.S. hunters to support law enforcement and management
- 5: Sustainable use of elephant, specifically information of the levels of legal and illegal offtake
- 6: Revenue utilization from the hunting of elephant on Communal Lands, Safari Areas, Forestry and Private Conservancies.

The CAMPFIRE Association is not able to address these issues since these are the prerogative of the ZPWMA who is responsible for the conservation and management of elephant at the national level. Nonetheless, the CAMPFIRE Association is in a position to address part of the information requested under “Revenue Utilization”, and contribute indirectly to the other five issues raised by the FWS.

2 OVERVIEW OF COMMUNITY BASED NATURAL RESOURCES MANAGEMENT IN ZIMBABWE

There are numerous reports and references in the literature that analyze the community based natural resources management program (CBNRM) in Zimbabwe. A more recent assessment can be found in the document prepared for USAID Zimbabwe by Mazambani and Dembetembe (2010).

In 1982, the government amended the 1975 Parks and Wildlife Act to enable Rural District Councils (RDCs) to obtain 'appropriate authority' (AA) to utilize wildlife for commercial gain. The proposed changes were aimed at finding alternative forms of land use to subsistence agriculture on marginal lands. At that time, there was no particular model as to how this could happen without

threatening the resource base. The (then) Department of National Parks and Wildlife Management (DNPWLM) began to explore options within the framework of an integrated landuse plan for the communal lands bordering National Parks and Safari Areas. This Act provided an opportunity to extend to communities in the Communal Lands the benefits that the private landowners enjoyed as a result of the 1975 Parks and Wild Life Act. This eventually led to the birth of Zimbabwe's Community Areas Management Program for Indigenous Resources (CAMPFIRE), which had far reaching impacts on wildlife productivity as well as the socio-economic wellbeing of CAMPFIRE communities.

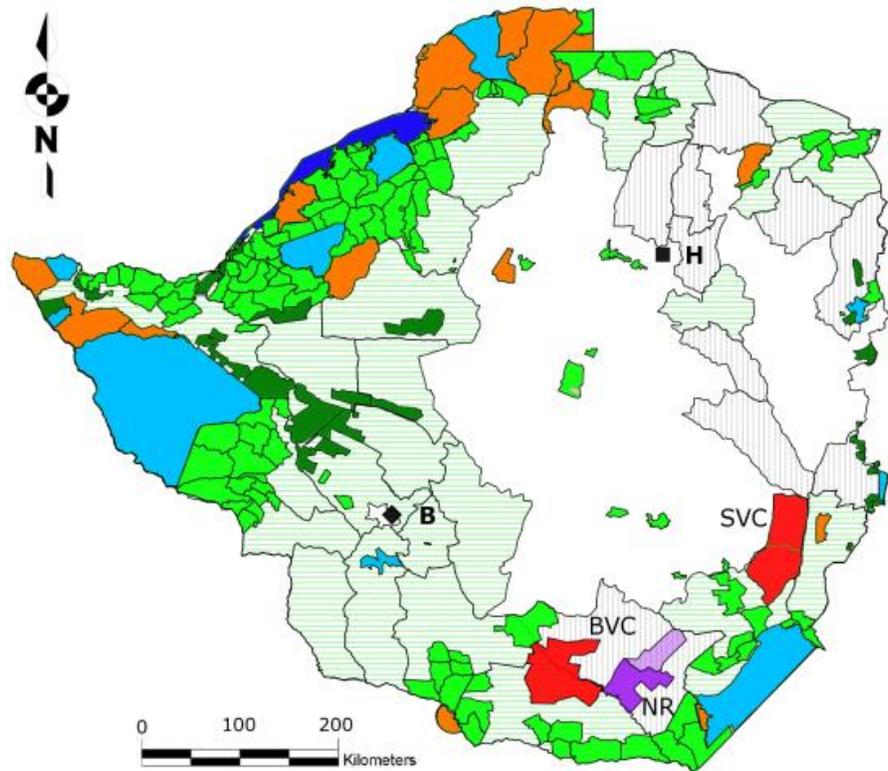


Figure 1: The location of CAMPFIRE areas (in light green) relative to National Parks (blue), Safari Areas (orange), Forest Areas (dark green) and Conservancies (red).

2.1 THE CAMPFIRE PROGRAM

The CAMPFIRE program was conceptually designed to focus on wildlife, woodlands, water, grazing resources, and grasslands. In practice, it focused on managing wildlife because of the direct monetary benefits which this resource offered to producer communities. The CAMPFIRE concept (see Murphree, 1993; Jones and Murphree, 2001) was developed in response to the realization that unless communities living adjacent to National Parks can obtain direct value from wildlife, they will not protect the wildlife. These communities would also need to have a much greater say in how those benefits would be derived and utilized.

While the 1982 amendment of the 1975 Parks and Wildlife Act permitted devolution of authority over wildlife to Rural District Councils (RDCs), the DNPWLM had meager resources to render the program operational (Jones and Murphree, 2001). The DNPWLM therefore turned to such institutions as the Center for Applied Social Sciences (CASS) at the University of Zimbabwe, which was assigned a socio-economic research and evaluation role; the WWF Multispecies Animal Production System Project in Zimbabwe; and the Zimbabwe Trust—an NGO focusing on rural development. These agencies had different but complementary objectives and together with the DNPWLM they formed the original CAMPFIRE Collaborative Group (CCG).

From 1986 to 1988, DNPWLM and its CCG partners engaged in discussions with selected communities and RDCs to identify locations for the inception of the program. The discussions focused on two main criteria, namely:

- (a) voluntary interest in participation by communities and District Councils, and
- (b) the presence of wildlife populations capable of producing sustainable and economically significant revenues.

The CCG work during this period also involved securing political support for the program, and attending to the demands of institutional and administrative detail associated with the conferment of Appropriate Authority (AA) by DNPWLM to RDCs, including the guidelines for awarding revenues and other benefits to communities from the the number of animals harvested within a local community's area each hunting season.

The agreed but non-binding guidelines stated that not less than 50% of the revenues was to be paid to the communities (as wards), not more than 35% was to be allocated to wildlife management (habitat management, fire control, monitoring, hiring of game scouts, etc.), and that 15% could be retained by the District Councils as an administrative levy.

Under the CCG, the CAMPFIRE Program attracted donor support and evolved through a number of phases.

- **Phase I 1989-1994:** (US\$10m grant support – USAID and various partners). The period saw the initiation of CAMPFIRE and donor support was channelled towards the improvement of safari hunting in major districts that had been granted AA by 1995. This is also the period in which CAMPFIRE Association was established to coordinate the program.
- **Phase II 1994-2003:** (US\$30m - USAID). This support focused on the capture of other natural resources (e.g. timber, sand, fishing, etc.). High-end non-consumptive tourism facilities were developed in Nyaminyami and Chipinge districts in the early 1990s, and 12 'joint venture' eco-tourism lodges were in operation in communal areas by 1999. Small grants were also provided to support the development of eco-tourism, crafts, and other community based natural resources management projects. Investments were also made in the production of natural resource products (e.g. fish in Beitbridge, Mwenezi; mopane worms in Bulilima Mangwe and Gwanda; honey in Binga, Kusile, Mutoko, and Nyanga districts) and many other products.
- **Phase III 2003-2007:** (US\$165,000 – Ford Foundation). This period saw the cessation of major donor funding to CAMPFIRE, and it also coincided with larger macro level policy changes in

Zimbabwe after 2000, and the subsequent adverse socio-economic conditions. This led to the collapse of financial and technical support previously provided by the CCG.

- **Phase IV** 2007-present: (US\$350,000 WK Kellogg Foundation). During this period, there was hyper-inflation, which led to the loss of income from hunting in real terms. This situation stabilised in 2009, when multiple foreign currencies were introduced. The CAMPFIRE Association maintained operations through a 4% levy paid by major hunting districts amounting to less than US\$100,000 annually.

Following are key achievements in the development of CAMPFIRE (see Mazambani and Dembetembe, 2010):

- I. Guruve and Nyaminyami, the first RDCs to be granted AA status, received their first hunting revenues in 1988. This had a dramatic effect in that many districts that are rich in wildlife applied for AA status and by the end of 1991 eleven additional districts had been granted AA status.
- II. By the end of 1991, the 13 districts participating in the program collectively grossed US\$1.1 million in revenue for that year.
- III. By 1995 there were 23 districts participating in the program.
- IV. The CAMPFIRE Association (CA), the secretariat for all districts with CAMPFIRE activities, was formed in 1992. Its primary objectives were to promote the wildlife interests of RDCs and to serve as an association of producer communities. The association played an important role in securing full government support for wildlife management in communal lands so that CAMPFIRE became a recognized conservation program.
- V. Between 1995 and 2000 CAMPFIRE not only witnessed growth in terms of attracting more districts, but also in building the capacity of the RDCs, and in diversifying their activities to include other natural resources. The number of RDCs that were awarded AA status to manage wildlife increased from 2 in 1988 to 27 in 1996. Institutional capacity building grants via United States Agency for International Development (USAID) funding were secured for 24 districts from 1996 to 1999.
- VI. Between 1989 and 2001, CAMPFIRE revenues amounted to almost USD \$ 20.3 million, 97% of which originated in the original 13 districts. Of this, 49% was disbursed to communities (118 wards with over 121,500 households), 20% used for wildlife management, just over 12% retained by the District Councils as a levy, 3% used for other expenses (including the then 1.5% levy to the CAMPFIRE Association), and about 15% was retained by the RDCs pending allocation (Khumalo, 2003). Almost 90% of this income came from safari trophy hunting.
- VII. The period from 2001 to 2003 witnessed two significant developments in CAMPFIRE:
 - a. formation and registration of community trusts as a strategy for devolving decision making and control over resources from the RDCs to community groups, and
 - b. a concerted drive to diversify CAMPFIRE. Twenty-eight non-wildlife-based community projects received financial support through CAMPFIRE compared to only five wildlife-based community projects.
- VIII. At its peak in 2002, CAMPFIRE encompassed 53 districts with AA, though only 23 of these really functioned as intended, while only 12 received regular income from wildlife.
- IX. The Association has spearheaded the revision of CAMPFIRE revenue sharing guidelines to improve the community's share of income from 50% to 55% of hunting income. A Direct Payment System was developed in 2006 to ensure that communities receive their income on

time. A standard hunting contract has been developed to improve hunting administration by RDCs.

In summary, CAMPFIRE protects about 50,000 km² (12.7%) of land in Zimbabwe (Figure 1). Benefits from wildlife and other incomes encompass:

- Approximately 777,000 households (25%) in Zimbabwe benefited from CAMPFIRE directly or indirectly;
- Approximately 25% of Zimbabwe's people are receiving incentives to conserve wildlife and prevent anti-poaching through CAMPFIRE;
- Between 1994 and 2012, CAMPFIRE generated US\$39 million of which US\$21.5 million was allocated to communities and used for resource management (22%), household benefits (26%), and community projects (52%).
- About 90% of CAMPFIRE revenue comes from hunting with elephant hunting contributing up to 70% of annual revenue.
- Based on Constitution of the CAMPFIRE Association as amended in 2007, all major RDCs use CAMPFIRE revenue sharing guidelines, and in these districts revenue is paid directly into community controlled bank accounts by safari operators using the following guideline:
 - RDC fees (41%), CAMPFIRE Association Levy (4%), and CAMPFIRE community (55%).

In the following sections, we describe how the income from the hunting of elephant is generated and utilized using data from 9 Districts (Beitbridge, Binga, Bulilima, Chipinge, Chiredzi, Hwange, Mbire, Nyaminyami, and Tsholotsho) for the period 2010 and 2015¹. For each of these areas we provided:

- Total number of elephant hunted
- Total revenue earned from elephant (and other trophy species)
- How the revenue is spent on various management and social services

We also provide examples of community project support and the impact of human-wildlife conflict over this period.

3 SUSTAINABLE USE AND UTILIZATION OF CAMPFIRE RESOURCES AND REVENUES

The CAMPFIRE program relies almost exclusively on income from hunting. Since 2009, the number of RDCs where hunting is practiced has decreased, mostly because of the prevailing socio-economic conditions that have resulted in high levels of poverty. This is seen as the key driver of the escalating levels of illegal wildlife crime, and poaching of elephant in particular. Maintaining elephant numbers outside of the protected areas is important to their overall conservation, and the reason why Zimbabwe regards the sustainable utilization of all wildlife as critical to its national conservation strategy. The hunting of elephant in CAMPFIRE areas thus plays an important role and is the major source of income to communities in these areas.

¹ Hurungwe provided partial information, as explained in relevant parts of the report

3.1 NUMBERS, DISTRIBUTION AND REGIONAL TRENDS OF ELEPHANT IN ZIMBABWE

Elephants are distributed in four main regional populations in Zimbabwe, namely, Northwest Matabeleland, the Sebungwe, the mid-Zambezi Valley, and the South-East Lowveld. Crude ecological densities vary between 2.16 elephant/km² in Northwest Matabeleland and 0.46 elephant/km² in the Sebungwe region.

Elephant densities in the Communal Areas varies from 1.50 elephant/km² in the south-east Lowveld to 0.06 elephant/km² in the Sebungwe region. Overall it is estimated that 5,000 elephants reside in Communal Areas and occupy approximately 16,000km² (Table 1, Zimbabwe Elephant Management Plan: 2015-2020).

Table 1. Numbers and densities of elephants in the four regions of elephant range within Zimbabwe. (Source: Zimbabwe National Elephant Management Plan 2015 - 2020, see Dunham *et. al.* 2015a, b, c and d).

Name of Region & Area	Area (km ²)	Estimated Number of Elephants	Density of Elephants/km ²
NW Matabeleland	24,989	53,991	2.16
Hwange National Park	15,180	45,846	3.02
Matetsi Complex	4,402	4,843	1.10
Forest Areas	2,332	1,101	0.47
Communal Lands	3,075	2,201	0.72
Sebungwe	15,529	3,407	0.22
Parks & Wildlife Estate	6,234	2,894	0.46
Forest Areas	261	16	0.06
Communal Lands	9,034	497	0.06
Mid-Zambezi Valley	16,014	11,656	0.73
Parks & Wildlife Estate	12,257	9,752	0.80
Communal Lands	3,757	1,904	0.51
South East Lowveld	8,835	13,037	1.48
Gonarezhou NP & Malapati SA	5,118	11,120	2.17
Save Conservancy	3,496	1,585	0.45
Communal Lands	221	332	1.50
<i>Mozambique Border</i>	<i>1,574</i>	<i>0</i>	<i>0</i>
National Total*	65,367	82,091	1.23
Parks & Wildlife Estate	43,191	74,455	1.75
Forest Areas	2,593	1,117	0.43
Save Conservancy	3,496	1,585	0.45
Communal Lands	16,087	4,934	0.18

* The survey did not include Buby Valley Conservancy or the Tuli Safari Area and some other small populations that likely add another 1,000 elephants to the estimated total for the country. The area surveyed in Mozambique is not included in the national total or in the South-East Lowveld total area.

3.2 ELEPHANT QUOTA ALLOCATION AND UTILISATION

Zimbabwe is allocated an export quota of 500 elephants (1,000 tusks) in terms of the CITES regulations (see <https://cites.org/eng/res/10/E-Res-10-10R16.pdf>). In practice, Zimbabwe adopts an adaptive management strategy that sets the overall elephant quota at up to 0.75% of the overall population. This implies that the maximum national quota should not exceed 600 animals at the current population estimate of 80,000 elephants. However, to maintain trophy quality at approximately 35kg (77lbs), the national quota is set at 0.3 – 0.5% of the overall population i.e. 240 – 400 elephants, assuming an average offtake of 60% (R.B. Martin, pers. comm.).

The approach applied to the CAMPFIRE areas is to set quotas that use parameters that are higher than these national guidelines. This strategy is adopted to provide incentives to local communities that reside in areas where high levels of human-elephant conflict is recorded, and to facilitate benefits to local communities through sport hunting.

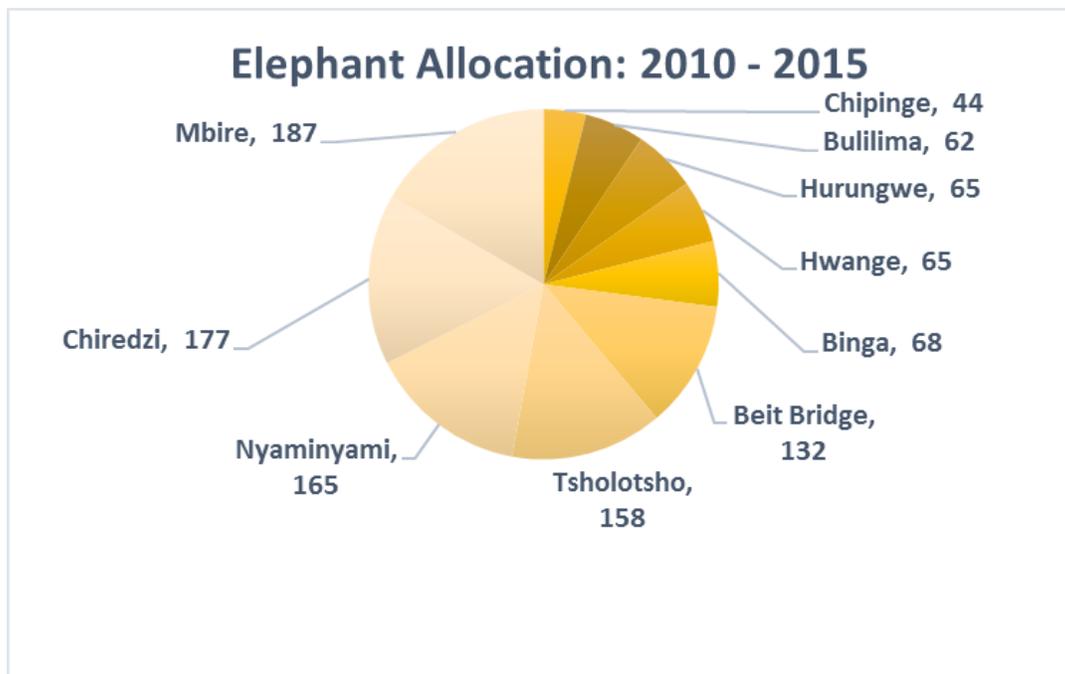


Figure 2: Total allocation of trophy elephant (N=1087) to nine major CAMPFIRE areas over a 6-year period

A total of 1,087 elephants have been allocated on quota to nine major CAMPFIRE areas since 2010 (Figure 2). This equates to 180 elephants per year. The distribution of this quota among the nine CAMPFIRE areas is dictated by the relative density of elephants in the neighboring protected areas and those residing in the CAMPFIRE areas. Tsholotsho, for example, that borders the southern boundary of Hwange National Park, was allocated 158 elephants (or 26/year) while Hwange, Binga and Hurungwe CAMPFIRE Areas that do not border onto areas of high elephant densities receive approximately 10 elephants/year.

The historical trend of utilization of the elephant quota (667 elephant or 61% of the quota allocation) is provided in Figure 3.

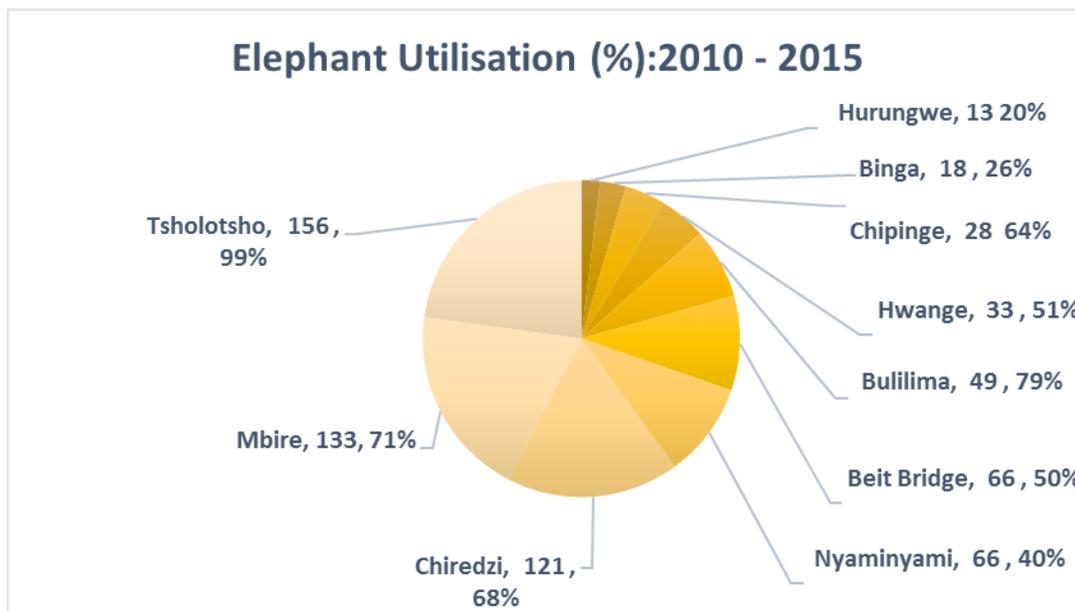


Figure 3: Overall utilization (%) of elephant quotas in nine major CAMPFIRE Areas over a 6-year period

Over the six years, Tsholotsho (99%), Mbire (71%) and Chiredzi (68%) have successfully utilized their allocated quotas while areas such as Hurungwe (20%) and Binga (26%) have not performed as well. The origin of clients hunting in these areas is summarized in Table 2. Over the 6-year period 1702 clients (average 284/year) have hunted in the seven CAMPFIRE Areas (excluding Binga and Hurungwe for which no data are available). Of these 897 clients (c.150/year or 53%) originated from the USA and 461 (c.77 or 27%) from Europe.

Table 2: Origin of hunting clients visiting the major CAMPFIRE Areas :2010 – 2015. Note. No data are available for Binga and Hurungwe

Origin of Clients	USA	Europe	Africa	Asia	South America	Oceania	Canada	Middle East	Total	Average
Beit Bridge	172	36	10	3	14	9	3	0	247	41
Bulilima	17	9	0	0	7	0	0	4	37	6
Chipinge	17	5	0	0	1	0	0	0	23	4
Chiredzi	151	52	57	69	0	0	0	0	329	55
Hwange	20	14	1	5	4	4	1	1	50	8
Mbire	213	90	36	0	10	16	3	0	368	61
Nyaminyami	273	218	24	1	18	21	8	0	563	94
Tsholotsho	34	37	3	4	1	1	1	4	85	14
Total	897	461	131	82	55	51	16	9	1702	284
Percentage	53%	27%	8%	5%	3%	3%	0.9%	0.5%		
Average/year	150	77	22	14	9	9	3	2		

3.3 INCOME GENERATION FROM SPORT HUNTING OF ELEPHANTS AND OTHER KEY SPECIES

3.3.1 Income received by Outfitters

To fully account for earnings in the hunting sector, the Reserve Bank of Zimbabwe, in collaboration with all the relevant stakeholders, introduced the Tourism Receipts Accounting System (TRAS) that required all outfitters to submit returns listing the revenue generated for hunting activities. This system has been in place for several years but required manual analysis of the data to extract the information. In January 2015, a web-based system (TRAS2) was introduced which links Safari Operators, Zimbabwe Parks and Wildlife Management Authority, Taxidermists, Shipping Agents, International Marketing Agents and Reserve Bank. Under this system all authorized hunts are registered allowing for the capture of hunting data (origin of clients, value of trophies and hunts, area hunted etc.), monitoring hunting quota utilization and tracking hunted trophies (Chitauro, 2016). The Exchange Control Division of the Reserve Bank of Zimbabwe and the ZPWMA are now able to:

1. Assess regional price differentials of similar hunts and the reasons thereof;
2. Present TRAS2 systems updates and reports to the users including international marketing agents;
3. Engage with international marketing agents of sport-hunting;
4. Obtain relevant insights on governing of the hunting sector; and
5. Come up with an effective mechanism to fully account for export proceeds from the hunting sector.

Outfitters that operate hunting concessions in CAMPFIRE Areas are required to deposit copies of the TRAS2 form with the CAMPFIRE Office in their respective RDCs/Wards. Each Office is therefore able to extract data on daily rates, trophy fees and other incidental revenues. Figure 4 provides a summary of the income by country of origin. This data confirms the major role of American hunters to the CAMPFIRE program who contribute 52% of the overall income.

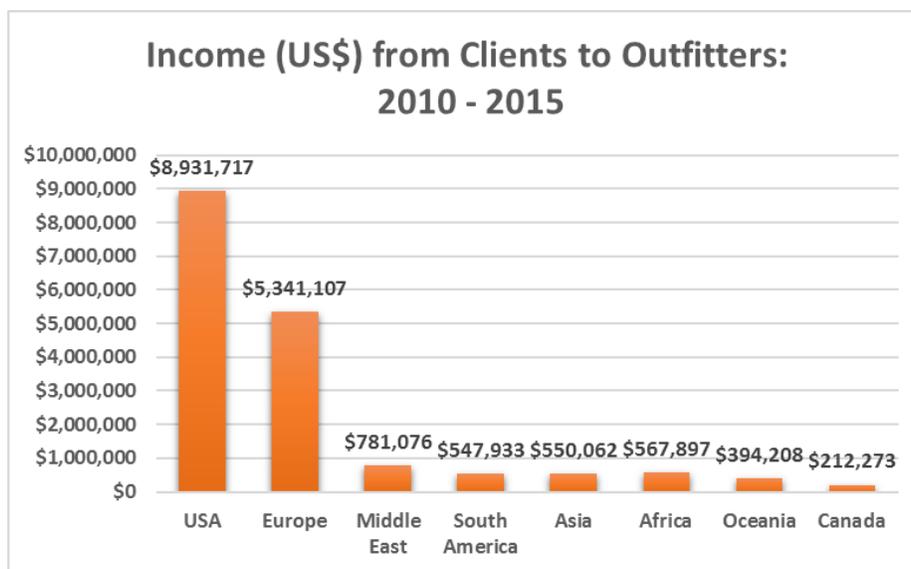


Figure 4: Contribution of hunting clients to the CAMPFIRE Program

3.3.2 Income from Trophy Fees

The data for the total amount of revenue generated for elephant, buffalo, leopard, hippo, crocodile and lion between 2010 – 2015 (approximately US\$11 million) is shown in Figure 5.

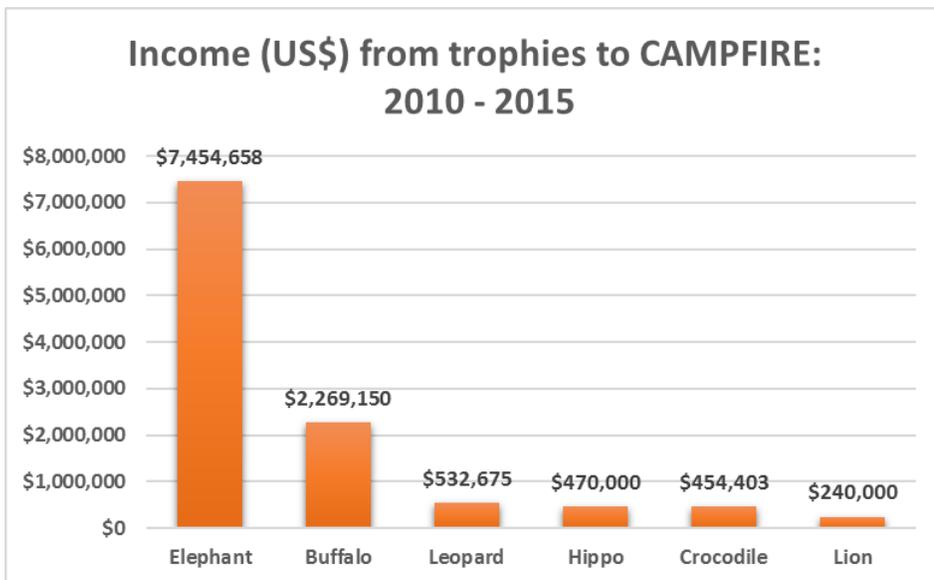


Figure 5: Income (US\$) generated from the sale of key trophies

The importance of the income from elephant is clear from these data. Trophy fees from elephant account for 64% of all fees generated from the key species (approximately US\$1.2 million/year). Buffalo (20%) are ranked second while leopard, hippo and crocodile contribute approximately 5% each. Noteworthy here is the low contribution of lion (approximately 2%). This low level of income generation is partly a result of the impact of the lion import suspension into the USA and Europe, decreasing quota allocations and decreasing offtake levels brought about by the recently imposed lion age hunting regulations. By comparison, the 897 American clients who hunted in CAMPFIRE Areas in the six-year period paid US\$9 million in trophy fees and daily rates. Other nationalities, contributed US\$8 million.

3.3.3 Other Income to RDCs

RDCs can generate income for other revenue streams, notably receiving a percentage of the daily rate, concession fees, bed night levies from photographic camps and from the lease/rent of equipment (Figure 6). The eight RDCs for which data are available generated approximately US\$4 million from these revenue streams. Excluded here are revenues that could have been earned from the sale of ivory recovered from problem animal control (PAC) and natural deaths, and from the distribution of meat estimated at 550,000kg over the 6-year period.

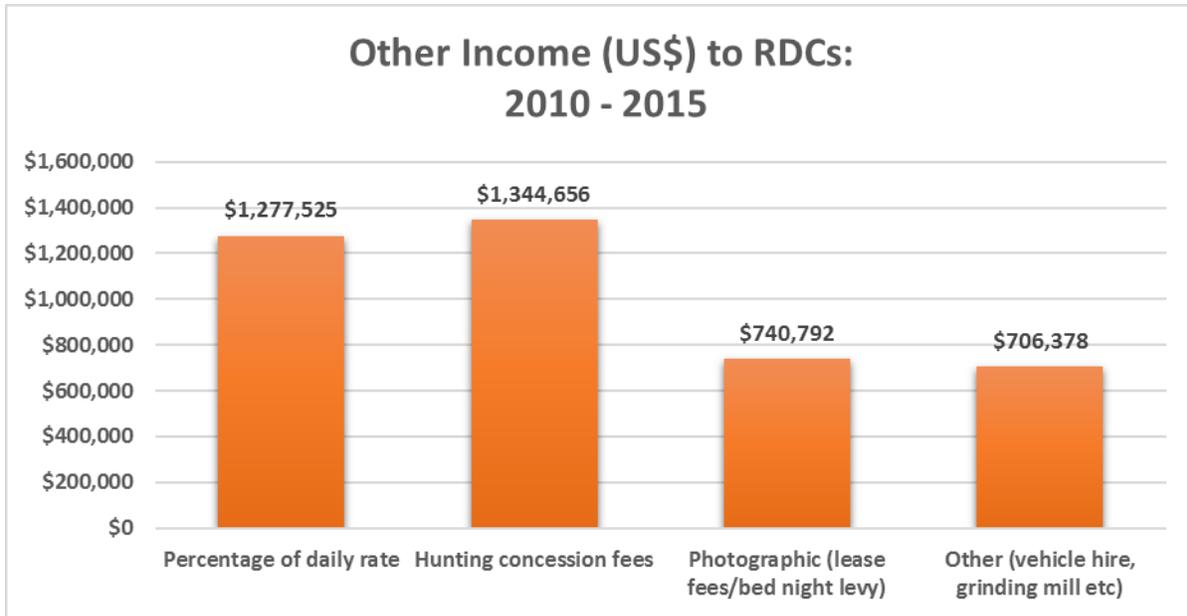


Figure 6: Income (US\$) accruing to the RDCs from related income revenue streams

3.3.4 Benefit sharing: RDC vs Wards

Communities at the Ward level receive funds directly from the outfitter utilizing their area, except for those in Beitbridge and Hwange who are paid from dedicated CAMPFIRE accounts with the respective RDC. These funds are generated through trophy fees and income from the sale of hides, concession fees etc. (Table 3).

Over the last 6 years, the income generated from trophy fees is approximately US\$11 million while a further US\$4 million has come from the sale of hides, concession fees and other sundry income. The agreed split of these funds is that not less than 55% of the revenues is paid as Ward dividends, not more than 35% is allocated to the RDC for wildlife management (habitat management, fire control, monitoring, hiring of game scouts, etc.), and 15% is retained by the RDC as an administrative levy. Some RDCs do not consider all these revenues as “CAMPFIRE Funds” and segregate trophy fees from the other revenues. On average, the CAMPFIRE District Wards received 42% (range 23% - 66%) of the **combined Concession and Trophy Fees**, but the Wards received approximately 58% (range 26% - 77%) of the **Trophy Fees** (Table 3).

Table 3: Summary of the benefit sharing (US\$) of hunting related income between RDCs and Wards: 2010 - 2015

Districts	Income to RDC from trophy fees	Income to RDC from Hides, Concession fees etc.	Income to Wards	% All Revenue share: RDC vs Wards	% Trophy Fee Revenue share: RDC vs Wards
Beit Bridge	\$657,458	\$12,298	\$370,228	55%	56%
Binga	\$299,800	\$364,224	\$162,062	24%	54%
Bulilima	\$521,700	\$46,337	\$403,685	71%	77%
Chipinge	\$349,500	\$139,259	\$135,572	28%	39%
Chiredzi	\$1,848,600	\$181,420	\$1,339,678	66%	72%
Hwange	\$394,000	\$105,131	\$237,245	48%	60%
Mbire	\$3,022,250	\$54,420	\$1,740,714	57%	58%
Nyaminyami	\$1,883,853	\$1,319,772	\$1,132,204	35%	60%
Tsholotsho	\$2,136,000	\$1,990,200	\$1,109,956	27%	52%
Total	\$11,420,886	\$4,213,061	\$6,631,342	42%	58%

4 USE OF FUNDS BY RDCs AND WARDS

The CAMPFIRE Association prepared two templates in conjunction with district based CAMPFIRE Managers that were used as tools to audit the flow of income from safari hunting for the period 2010-2015, and how these funds are used to benefit CAMPFIRE communities. The tools gathered information on the following:

Tool 1: Data related to Rural District Councils

1. Area of district (either sq. km / ha) and total number of wards
2. The income generated by elephant, lion, leopard, hippo and crocodile i.e. Allocated quota (Number), Trophy fee, number hunted (offtake), percentage quota utilization.
3. The origin of the hunters (i.e. USA, Germany etc.) and the value of the safaris extracted from the TRAS2 forms where available. This data provided an indication of the income generation by outfitters.
4. The gross income that CAMPFIRE Districts received from the hunting and photographic activities (i.e. trophy fees, daily rates, concession fees, photographic fees, meat and any other sundry income).
5. Human resources employed at the District level (i.e. number of Wildlife Managers, number of Game Scouts, equipment (e.g., vehicles, patrol equipment etc.), patrol days per year.
6. The use of the funds to support:
 - a. Meetings and Administration (i.e. the "15%" of funds)

- b. Law enforcement (RDC Game scouts, equipment, operational costs etc.)
- c. Compensation schemes (burial expenses, education, payment for hospital expenses etc.)
7. Management activities (fire guards, rehabilitation of water supplies, anti-poaching, problem animal control etc.)
8. Social services i.e. support to clinics, schools etc.
9. Other expenses not related to the above.

Tool 2: Data related to Wards

The following data was summarized for each ward in the District. The data collected at the Ward level was supported with evidence of income and expenditure e.g. copy of accounts, photographs of infrastructure etc.

1. Name of ward and ward number
2. Name and size of hunting area(s)
3. Name and number of village(s) and number of household beneficiaries
4. Income received at Ward level from hunting income, income generating projects from wildlife and other income (grinding mills etc.)
5. Allocation and use of income at Ward level for
 - a. Meetings and Administration
 - b. Wages/salaries
 - c. Compensation schemes (e.g., burial expenses, education)
 - d. Management activities (e.g., fire guards, rehabilitation of water supplies, anti-poaching, problem animal control.)
 - e. Project running costs
 - f. Social services (e.g. clinics, schools, grinding mills, roads, fencing, equipment, boreholes/pumps)
 - g. Food security
 - h. Direct cash benefits (i.e. to individuals, households, if applicable)
 - i. Other
6. Human resources employed at the Ward level (i.e. number of Wildlife Managers, number of Game Scouts, equipment (e.g., vehicles, patrol equipment etc.), patrol days per year.
7. Number of Human and Wildlife Conflict cases by year and type (human death, injury, livestock, infrastructure)
8. Population estimates of major species (where available)

4.1 PROFILE OF RURAL DISTRICT COUNCILS

The data presented here has been extracted from Tool 1. For ease of understanding, these are presented below as follows:

- Characteristics of CAMPFIRE Districts
- Human resources and patrol effort
- Investment in equipment
- Expenditure

4.1.1 Characteristics of the CAMPFIRE Districts

The main parameters of the 10 RDCs (including Hurungwe) that provided data for this analysis are provided in Table 4. These RDCs represent approximately 9 million hectares of which 3.7 million hectares fall under the CAMPFIRE program. These RDCs have entered into agreements with both hunting and photographic outfitters who have invested in 26 hunting camps and 8 photographic camps respectively.

Altogether there are 224 Wards represented in these areas of which 104 are under the CAMPFIRE program. Excluding Hurungwe, there are 737 villages with a minimum of 85,847 households. This represents a community of approximately 600,000 people assuming that the average household is represented by 7 family members.

Table 4: Baseline features of the nine CAMPFIRE Districts

District	Total Area (Ha)	CAMPFIRE Area (Ha)	Hunting camps	Photo camps	Number of Wards	Number of Campfire Wards	Number of Villages	Number of Households
Beit Bridge	1,269,700	310,300	4	1	15	8	15	5,070
Binga	1,230,800	364,000	1	0	25	21	51	19,474
Bulilima	203,300	203,300	1	0	22	13	51	7,767
Chipinge	522,300	40,800	1	1	33	2	15	951
Chiredzi	1,710,239	481,004	5	0	32	9	52	9,461
Hurungwe	1,967,834	529,800	2	1	26	7	N/A	N/A
Hwange	376,963	376,963	2	1	20	18	93	13,980
Mbire	781,000	898,000	6	0	17	9	328	12,302
Nyaminyami	369,931	140,000	3	3	12	6	62	5,875
Tsholotsho	833,600	410,000	2	1	22	11	70	10,967
Total	9,265,667	3,754,167	26	8	224	104	737	85,847

4.1.2 Human resources and equipment employed at the District Level

Each of the RDCs employ staff to manage the CAMPFIRE program in their Districts. The number of people employed and the roles that they play is dependent on the level of income generated by the CAMPFIRE program. The core function of these staff is to monitor wildlife related activities in their respective areas, notably recording and dealing with human and wildlife conflict, coordinating meetings at the Ward level and monitoring outfitter hunting activities.

Most RDCs employ Game Scouts to conduct routine patrols and undertake basic law enforcement activities. In most cases this is low key since the CAMPFIRE program relies on members of the community to report incidents of wildlife crime, and any other matters related to wildlife in their respective Wards and villages.

Table 5: Summary of Human Resources Employed at District Level.

District	Wildlife Managers	Wildlife Officers	Game Scouts	Employees	Patrol Days
Beit Bridge	2	0	0	76	0
Binga	2	0	9	0	48
Bulilima	1	0	4	5	24
Chipinge	1	0	10	0	365
Chiredzi	2	0	8	8	91
Hurungwe	1	1	4	0	31
Hwange	1	0	6	0	144
Mbire	2	0	21	50	255
Nyaminyami	1	0	23	46	112
Tsholotsho	1	0	10	30	162
Total	14	1	94	215	1231

All RDCs have invested in various equipment that are employed on wildlife management activities. The number and type of equipment depends on the level of income and sophistication of the CAMPFIRE program. For example, the relatively wildlife endowed Mbire RDC has invested in a VHF radio system and camping gear for its scout force.

Table 6: Examples of equipment used in the CAMPFIRE Districts.

District	Vehicle (4 x 4, pick up etc.)	Truck	Tractor	Trailer	Grader/Tow Grader	Motor cycle	Bicycles	Radio Base Station	Radio hand sets	Rifles	Tents	Other
Beit Bridge	2	-	-	-	-	-	-	-	-	7	-	-
Binga	1	-	-	-	-	-	-	-	-	-	-	-
Bulilima	1	1	-	-	-	-	2	-	-	-	-	-
Chiredzi	2	-	1	1	1	-	-	-	-	-	-	-
Chipinge	1	-	-	-	-	-	-	-	-	7	-	-
Hurungwe	1	-	-	-	-	-	-	-	-	-	-	-
Hwange	1	-	-	-	-	3	-	-	-	7	1	-
Mbire	3	-	-	-	-	2	20	6	15	-	23	8
Nyaminyami	1	-	-	-	-	-	-	-	-	27	-	10
Tsholotsho	2	-	-	-	-	-	-	-	-	-	-	-
Total	15	1	1	1	1	5	22	6	15	48	24	18

4.1.3 RDC expenditure

CAMPFIRE related expenditure over the 6-year period is approximately US\$6.2 million (or US\$1.0 million/year). Figure 7 represents a breakdown of how the RDCs utilize the income from hunting to support the CAMPFIRE Program in their respective areas. These can be broken down into Administration, Management and Law Enforcement which accounts for approximately 80% of the expenses (or approximately US\$835,000/year). The remaining 20% are used to support various community benefits and are aggregated under Social Services, Compensation and Other² activities. This equates to approximately US\$220,000/year.

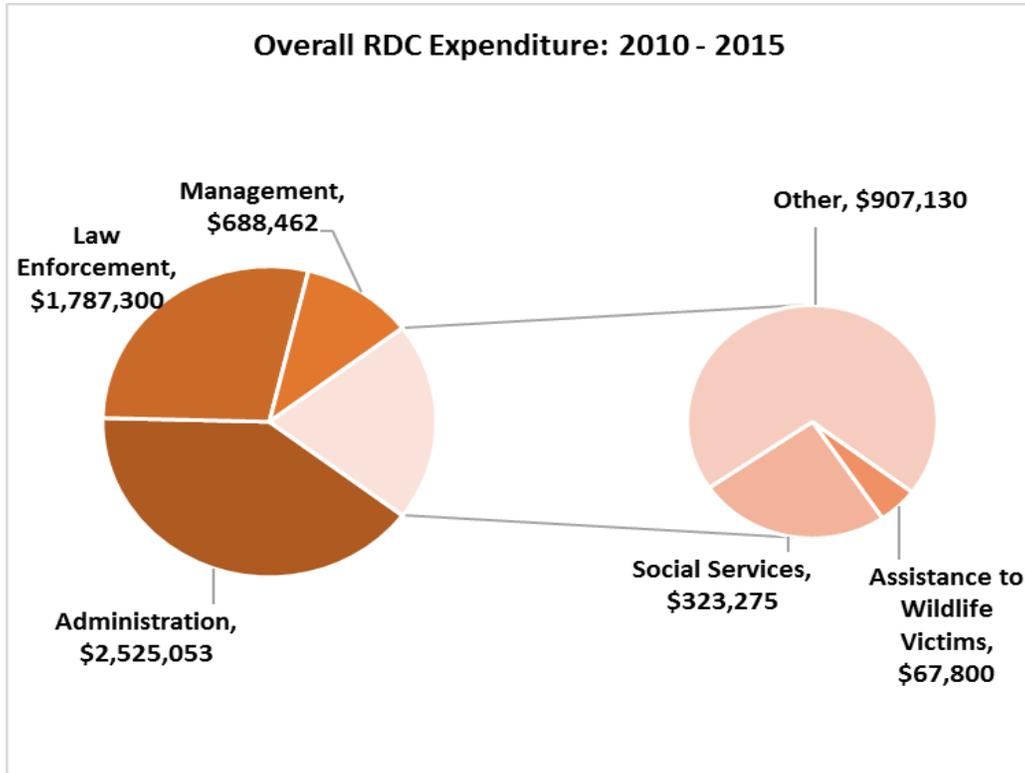


Figure 7: Breakdown of expenditure at the District level on CAMPFIRE program activities

A strategy employed by most RDCs is to invest more in activities related to the management and administration of the CAMPFIRE program rather than on social services. On average, 40% is spent on administration, 20% of law enforcement and 11% on management related expenses while 6% is allocated to support social services. There is no official national compensation scheme, however, RDCs and Wards (including outfitters) assist people and families who are injured or killed by wildlife.

4.2 PROFILE OF CAMPFIRE PRODUCER WARDS

² The “Other” activities have been skewed by the inclusion of a number of expenses registered by Mbire RDC that include construction and maintenance of staff housing, promoting and managing a community cattle production scheme and purchasing vehicles and office equipment.

The data presented here has been extracted from Tool 2. For ease of understanding, these are presented below as follows:

- Human resources and patrol effort
- Human and Wildlife Conflict
- Investment in equipment
- Expenditure

4.2.1 Human Resources, Patrol Effort and Equipment

Table 7 represents the decision that the CAMPFIRE producer Wards elect to invest in their respective CAMPFIRE Programs. Each Ward is required to establish a Wildlife Committee to which at least 7 members are elected from the villages located in that ward. Each Wildlife Committee employs several people either as ward based monitors or as Game Scouts. This workforce is responsible for approximately 2.6 million hectares of land and represents the 85,847 households that reside in the 737 villages.

The decision to invest in equipment is dictated by the level of income that each producer Ward receives, and the ability of the Ward to service and maintain the equipment in the long term. The records kept at the Ward level under estimate the number of patrol days (minimum 3,002/year) achieved.

Table 7: Average number of staff employed at the Ward level, patrol effort and investment in equipment

District	Number of Wildlife Committee members	Number of Employees paid by community	Number of Game Scouts paid by community	Patrol days per year	Equipment (e.g., vehicles, tractors, grinding mills)	Concession Area (Ha)	Number of Villages	Number of Households
Beit Bridge	66	1	3	152	1	324,300	15	5,070
Binga	7	-	-	-	-	364,000	51	19,474
Bulilima	-	-	100	7	-	193,984	51	7,767
Chiredzi	56	32	-	-	3	N/A	52	9,461
Chipinge	9	5	5	1,584	4	9,400	15	951
Hwange	49	-	-	-	-	342,750	93	13,980
Mbire	76	90	48	1,259	19	898,000	328	12,302
Nyaminyami	45	30	12	-	-	140,000	62	5,875
Tsholotsho	77	2	-	-	1	410,000	70	10,967
Total	385	161	168	3,002	28	2,682,434	737	85,847

4.2.2 Human and Wildlife Conflict and Problem Animal Control

Communities living in CAMPFIRE areas are on the front line and are required to deal with wildlife problems almost on a daily basis. Table 8 below provides a summary of the magnitude of human and wildlife conflict (HWC) recorded over a 6-year period (2010 – 2015) in 9 CAMPFIRE Districts.

Conflict with wildlife falls under two areas: crop damage and livestock deaths. While there are many other wildlife species responsible for crop damage (baboons, monkeys, bushpig, rats, quelea birds etc.), elephant are considered the greatest threat and problem.

Although the data are incomplete, it is estimated that 7,000ha of crops were destroyed by elephant during the 6-year period under review. It is not possible to accurately place a monetary value to this because crop production varies greatly from one year to the next, and from one region to another. It is important however to take into consideration that the impact of crop destruction in the highly prone drought areas and areas of low rainfall (e.g. Beit Bridge, Binga, Tsholotsho) is more acute than in areas where crop production may be higher. To place this into perspective, the national average maize yield is estimated at 300 – 600kg/ha, and the minimum cash value is US\$180/ton³. The approximate value of the maize lost is therefore US\$500,000 – US\$1.0 million. Applying this to livestock losses, the average price of cattle is US\$400 – US\$700/head depending on the time of year and condition of the livestock. Lion and crocodile are responsible for most cattle deaths and at these prices, the value of stock lost to these predators is US\$500,000 – US\$1.0 million. Hyena equally destroy cattle but are more likely to kill small livestock (goats, sheep). At US\$75 – US\$125/head, the minimum cost of predation on small livestock is estimated at US\$170,000 – US\$300,000 (Table 8).

Table 8: Summary of the extent of human – wildlife conflict recorded in CAMPFIRE Wards: 2010 - 2015

District	Crop Damage (estimated Ha)			Livestock killed (cattle, goats, sheep)				Human deaths
	Elephant	Hippo	Buffalo	Lion	Leopard	Crocodile	Hyena	
Beit Bridge	268	-	1	3	-	-	30	4
Binga	26	35	-	1	-	32	29	7
Bulilima	522	-	-	5	-	-	231	-
Chiredzi	18	9	-	122	-	21	-	2
Chipinge	22	10	-	5	-	7	-	7
Hwange	461	-	-	71	2	15	-	2
Mbire	3,878	475	1,146	426	52	416	1,870	53
Nyaminyami	1,216	49	102	59	6	9	-	13
Tsholotsho	1,085	-	20	175	19	-	211	8
Total	7,495	578	1,269	867	79	500	2,371	96
	9,342ha			3,817				
Cost (US\$)	@300kg/ha*\$180/ton	\$504,473	Cattle@\$400 - \$700/head		\$546,800 - \$1,040,400			
	@600kg/ha*\$180/ton	\$1,008,947	Small livestock@\$75 - \$125/head		\$177,825 - \$296,375			

Communities who live with wildlife also pay the ultimate price and 96 people have lost their lives and others injured after encountering dangerous animals. Crocodile and hippo are responsible for most human deaths and injuries but there are many incidents where elephant have killed and maimed people who were tending their fields or traversing wildlife areas.

³ Note: the official price for maize is approximately \$350/ton but sellers rarely receive this price from the millers and other interested buyers.

Table 9 summarizes the incidents of problem animal control and illegal activities recorded in the 9 major CAMPFIRE RDCs (data extracted from The Proceedings of the CAMPFIRE workshop, Gandiwa et. al. 2014).

Table 9: Summary of problem elephant destroyed and through illegal activities in 9 CAMPFIRE Districts

	2009	2010	2011	2012	2013	2014	Total
Conflict	250	283	340	208	295	478	1854
PAC	55	66	41	33	36	66	297
Illegal	7	14	12	11	16	19	79

It is not unexpected that local communities will seek to mitigate these losses either through retaliatory killings (this applies mostly to the carnivores) or through removal of problem animals. With respect to elephant, it is important to understand the relationship between trophy hunting, problem animal control and illegal offtake. The interactions amongst all three variables are not simply additive. For example, a relatively small offtake of problem animals can have a significant influence on the mean tusk weight of hunting trophies taken from the population and, hence, the income derived from hunting. Martin (pers. comm.) uses a population simulation model (Craig et. al. 2011) to carry out an analysis to examine these interactions. This model assumes that Problem Animal Control (PAC) is selective, and that most of the elephants killed are males between the ages of 13-36 years old and females between the ages of 22-42 years old. Moreover, more males are killed than females (5:1).

Martin demonstrates that the combined effect of trophy hunting quotas and level of PAC shows that in a scenario where there is no PAC, trophy hunting quotas can be set ranging from 0.1 - 0.6 % of the population. However, as PAC increases, so the trophy hunting quotas must be decreased to maintain trophy quality. The magnitude of the changes caused by relatively minor increments in PAC are highly significant. The modelling shows that increases in the trophy hunting quotas and PAC offtake causes only a minor drop in the rate of increase of the population which remains above 4% per annum, however, if the PAC offtake exceeds 1% of the population, then hunting quotas should not exceed 0.1% of the population. Unless these ratios are maintained, there is a real risk that the elephant populations will decline with the consequential loss of income from sport hunting.

Currently Zimbabwe adheres to quotas set at 0.3 – 0.4% of the population, and slightly higher in the CAMPFIRE areas. The PAC levels shown in Table 9 do not approach these critical thresholds, however, close attention needs to be paid to trophy quality and age (see discussion of elephant hunting in Mbire - in The Proceedings of the CAMPFIRE workshop, Gandiwa et. al. 2014).

4.2.3 Beneficiaries of CAMPFIRE Income at the Ward Level

The beneficiaries of revenues from the CAMPFIRE program are the community's resident in the producer Wards. However, the volume of people residing in these areas precludes providing individuals with direct dividends since the value of such dividends would be meaningless. The CAMPFIRE wards have therefore elected to invest in projects that provide social services to the whole community and only in special circumstances are dividends paid out for food security and direct cash benefits.

Table 10: Examples of Social Services funded in selected CAMPFIRE areas from Ward Revenues generated from sport hunting: 2010-15

District	Project
Beitbridge	Rehabilitation of schools, clinics and protection of irrigation schemes
Bililima	Rehabilitation of 3 clinics and 3 primary schools, hall, fencing of fields and rehabilitation of lodge, community truck, tractor, dam repair machinery.
Chipinge	3 grinding mills, lorry, teachers houses, community office, shop
Chiredzi	Clinic, teachers' houses, primary school, community-grinding mill, Police sub-office, piped water and electrification of clinic.
Hurungwe	Construction of classroom block Nyamakate Secondary, Maintenance of Nyamakate bridge. Purchase of tractor tube, payment of carpenters, Roofing Chipfuko Primary School and Huyo Secondary School, CAMPFIRE Ward tractor major service, Purchase of Treasurers bicycle, Payment of Nyamakate Clinic guard, 7 resource monitors allowances, 26 bag cement Chitindiva, Kabidza, Manyenyedzi and Mawau schools for toilets construction, renovation Karuru School (5 bags cement), and toilet construction, Chitindiva Clinic toilet construction, Roofing Chikova Secondary School, Purchase of buiding materials Chikova Secondary Block, Painting Dete Primary School, Building toilets Makwiye school, Building shed Mupuse school, Roofing Bhashungwe primary school, Sanyati Bridge camp renovation, Purchase of Cement Tashinga Primary School, 6 pairs uniform for resource monitors, Purchase of 20 bags cement Chisipite Primary School, Purchase of tires for Ward tractor, Bridge maintenance
Mbire	Clinic, nurse's houses, office, storerooms, 14 classrooms, 7 teachers houses, grinding mill, school office, wildlife administration offices, 2 hand pump boreholes, water piping, toilet, water storage tanks, 2 tractors, a basic tourist camp with 4 chalets;
Nyaminyami	Tillage tractors, renovation of dispensary at clinic, nurse's house. Construction of Mayovhe classroom block, 3 grinding mills, Teacher's house, Jongola school. School bursaries x 3 students at Seke Teacher's College. Renovation of pre-schools x 2. Negande: Rehabilitation of water pipeline, grinding mill. Nebiri: Chikuro primary block, rehabilitation of Harudziva water pipeline. Kasvisva: Rehabilitation of water pipeline to supply water to Kasvisva clinic, Kasvisva Secondary school block. Msampa: Teacher's house, Majazu primary, renovation of ward warehouse; Kanyati: Cement for teacher's house renovation.
Tsholotsho	Classroom blocks and furniture (Sihazela, Mlevu, Mtshwayeli, Ntulula, Dibutibu, Gwaai, Nkwizhi, Zibalongwe, Malindi, Mgodimasili, Phelela, Mpilo, Jimila, and Kapane Primary schools), 2 F14 cottages, 10 sewing machines (Dibutibu Secondary school), 7km piped water system for Thembile primary school, Sikente Clinic, Tshitatshawa and Jowa clinics construction, fencing of Madlangombe clinic, 10 water engines, borehole drilling and repairs and repair kits, Lister diesel engines for 6 villages in ward 21 and at Sihazela Line in ward 1, grinding mills, solar water pumping in wards 1, 2 and 4. 2 pickup trucks for wildlife monitoring purchased in 2015.

Figure 8 summaries the distribution of the US\$5.4 million that Wards in 9 CAMPFIRE areas received over the 6-year period under review (2010 – 2015). As with the District expenditure, the Ward Wildlife Committees allocate 42% of the funds (US\$2.2 million) for administrative functions (i.e. Meetings and Administration, Wages and Salaries, Management and Projects) and 55% of the funds (US\$2.9 million) to

community benefits. Most of the funds are allocated to social services (US\$2.4 million) that support schools, clinics and other infrastructure that benefit the whole community. Examples of this support are provided in Annex 1.

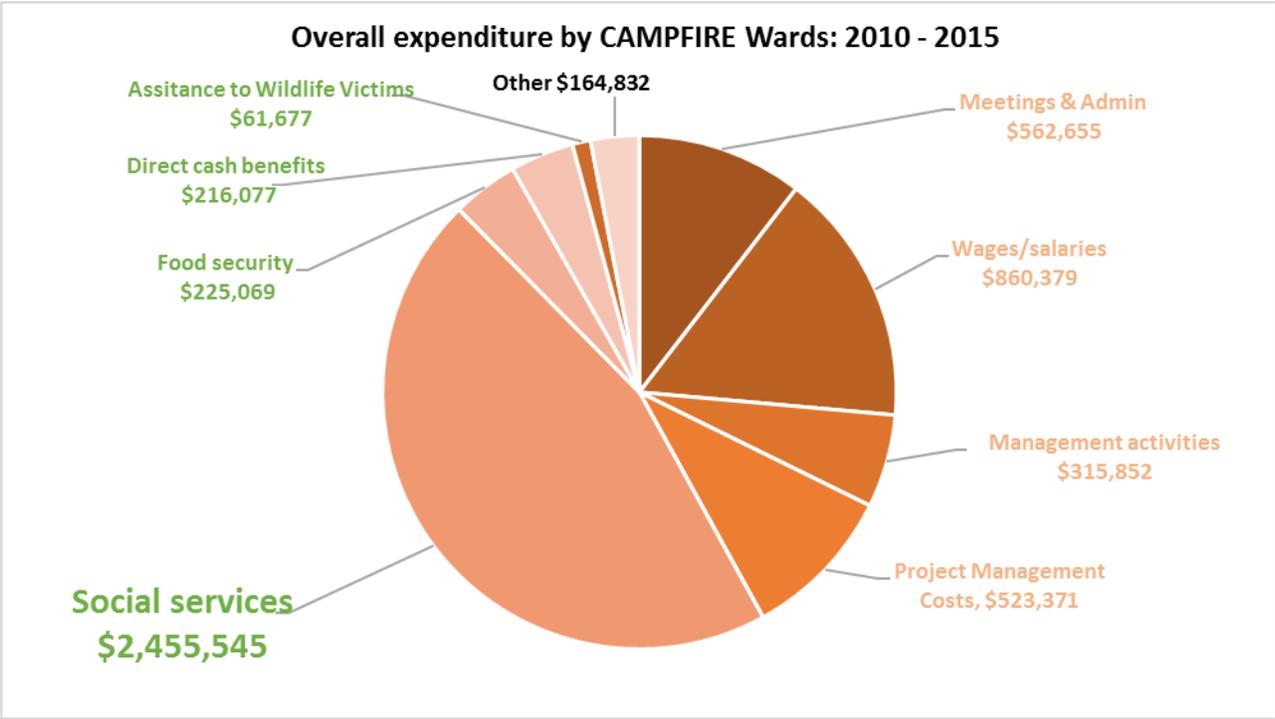


Figure 8: Allocation of Ward Campfire funds

5 IMPACT OF THE SUSPENSION OF ELEPHANT TROPHY IMPORTS TO THE UNITED STATES ON THE CAMPFIRE PROGRAM

The income to CAMPFIRE from the sustainable use of elephants has been declining since 2013, with 2014 registering a significant drop following the announcement of the ban on ivory imports into America (Figure 9). Although the hunting industry responded by seeking alternative markets (e.g. Russia, Middle East), this trend continued through 2015 and unconfirmed reports suggest that the decline has continued in 2016.

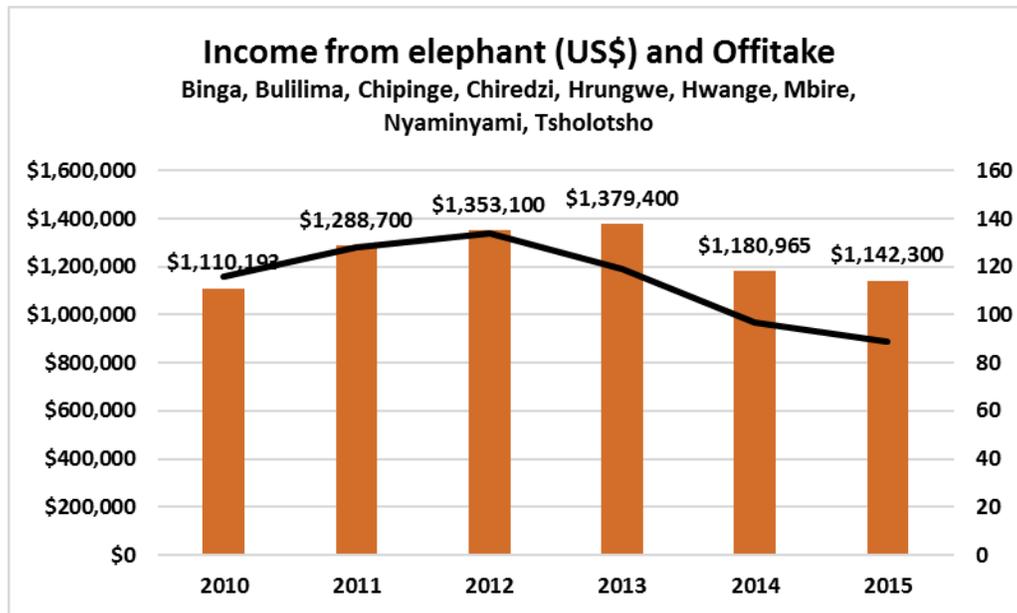


Figure 9: Annual income (US\$) and offtake of elephants in 10 CAMPFIRE Districts

It is difficult to show concisely how the American ban on importation of elephant ivory from Zimbabwe has contributed to the decline in CAMPFIRE revenue and how hunting has enhanced the conservation of this species, due to the nature of the hunting industry in the CAMPFIRE areas. The hunting sector is integrated across a wide range of socio-economic activities and withdrawing one segment adversely affects a range of other wildlife based activities. Several indicators are provided here to demonstrate this:

1. The US suspension of ivory imports from Zimbabwe has had a significant impact on CAMPFIRE, and resulted in the cancellation of 108 out of 189 (57%) elephant hunts in all major districts initially booked by US citizens in 2014. The net impact of this was a reduction of CAMPFIRE income for all areas from US\$2.2m in 2013 to US\$1.7m in 2014. A similar pattern prevailed in 2015 (US\$1.6m), and a further decline is anticipated in 2016 where outfitters struggled to sell elephant safaris and those that did had to heavily discount their prices.
2. The key trophy species (elephant, buffalo, leopard, hippo, crocodile and lion) contribute approximately US\$1.2 million/year to CAMPFIRE revenues. Elephant account for 64% of these fees.

3. Quota utilisation of elephant prior to the ban did not exceed 60% of the CAMPFIRE quota allocation.
4. American hunters make up 53% of the clients in CAMPFIRE areas.
5. CAMPFIRE producer Wards receive on average 57% of all trophy revenues.
6. The CAMPFIRE hunting industry in the 9 RDCs covered in this analysis directly supports 104 producer Wards, representing 737 villages or 85,847 households.
7. The CAMPFIRE program employs managers, officers and game scouts at both the District and Ward level who are responsible for monitoring wildlife based land use activities in their areas and these are directly paid from safari hunting income.
8. Both RDCs and Wards invest in a variety of equipment that benefits communities and wildlife management. The operational and maintenance costs for this equipment are drawn from safari hunting income.
9. RDCs utilise 80% of the CAMPFIRE revenues to support administration and management of the program. 20% is invested in global social services that benefit communities at the District level.
10. Producer Wards, representing approximately 2.6 million hectares, bear the cost of living with wildlife. Under the 6-year period under review, elephants are responsible for the destruction of approximately 7,000ha of croplands in the 9 Districts. The minimum cost of this in terms of food production is estimated at US\$500,000 – US\$1.0 million.
11. Producer Wards have elected to invest 55% of their dividends from CAMPFIRE revenues in social services (schools, clinics etc.). 74% of these revenues are generated through trophy fees where elephant play a significant role.
12. Although CAMPFIRE communities suffer most from elephant crop damage, the number of elephant destroyed as problem animals is well within acceptable limits and with few exceptions, has little or no impact on population numbers.

In conclusion, the CAMPFIRE program relies almost exclusively on revenues generated through hunting. These revenues cannot be replaced through alternative wildlife based activities. This places almost two million hectares of wild land at risk, including the risk of increasing retaliatory killing through poisoning and illegal wildlife crime.

Wildlife in Communal Lands is under pressure. Removing any benefits will tip the balance and disgruntled CAMPFIRE communities will turn to pastoralism and unsustainable agricultural practices, thereby reducing wildlife habitat. The suspension of trophy imports is effectively encouraging communities to become willing tools for poaching – a forced abandonment of CAMPFIRE.

6 THE WAY FORWARD

The ZPWMA has recently developed and approved its 5-year Elephant Management Plan (ZPWMA, 2015). This plan recognizes that if elephants are to survive in the future, they must have a value, both to the governing authorities and to the local people. Unless the local communities, who live closest to elephants, are tolerant of this charismatic yet destructive species, it is unlikely that they will survive in the long term.

The Elephant Management Plan recognizes that *“regulated sport hunting converts wildlife into assets for the benefit of local people and the country as a whole. Wildlife can be a most valuable asset and in turn empower local communities and provide basic necessities. When it is viewed as a valuable asset, wildlife becomes an economically competitive land use in Zimbabwe, which leads to habitat preservation instead of habitat destruction and conversion to agriculture or livestock production.”*

The presence of regulated hunting can also reduce illegal activities, and private outfitters' lease agreements are being reviewed to include anti-poaching as an obligation of the concessionaire. Trophy hunting revenues are vital to facilitating not only law enforcement activities but also general wildlife management. Alternative wildlife land use practices, e.g. eco-tourism, cannot generate sufficient revenues to cover these costs, and certainly not to justify wildlife as a land use outside of protected areas.

Hunting can generate revenues under a wider range of scenarios than eco-tourism, including in remote areas lacking infra-structure, attractive scenery, or high densities of viewable wildlife. Consequently, elephant and other wildlife populations will be negatively affected through reduced conservation efforts arising from low funding and reduced goodwill from the communities.

CAMPFIRE has been widely regarded as one of Africa's most successful contemporary conservation initiatives. Hunting of elephants plays an integral part in promoting CAMPFIRE as it permits the residents of communal lands to share in the benefits generated by wildlife utilization on those lands.

As shown above, the bulk of CAMPFIRE's revenue comes from hunting, with elephant hunting contributing more than 60% of annual revenue. The current revenue sharing guidelines require safari outfitters to pay revenue directly into community-controlled bank accounts and this has had a positive impact on community attitudes to wildlife conservation. These funds have been used by RDCs and producer Wards to promote wildlife conservation, but despite its achievements, CAMPFIRE still faces fundamental challenges.

The most crucial of these challenges is developing strategies to accommodate the increasing human populations averaging 16-20 people per km² in some key CAMPFIRE areas. Understandably, the focus of these households is on food security requiring the extension of basic agricultural schemes and increased livestock numbers. Such land uses are incompatible with wildlife based land use.

Other CAMPFIRE challenges include: (i) the downturn in Zimbabwe's economy and tourism sector post-2000, (ii) great reliance on consumptive trophy hunting and less focus on other uses and non-consumptive uses of natural resources due to viability considerations, and (iii) low re-investment in development, fixed assets, human capital, and management and protection of wildlife in CAMPFIRE areas.

Despite these challenges, CAMPFIRE stands very high in the agenda of Zimbabwe's Government, and an evaluation dedicated to improving the program is ongoing and should be finalized by the end of 2017. Zimbabwe's Government recognizes that the survival of wild animals depends entirely on those among whom they live. Unless local people want to save them, wildlife will be poached to the point where just a few remain in fortified reserves. CAMPFIRE is meant to avoid this and the future of wildlife in communal areas rests on the success of this program.

The hunting of elephants, under sustainable and well-regulated conditions, has the potential to raise adequate funds to support itself and other species in CAMPFIRE areas. For these reasons, Zimbabwe confirms its commitment to the sustainable use of elephant and other wildlife in its Elephant Management Plan, and recognizes the role that elephant play in the CAMPFIRE program.

7 ANNEX 1: EXAMPLES OF SOCIAL SERVICES PROJECTS SUPPORTED BY CAMPFIRE FUNDS AT THE DISTRICT AND WARD LEVEL

CHINONGE WARD Binga District: Clinic under construction and example of Ward bank statement.



Results 1 - 11 of 11

Account Statement
 Account : 10300008919
 Customer : 174696
 Address 1 CHINONGE WARD CAMPFIRE FUND
 Address 2 CHINONGE WARD CAMPFIRE FUND
 Address 3 BOX 23 BINGA

Currency : USD
 Name : CHINONGE WARD CAMPFIRE FUND

Value date	Description	Reference	Post date	Debit	Credit	Amount
	Balance at Period Start				3,030.45	
16 SEP 14	Cash Withdrawal Charge	TT14259HDYZH	16 SEP 14	-29.30		3,001.15
16 SEP 14	Cash Withdrawal 06011533Z06 NEVER NDLOVU	TT14259HDYZH	16 SEP 14	-2,930.00		71.15
01 OCT 14	Ledger Fees	10300008919-2014093	30 SEP 14	-12.50		58.65
01 OCT 14	Service Fees 10300008919	10300008919.SERVICE	30 SEP 14	-2.00		56.65
01 NOV 14	Ledger Fees	10300008919-2014103	31 OCT 14	-12.50		44.15
01 NOV 14	Service Fees 10300008919	10300008919.SERVICE	31 OCT 14	-2.00		42.15
10 NOV 14	TRANSFER LODZI HUNTERS	FT143140JG30VRE	10 NOV 14		2,800.00	2,842.15
10 NOV 14	TRANSFER LODZI HUNTERS	FT143150JG40VRE	11 NOV 14	-2,800.00		42.15
10 NOV 14	TRANSFER LODZI HUNTERS	FT143150JG41VRE	11 NOV 14		2,800.00	2,842.15
01 DEC 14	Ledger Fees	10300008919-2014113	29 NOV 14	-12.50		2,829.65
01 DEC 14	Service Fees 10300008919	10300008919.SERVICE	29 NOV 14	-2.00		2,827.65
	Balance at Period End				2,827.65	

Beit Bridge CAMPFIRE Program: Masera Secondary School Classroom Block and Staff Housing



Tsholotsho RDC: CAMPFIRE Vehicles, Tshitatshawa Clinic under construction in Ward 8, Tsholotsho CAMPFIRE District Wildlife Committee, Hunting Camp, and solar powered 7km piped water scheme



8 REFERENCES

- Chitauro. 2016. Status of the hunting sector in Zimbabwe. Internal report prepared by the Director of Exchange Control on behalf of the Reserve Bank of Zimbabwe. Unpublished.
- Craig G.C., Martin, R.B. and Peake, D.A. 2011. The Elephants of Northern Botswana: Trophy Hunting, Population Dynamics and Future Management. Study funded by the Conservation Trust Fund (CTF) of the Ministry of Environment, Wildlife and Tourism, Botswana. Awaiting publication.
- Dunham, K.M. 2008. Detection of anthropogenic mortality in elephant *Loxodonta africana* populations: a long-term case study from the Sebungwe region of Zimbabwe. *Oryx*, 42, 36– 48.
- Dunham, K.M. Mackie, C.S. and Nyaguse, G. 2015a. Aerial Survey of Elephants and other Large Herbivores in the Zambezi Valley (Zimbabwe): 2014. Great Elephant Census, Vulcan Inc., Seattle, WA, USA. 118 pp.
- Dunham, K.M., Mackie, C.S., Nyaguse, G. and Zhuwau, C. 2015b. Aerial Survey of Elephants and other Large Herbivores in north-west Matabeleland (Zimbabwe): 2014. Great Elephant Census, Vulcan Inc., Seattle, WA, USA. 126 pp.
- Dunham, K.M., Mackie, C.S., Nyaguse, G. and Zhuwau, C. 2015c. Aerial Survey of Elephants and other Large Herbivores in the Sebungwe (Zimbabwe): 2014. Great Elephant Census, Vulcan Inc., Seattle, WA, USA. 111 pp.
- Dunham, K.M. & van der Westhuizen, H.F. 2015d Aerial Survey of Elephants and other Large Herbivores in Gonarezhou National Park and Save Valley Conservancy (Zimbabwe): 2014. Great Elephant Census, Vulcan Inc., Seattle, WA, USA. 115 pp.
- Gandiwa, E., Jonga, C. and Mufute, O. (editors). 2014. *Proceedings of the CAMPFIRE stakeholders' workshop: Towards the development of a new Elephant Management Plan and Policy*. Harare, Zimbabwe, 17–18 November 2014.
- Jones, B. and Murphree. M. 2001. The Evolution of Policy on Community Conservation in Namibia and Zimbabwe. In: *African wildlife and livelihoods: The promise and performance of community conservation*. (Eds. D. Hulme and M. Murphree). James Currey, Oxford.
- Khumalo, A. 2003. CAMPFIRE Monitoring and Evaluation Data, 2001. WWF SARPO, Harare.
- Mazambani, D. and Dembetembe, P. 2010. *Community Based Natural Resource Management. Stocktaking Assessment: Zimbabwe Profile*. Publication produced for review by the United States Agency for International Development (USAID). It was prepared by DAI in collaboration with World Wildlife Fund, Inc. (WWF).
- Murphree, M.W. 1993. Communal Land Wildlife Resources and Rural District Council Revenues. CASS Occasional Paper No.53/93. 10pp.
- ZPWMA. 2015. Zimbabwe National Elephant Management Plan (2015-2020). Ministry of Environment, Water and Climate. Harare, Zimbabwe. 84 pages.