Review Article

Enhancing Sustainable strategic management practices at the Zimbabwe National Parks and Wildlife Management Authority: A post 2000 survival strategy

Chavunduka Desderio[1], Muchanyukwa Lawrence[2], Sifile Obert[3], Mamimine Patrick[4]

[1,2,3,4] Chinhoyi University of Technology

Corresponding author: dchavunduka@gmail.com

Abstract*:* Despite the tourism sector having great potential for growth in Zimbabwe, the contribution of wildlife to the country's GDP has decreased in the post 2000 era. This makes it necessary to examine practices in wildlife management to determine the strategies that might enhance sustainable tourism especially in protected areas. A self administered questionnaire was given; face to face interviews and focus group discussions were conducted as primary data collection tools. Despite all efforts made to control and protect wildlife, there is need for involvement of local communities in wildlife management as community-based conservation in particular has been subjected to a series of scathing criticism and it has become increasing unacceptable to advocate for a return to more coercive forms of conservation. The study recommends that the Zimbabwe National Parks and Wildlife Management Authority to integrate their efforts with those of the private sector. Effective conflict prevention mechanisms need to be developed together with the communities especially in the implementation process.

Keywords: Conservation, Management practices, Sustainable development, Wildlife management.

Introduction

In Zimbabwe, the area occupied by national parks, safari areas, recreational parks, botanical reserves and sanctuaries (collectively called the Wildlife Estate) totals about 47000 km$^{2;}$; 12.5% of the total land area (Mutandwa and Gadzirayi , 2007). These areas enjoy the highest protective legal status. They are is managed by the Department of National Parks and Wildlife Management Authority (DNPWLMA) which is also responsible for wildlife resources throughout the country. Most of the Wildlife Estates are located in remote or rugged terrains; hot and dry; and have shallow, infertile soils of low agricultural potential. Nevertheless, population pressure is forcing settlers into these areas where they are trying to introduce and maintain the type of agricultural practices that have been developed in less fragile regions. This migration into these areas has created conflicts between people and wildlife (Mutandwa and Gadzirayi, 2007). Even today most people do not appreciate the existence of National Parks (Martins, 2002).

In 1981, the new government amended the 1975 Parks and Wildlife Act Chapter 20:14 and gave the right to own, manage and benefit from wildlife to rural people if they applied for Appropriate Authority Status (AAS). This new development gave birth to Communal Area Management Programme for Indigenous Resources (CAMPFIRE) projects. Local communities participating in CAMPFIRE projects are enjoying the fruits of wildlife management. At least 52 out of the 57 Rural District Councils (RDC) in Zimbabwe are involved in CAMPFIRE projects (Mutandwa and Gadzirayi, 2007). The year 1997 saw the conversation of the Department

of Wildlife to a Statutory Fund. The Agrarian Land Reform Programme of 2000 resulted in some groups being allocated land in national parks, example, the resettlement of the Chitsa people in Gonarezhou. This negatively affected the running of National Parks and conservation of wildlife (FAO Report 2003).

In 2003, the ZNPWMA was commercialized but the boards of directors are still appointed by the government. This has an effect on the management of wildlife in national parks as some of the appointed board members do not have the required knowledge in the management of these national parks. Of late there is the Indigenization Act of 2008 which gives 51 % stake to the black majority in all sectors in Zimbabwe. This is causing a lot of havoc in the Save Valley Conservancy.

The Post 2000 era ushered in a new dimension in terms of best practices in Zimbabwe National Parks. However the greatest threat facing national parks together with other protected areas in Zimbabwe is that the ZNPWMA is underfunded compared to other international parks like the Yellow Stone Park and Kruger National Park in South Africa, which have become models in park management because they have set the pace to the conservation of wildlife The tourism industry in Zimbabwe hinges on wildlife and tourism in Zimbabwe contributes 33% of the GDP after agriculture and mining (Murphree, 2004).

Campfire fact sheet (2008) states that wildlife contributes over US$ 250 million annually to the country's GDP (one-quarter of the total contribution made by agriculture) through safari hunting, game cropping, tourism and live animal sales. Safari

hunting generates substantial foreign exchange and provides direct employment for local populations. It also contributes to the development of secondary industries, such as skin and hides processing and ivory carving. Although subsistence hunting is still illegal in most of the country, game cropping provides animal protein to people in the communal lands (Murphree, 2004).

According to Ritchie and Crouch (2003) the challenge faced by the authorities in the conservation areas is to manage its various components in a way that ensures their economic profitability while avoiding degradation of the factors that create their competitive advantage. Despite tourism being one of the fastest growing industries, the contribution of wildlife to the country's GDP has decreased in post 2000. The issue of strategic management and sustainable development in protected areas have been brought to light independently in the last two decades as a consequence of the steady development of tourism from both the demand and supply side, (Keller, 2000). However, little attempt has been made in previous research to integrate these two concepts. In view of these, this study was set to assess the perceptions of management at ZNPWMA in the implementation of sustainable practices as a survival strategy and determine strategies that might be implemented to enhance sustainable tourism in the protected areas. This was achieved through the cross - examination of the strategies implemented by the ZNPWMA and what it has done as best practices in sustainable tourism development and wildlife management in the post 2000 period.

The ZNPWMA as the sole and ultimate authority in wildlife management authority in Zimbabwe, just like any other authorities in the southern region, has also managed to enhance management practices with the major aim of achieving sustainable management of wildlife in the post 2000 period. Zimbabwe as a country is a signatory to several important international and national frameworks for sustainable resources use, majority of which emerged from United Nations Conference on Environment and Development (UNCED) held in Riode Janeiro in 1992 (Mutandwa and Gadzirayi, 2007). The principle of sustainable use of wildlife resources forms the basis of the widely acclaimed CAMPFIRE projects in Zimbabwe. The CAMPFIRE projects are an example of the community base wildlife management in Zimbabwe.

Wildlife in Zimbabwe is important for one major reason, that is, it is a source of income in tourism. The government of Zimbabwe regards wildlife management as a valuable, legitimate and sustainable land use system, which may be most appropriate in agriculturally marginal areas. That is the reason why the government took a bold positive step in 1975 in area of wildlife conservation by putting provisions in the Parks and Wildlife Act which allowed the custodial ownership of wildlife landholders and the Act was a quintessential breakthrough for conservation. Also National Parks are one of the Zimbabwe's tourism industry trump cards according (Murphree, 2004). Wildlife is one of the major tourist

attractions to Zimbabwe, hence the financial gains from tourism are. If wildlife is not correctly or properly managed, the tourism industry will dwindle as a source of economic prosperity in Zimbabwe.

Conservation and sustainable development

The conservation and sustainable development of nature are essential requirements for the future well-being of human and other life on earth (Nelson, 2003; Murphy, 2007). There is need therefore for the regulation of human activity on the environment so that their influence can provide economic, social and environmental benefits for future generations. This implies the ability to use the resources in a replicable manner (sustainability). Both the department of National Parks and Wildlife Management and the community have a very important role to play to achieve sustainability (Chardonnet et al, 2005; Berger, 2006; Wunder, 2007).

There has been a population increase in areas around the protected areas in Zimbabwe in the last twenty years (Wunder, 2007) and this fact has resulted in a dramatic conflict between the communities and the parks. The general population perceives the national parks as being elitist, intended primarily for tourists, as an income producer or status symbol for a privileged few, or as the locking up of resources needed for basic food or shelter for the needy. Pienaar (2010) and McGregor (2004) underscore the importance of sustainable utilisation of wildlife in ensuring food security, an ecological importance as well as having a health importance.

In order to determine the sustainability of rural economies near conservation areas, social and demographic analyses of the local human populations are required (Osborn & Parker, 2012; Baldus; 2008). According to Woodroffe et al (2007), one of the major challenges in nature conservation is to reconcile all the many interests involved. This arises from the different interests politicians, local communities, farmers, conservation NGOs, conservation agencies and the general public. It appears that in the past, the interests of local communities have been almost entirely neglected (Friedman, 2007) yet these are not peripheral to conservation matters. Effort must be made to gain the understanding and active participation of local people in the establishment, management and monitoring of conservation areas (Liebenberg, 2010; Young, 2012; Marchand, 2012).

The Wildlife Management Models

This study focused on three broad models of wildlife management, each with different strategies for ownership, funding sources, and wildlife utilization laws. Although each model has fundamental contextual differences, Baldus (2008) emphasized that one can still be able to compare them based on simplified, measurable outcomes, such as wildlife trends and economic revenues. Each model's relative strengths and weaknesses are to be highlighted in this study. In general, Asia's model is characterized by state or governmental ownership, and Africa's by community-ownership of land by large private or corporate holdings (also common in Latin

America). In contrast, North American model is characterized by public ownership of wildlife.

Table 2.1: Summary of wildlife management models in use

	North American Concept	**Southern African Concept**	**No Hunting Concept**
Wildlife ownership	Public	Private	Government
Wildlife conservation funding	1. Sport Hunting (USA)	1. Eco-tourism	Eco-tourism
	2.Public Taxes (Canada)	2. Sport Hunting	

The North American model of wildlife conservation is characterized by public ownership of wildlife and a "user pay, user benefit" system in which hunters and anglers contribute to funding for wildlife conservation. Geist et al (2011) argues that this model is credited with success as it generates millions of dollars each year for conservation and local economies, promotes public interest in wildlife, and promotes stable populations of wildlife.

The Southern African model of wildlife management centres on the privatization and commercialization of wildlife resources, with devolution of rights over wildlife to private landowners and local communities (Osborn & Parker, 2012; Baldus, 2008; Woodroffe et al., 2007). The model finds its success in its ability to simultaneously benefit wildlife populations and local communities, which are able to capitalize on the booming consumptive and non-consumptive tourism industry in Africa.

The No-hunting model is characterized by a complete ban on commercial hunting (with minor exceptions for subsistence), and a reliance on tourism revenues and government subsidies to cover operating costs for wildlife conservation. The main argument made in support of the No-hunting model is that hunting wildlife harms wildlife populations and is unethical. Wildlife, both dead and alive, is owned entirely by the state. In developing nations like Zimbabwe, there is high population and poverty which strongly influence strategies and capabilities to implement wildlife management strategies. This means that to be effective conservation models adopted should highlight strategies that also create positive outcomes for people and not just the wildlife.

Methodology

This study adopted the mixed method approach utilized questionnaires, personal interviews and focus groups discussions (FGDs) as research instruments. Interviews were used sparingly to either clarify questionnaires and FGDs or where it was difficult to serve questionnaires to intended subjects whose information was considered critical when drawing conclusions and the subsequent recommendations. The subjects of the research were employees, management at ZNPWMA as well as communities surrounding national parks. The target population for this research consisted of 1500 managers and employees at ZNPWMA and the local

people in communities affected by the management practices. Stratified random sampling was used to come up with the sample size of 70 respondents. A total of 70 questionnaires were distributed and 65 were fully completed and returned. A total of 5 focus group discussions and interviews were drawn and conducted from local communities surrounding national parks. The analysis of data was done using both quantitative and qualitative analysis. Quantitative analysis included principal component factor analysis and regression analysis using Statistical Package for Social Scientists (SPSS). Qualitative analysis was done by analyzing data from the focus groups and interviews. Secondary data was obtained from previous related and non related but relevant studies.

Results

Management practices and strategic dimensions as predictors of sustainable strategic management and development in protected areas.

Table 4.3 below shows that management practices and sustainable development strategies explain 56% (R^2=0.559) of the variance in sustainable strategic management and development. This shows that the two factors are significantly important at p<0.001.

Table 4.3: Management practices and strategic dimensions as predictors of sustainable strategic management and development in protected areas

Survival Dimensions	R^2 *(Adj R^2)*	**Predicted direction**	**Beta values (t – values)**	**Support**
(n=65)				
Management Practices		+	0.788 (12.87)***	Yes
Sustainable Development Strategies		+	0.748 (11.14)***	Yes
R^2	0.559			
(Adj R^2)	0.554			

***=p<0.001

Analysis of management practices being implemented by ZNPWMA

Sensitization of buildings in National Parks

According to the study conducted by the researcher, the ZNPWMA does not construct any structure in National Parks or protected areas without a proper environment impact assessment (EIA) being carried out by the Environment Management Agency. The EIA is intended to cover all adverse outcomes including impact on ecosystems, the community, recreational and scientific values of a locality on significant local buildings and arising from the disposal of waste. Even investors who want to construct structures in the National Parks have to undergo EIA process.

According to the information gathered from ZNPWMA, all construction in the protected areas have to use building materials such as poles, thatched roofs, stone wall and floors or cement that easily break in case if these structures want to be eradicated anytime. As of late, tented lodges are encouraged. Some notable examples of these buildings include Harare Safari Lodges in Lake Chivero, Hwange Safari Lodges in Hwange National Park, National Parks Camping Lodges in Matopos and Victoria Falls.

The policy of the ZNPWMA is that they do not allow cultivation and building any other structures or even keeping of domestic animals at National Park staff houses without the approval of the Park Authority. The concept of sensitive building in National parks is in line with the ZNPWMA pay-off line, 'living in harmony with nature' as sensitive building will not disturb the wildlife as well as the ecosystem that live on the environment.

Animal census

From the information gathered, the ZNPWMA has managed to carry out animal censuses in post 2000. The Park Authority carries animal census after every two to three years. The ZNPWMA uses different methods of counting different species. Aerial counting is done for large mammals from the size of kudus to larger animals like elephants and for crocodiles they use what they call night tough. Usually in most cases large mammals and those of economic value are counted. Animal counting is usually conducted around end of July to August after winter season when most vegetation will be shading off their leaves and this will give a clear view of animals since the forests will not be thick or dense. The animal census figures especially on large mammals like elephants have helped the authorities to come up with details showing the wildlife population and population trends in the protected areas and this assists authorities to come up with better conservation methods. The statistics are used to set hunting quotas and also to establish the effects of hunting on animal population.

The research found that cropping of elephants by shooting was instituted far back in 1960 and there were no plans to re-institute it as a result of international pressure against culling and the ban on ivory trading. Because of the ban, Zimbabwe still holds stock piles of ivory and the ZNPWMA cannot undertake such large-scale operations as disposal of the ivory. The research also established that hunting is mainly practiced in ZNPWMA protected areas especially the Save Conservancy. The hunting has been used as a wildlife management tool to help keep wildlife population in balance with their habitat. The pie chart (Figure 4.4) shows animal population for the 2013 census carried out for the south-east lowveld. The elephant population was found to be the largest, which account to over 500 000 including estimates for the other part of country. Rhinos account for the least (4%), hence the need for conserving the endangered one-horn specie and save it from extinction.
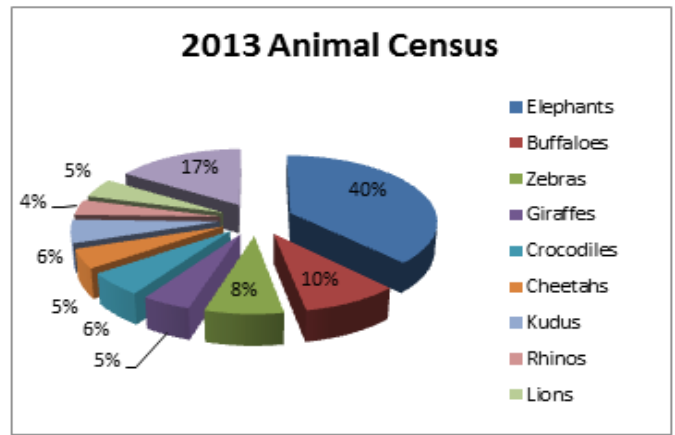

Fig 4.4: Animal Census

Perceptions of management in the implementation of sustainable practices

Hypothesis testing

The responses given by management on their perception in the implementation of sustainable management practices were summarized below and one way analysis was used to test at 95% level of significance if there is a significant difference in sustainable tourism development in protected areas that were implementing strategic management practices as a survival strategy.

Table 4.6: Hypothesis testing

Management Level	Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5
Executives	10	12	9	16	13
Top Management	9	7	12	11	11
Middle Management	14	11	15	14	16

Hypothesis

H0: There is no significant difference in sustainable tourism development in protected areas implementing strategic management practices as a survival strategy.

H1: There is a significant difference in sustainable tourism development in protected areas implementing strategic management practices as a survival strategy

At 5% level of Significance, V1= 2 and V2=12

Therefore f crit = 3.89

Management Level	Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5	n	Sum of x	Mean
Executives	10	12	9	16	13	5	60	12
Top Management	9	7	12	11	11	5	50	10
Middle Management	14	11	15	14	16	5	70	14

Overall Mean = 180 = 12	5
Within Variability (Perception)	
Executives	-30
Top Management	-16
Middle Management	-14
SSW (Same Level Perception)	**-60**
Between Variability	
SSB (Different Management Level Perception)	**-40**

Source of Variation	Degrees of Freedom	SS	MSS	F
SSB	V1=2	40	20	
SSW	V2=12	60	5	4
TOTAL	14	100	25	

Since f crit = 3.89 < f calc = 4

Therefore we reject H0 and conclude that there is a significant difference in sustainable tourism development in protected areas implementing strategic management practices as a survival strategy.

Impact of the 2000 land reform programme on wildlife management

Document analysis established the fast track land reform programme adversely affected wildlife management. This saw the resettlement of the Chitsa people in Gonarezhou National Park and the subsequent grabbing of private conservancies by those people with little or no knowledge of wildlife management mainly in the Matabeleland and Midlands provinces of the country. Most of the land was converted for crop growing there by killing wildlife animals mainly, destroying protected areas infrastructure and or deforestation. Poaching increased during the period and lack of fuel hampered efforts for patrols by ZNPWMA. Almost 80% of wildlife on private lands on affected areas vanished because of the programmes. Due to resettlement of the communities in National Parks, there is free movement of cattle and other domestic animals within area posing risk of foot and mouth diseases between wildlife and domestic animals. The programme also does not recognize land rights of traditional leaders (Murphree, 2004). The Agrarian land reform programme in Zimbabwe only focused on farming and people moved into protected areas for their own farming activities.

Impact of the 2008 Indigenization policy on wildlife management

The indigenization of wildlife in Zimbabwe cannot be told without referring to the Save Conservancy. The Save Conservancy was founded in 1991 and has drawn much support from the WWF and investors from Europe and United States who are protected under bilateral investment agreements with the countries involved. However the Save

Conservancy benefited a few greedy individuals who are only for what they can take for themselves with no interest in protecting the endangered wildlife. Some authorities view it as another 'land reform programme' by the ZANU PF government. The indigenization law is not prescriptive and certain indigenization criteria will have to be negotiated to be suitable to each industry. The wildlife industry in Zimbabwe is in the indigenous hands (93.2%) and counts as fully indigenized. If further indigenization is agreed (as witnessed in the Save Valley Conservancies saga) willingly by parties, due value recognizing capital invested, interest and good will must change hands
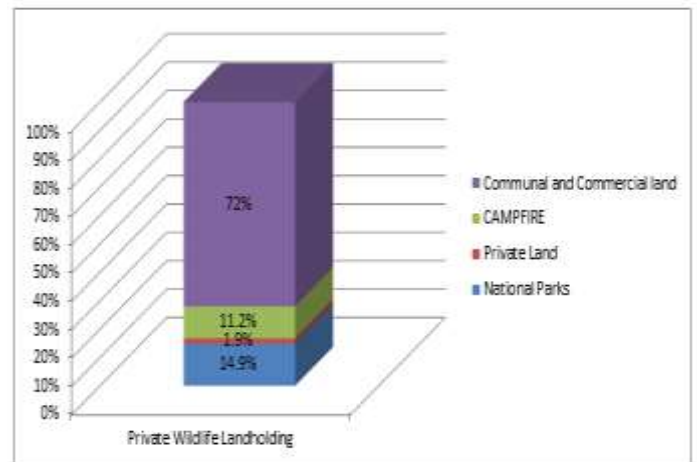

Fig 4.5: Private wildlife landholding

However according to the research, indigenous players control a staggering 93.2% of wildlife landmass in this industry. Only 6.8% of the entire wildlife landmass in Zimbabwe is in private hands and of this, two thirds is held by foreign investors who came to the country at the invitation by government. Hence the wildlife industry is by far the most extensively indigenized industry within Zimbabwe. It is therefore concluded that the huge responsibility of maintaining and conserving wildlife is not a 'privilege' of a few but rests in the hands of many.
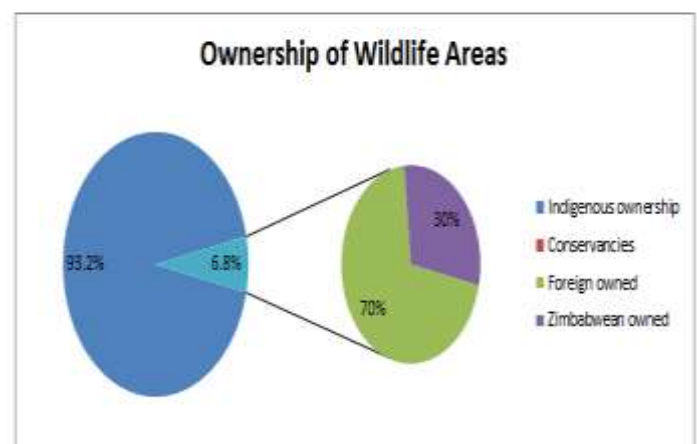

Fig 4.6: Ownership of wildlife areas

Challenges faced by ZNPWMA in sustainable management practices

There are numerous challenges unearthed faced by the ZNPMWA in trying to implement and benchmark sustainable

management practices with other SADC National Parks in wildlife management in the post 2000 environment. The major of these problems is lack of capital to implement successfully management practices and benchmark them against SANParks which is the flagship in model park management in the SADC region.

Some of the challenges faced include:

- Corruption in wildlife management as some vehicles that are donated for purposes of patrols in National Parks and protected areas are allocated to non patrolling teams.
- Poachers turn to use more advanced, complex and sophisticated methods of poaching (reference to the September 2013 Hwange Ecological Disaster) and in some cases they operate as syndicates with the ZNPWMA employees due to poor remuneration for the employees.
- Donor funding withdrawal such as USAID. Investors continue to avoid investing in Zimbabwe due to unfavourable government policies that deter investors and funding. State financing or funding has been grossly inadequate. This has lead to deterioration of park infrastructure.

5.1 Summary of research findings

The issues of strategic management and sustainable development in protected areas are very sensitive. The ZNPWMA has implemented several strategic management practices in wildlife management to try and curb poaching. Origins of National Parks have a violent beginning hence the negative perception of the local communities surrounding protected areas. However the ZNPWMA has managed to involve the local communities in wildlife management and decision making and this has resulted and some success stories of CAMPFIRE projects in Zimbabwe.

To achieve sustainable tourism development, ZNPWMA has made use of three sustainability principles or dimensions to the environmental, economic and socio-economic aspects of tourism development to try and guarantee its long-term sustainability.

The ZNPWMA in its quest to implement and benchmark sustainable management practices with other SADC National Parks and park models has faced numerous challenges which emanate from lack of capital to implement successful management practices. Despite these challenges, the Authority has managed to partner with public and private sector organisation in an effort to move with the globalization terminology. On the other hand the fast track land reform programme of 2000 has negatively affected wildlife conservation. The land reform programme has seen the resettlement of some communities in protected areas hindering the efforts of the wildlife authority's mandate of wildlife management.

5.2 Recommendations

In view of the above findings and conclusions, the study recommends that the Zimbabwean government begins to fund wildlife management from the fiscus because over reliance on donor funding is not sustainable. The ZNPWMA should engage in vigorous awareness campaigns to the relevant communities on sustainable wildlife management.

- The ZNPWMA needs to invest in technological advancement such as the Geographical Information System, satellite surveillance whereby satellite tracking devices are implanted on endangered species such as rhinos to monitor their movements and reduce poaching. This would also help in better park management.
- There is also need for benchmarking of management practices with regional authorities so that there will be uniformity in the SADC region in wildlife management and countries in peace parks.

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