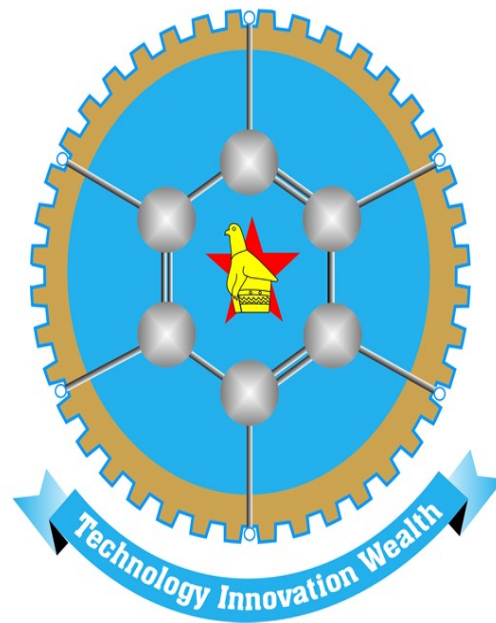


CHINHOYI UNIVERSITY OF TECHNOLOGY



**TOURISM AND WILDLIFE CONSERVATION:
PROTECTED AREA-COMMUNITY RELATIONSHIPS AND
NATURE TOURISM DYNAMICS IN ZIMBABWE**

By

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Thesis submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy in Tourism and Wildlife Management in the School of
Hospitality and Tourism at Chinhoyi University of Technology

JUNE 2017

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ABSTRACT

The main purpose of this study was to analyse the interactions between protected area (PA)-community relationships and nature-based tourism using a case study of Zimbabwe. Three main theories formed the basis for the study, i.e., the theory of socio-ecological systems, the social exchange theory (SET), and the tourism system. The study sites included four PAs (Umfurudzi Park, Gonarezhou National Park, Matusadona National Park and Cawston Ranch) and their neighbouring communities. To achieve this, I used an interdisciplinary approach and adopted the pragmatic approach where both quantitative and qualitative data were collected using mixed methods, i.e., focus group discussions, in-depth interviews, questionnaire surveys and secondary data. Content analysis was used to analyse the qualitative data while statistical techniques including regression analyses, Kruskal-Wallis Analysis of Variance and Mann-Whitney *U* tests were used to analyse the quantitative data. The main findings of the study were, (i) communities mainly perceived the relationship they had with the PAs to be negative while PA staff mainly perceived a positive relationship with the communities and these relationships were determined by history of PA creation, communication, community perceptions of tourism, conservation and PA staff, PA staff perceptions on communities, benefit-sharing and community involvement in the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) or tourism. Moreover, internal and external environmental factors, as well as legal instruments and institutional frameworks also shaped the way PAs related with adjacent communities and vice versa, (ii) community perceptions of conservation were generally positive while perceptions of tourism were generally negative, (iii) tourists' push factors for visiting national parks were 'recreation and knowledge seeking', 'appreciating wildlife' and 'feeling close to nature' while common pull factors between the two parks were abundance of wildlife, availability of different animal species, availability of different plant species, wilderness, beautiful landscape and peaceful/quiet environment. Tourists' wildlife tourism experiences were generally good and were influenced by different motivation factors, (iv) the sustainability of wildlife tourism was greatly threatened, with the most perceived serious threats being illegal hunting, destruction of wildlife habitats and human-wildlife conflict, and (v) tourist arrivals were fluctuating and tourists were mainly

local and were day visitors. The study concludes that PA-community relationships are dynamic, context specific and are complex in that they vary depending on whether it is the PA staff or community' perspective. The study further concludes that PA-community relationships have a bearing on wildlife conservation and nature-based tourism. However, wildlife resources alone are not enough to pull tourists to Zimbabwe as there are other internal and external environmental factors at play, e.g., the political and economic environment.

RELEASE FORM

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Programme for which the thesis was presented: DPhil in Tourism and Wildlife Management

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DECLARATION

I, Chiedza Ngonidzashe Mutanga, do hereby declare that this thesis is the result of my own work, except to the extent indicated in the acknowledgements, references and by comments included in the body of the report, and that it has not been submitted in part or in full for any other degree to any other university.

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APPROVAL FORM

The undersigned certify that they have read and recommended to the School of Hospitality and Tourism, Chinhoyi University of Technology, for acceptance; a thesis titled, “Tourism and wildlife conservation: Protected area-community relationships and nature tourism dynamics in Zimbabwe ”, submitted by Chiedza Ngonidzashe Mutanga in fulfilment of the requirements for the Doctor of Philosophy degree in Tourism and Wildlife Management.

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A handwritten signature in blue ink, consisting of stylized initials and a long horizontal stroke extending to the right.

Date: 02/10/2017

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DEDICATION

In love and gratitude,

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LIST OF ACRONYMS

ABS	: Access and Benefit Sharing
ADMADE	: Administrative Management Design
ANOVA	: Analysis of Variance
CAMPFIRE	: Communal Areas Management Programme for Indigenous Resources
CBD	: Convention on Biological Diversity
CBNRM	: Community Based Natural Resource Management
CBO	: Community-based organisation
CF	: Community forestry
CI	: Confidence Interval
CITES	: Convention on International Trade in Endangered Species
DNPWLM	: Department of National Parks and Wildlife Management
EFA	: Exploratory factor analysis
FGD	: Focus group discussion
FZS	: Frankfurt Zoological Society
GDP	: Gross Domestic Product
GLTFCA	: Great Limpopo Transfrontier Conservation Area
GNP	: Gonarezhou National Park
HEC	: Human-elephant conflict
HWC	: Human-wildlife conflict
ICDP	: Integrated Conservation and Development Project
IPZ	: Intensive Protection Zone
IUCN	: International Union for Conservation of Nature
KMO	: Kaiser-Meyer-Oklin
LIFE	: Living in a Finite Environment
LRT	: Likelihood ratio test
MEA	: Millennium Ecosystem Assessment
MNP	: Matusadona National Park
NGO	: Non-Governmental Organisation
NP	: National Park

PA	: Protected area
PCA	: Principal components analysis
RDC	: Rural District Council
RETOSA	: Regional Tourism Organisation of Southern Africa
SADC	: Southern African Development Community
SES	: Socio-ecological systems
SET	: Social exchange theory
SPSS	: Statistical Package for the Social Sciences
TFCA	: Transfrontier Conservation Area
UNESCO	: United Nations Educational, Scientific and Cultural Organisation
UNWTO	: United Nations World Tourism Organisation
US	: United States
USA	: United States of America
VIF	: Variance inflation factor
VMRW	: Vwaza Marsh Wildlife Reserve
WTO	: World Tourism Organisation
WTTC	: World Travel and Tourism Council
WWF	: World Wide Fund for Nature
ZPWMA	: Zimbabwe Parks and Wildlife Management Authority
ZTA	: Zimbabwe Tourism Authority

CHAPTER 1: General Introduction

1.1 Background

This introductory chapter provides an overview of the study, which is contextualised within the protected area (PA)-community and tourism nexus in Zimbabwe. Three elements, i.e., wildlife (represented by PAs), tourists and communities inform the framework and the study setting for this thesis. The study explores some of the dynamics of PA-community relationships and the role these relationships play in wildlife conservation, an issue that is highly debated (Holmes, 2013). A framework for PA-community relationships has been proposed with the intent to provide an understanding of how park-people relationships can be improved, an idea premised on the notion that good relationships motivate local communities to support wildlife conservation (Molina-Murillo *et al.*, 2016, Tessema *et al.*, 2010). The interdisciplinary nature of the study is an attempt to understand the dynamics surrounding PAs and wildlife conservation, PA-community relationships, tourist motivation for visiting PAs and tourists' satisfaction with wildlife tourism experiences in Zimbabwe.

The chapter provides background information concerning conservation and the development of PAs in general and discusses the PA-community relationships, wildlife conservation and tourism nexus. The problem statement, objectives and justification of the study are given in which the theoretical underpinning of the study is discussed. Finally, the structure of the entire thesis and the key arguments in each chapter are provided.

1.2 Literature review

1.2.1 Conservation and protected area development

People use natural resources to help meet their basic needs of food, clothing, shelter and recreation (Saarinen, 2016). However, as they do so, they consume natural resources and each time a renewable resource is used at a faster rate than its regeneration capacity, its supply is reduced. As such, if human consumption of natural resources goes unchecked, the availability of the natural resources may be threatened and even exhausted (Singh *et al.*, 2017). Two practices that protect natural resources are conservation and preservation (Minteer and Corley, 2007). Conservation is the sustainable use of natural resources focusing on the biological, cultural, recreational and economic needs and interests of people (Brulle, 2000). Conservation thus enhances human progress and development, with

minimum impacts on the environment (Minteer and Corley, 2007, Sharma, 2005). Preservation, on the other hand, means maintaining the present state of natural resources mainly focusing on resources that have not been modified by people (Katz, 1997, Paehlke, 1989). PAs promote the conservation of biodiversity and can act as indicators for conservation's progress (Wolf *et al.*, 2017, Molina-Murillo *et al.*, 2016, Naughton-Treves *et al.*, 2005).

PAs were first set aside as royal hunting reserves by kings and other national rulers in Europe in the early Renaissance (Eagles *et al.*, 2002). With time, these sites became open for public use, providing the basis for community involvement and tourism. The first park was the Yellowstone in the United States of America which was established in 1872 dedicated as a public park for the benefit and enjoyment of the people (Eagles *et al.*, 2002). Federated countries such as Australia, Canada, New Zealand, and United States of America started to establish PAs in the nineteenth century, e.g., Queen Victoria Niagara Falls was created in Canada in 1885 and in 1894 Tongariro National Park was created in New Zealand (Bishop, 2004). In South Africa, several forest reserves were set up in the last years of the nineteenth century. The idea of PAs spread around the world during the twentieth century, but the creation of most of these parks did not take into consideration the needs of local people and their environments (Risso, 2017, Eagles *et al.*, 2002).

In Zimbabwe, colonialism replaced the traditional African wildlife management systems with European models in which large tracks of land were taken and designated as PAs, e.g., national parks and safari areas (Mhlanga, 2001, Moore, 1992). The cornerstone of land use conflicts in Zimbabwe was the Land Apportionment Act of 1931 which legalised the allocation of 198,539 km² to 50,000 foreign settlers, 117,602 km² to 1,080,000 indigenous people while the remaining 74,859 km² was set aside for national parks, forestry and other forms of state land ownership (Mombeshora and Le Bel, 2009, Marongwe, 2002, Chenje *et al.*, 1998). The Game and Fish Preservation Act of 1929 saw the establishment of the first PAs in Zimbabwe (Whande *et al.*, 2003, McGregor, 1995). This was followed by the National Parks Act of 1949 and the Parks and Wildlife Act of 1975. With the Parks and Wildlife Act of 1975, amended in 1996, various levels of PAs were defined at which 11 national parks, 16 botanical reserves and gardens, 6 sanctuaries,

14 recreational parks and 16 safari areas were established as state PAs. The establishment of many of these PAs was, however, associated with forced removal of the local communities and their deprivation of access to resources in the PAs like meat, grazing areas and firewood (Fischer *et al.*, 2011). Tourism grew in many PAs and became a major element in the culture of society.

Park visitation and tourism were the central pillars of financing the PAs (Eagles *et al.*, 2002). Among other activities, tourism and recreational activities in PAs are recognized even by the International Union for Conservation of Nature (IUCN, 1994) (Tables 1.1 and 1.2). While PAs are managed for many different purposes (Table 1.1), the importance of tourism and recreation in PAs is evident as they are permitted in all of the IUCN PA categories (except Ia – strict nature reserve) (Table 1.2).

Table 1.1: IUCN Management Categories of PAs

Category	Description
I	Strict Nature Reserve: PAs managed mainly for science or wilderness protection.
Ia	Strict Nature Reserve: PAs managed mainly for science.
Ib	Wilderness Area: PAs managed mainly for wilderness protection.
II	National Park: PAs managed mainly for ecosystem protection and recreation.
III	Natural Monument: PAs managed mainly for conservation of specific natural features.
IV	Habitat / Species Management Area: PAs managed mainly for conservation through management intervention.
V	Protected Landscape / Seascape: PAs managed mainly for landscape / seascape conservation and recreation.
VI	Managed Resource Protected Area: PAs managed mainly for the sustainable use of natural ecosystems.

Source: IUCN (1994)

Table 1.2: Matrix of management objectives and IUCN PA management categories

Management objective	Ia	Ib	II	III	IV	V	VI
Scientific research	1	3	2	2	2	2	3
Wilderness protection	2	1	2	3	3	-	2
Preservation of species and genetic diversity (biodiversity)	1	2	1	1	1	2	1
Maintenance of environmental services	2	1	1	-	1	2	1
Protection of specific natural / cultural features	-	-	2	1	3	1	3
Tourism and recreation	-	2	1	1	3	1	3
Education	-	-	2	2	2	2	3
Sustainable use of resources from natural ecosystems	-	3	3	-	2	2	1
Maintenance of cultural / traditional attributes	-	-	-	-	-	1	2

Key: 1 – primary objective; 2 = secondary objective; 3 = potential applicable objective; - = not applicable. Source: IUCN (1994)

1.2.2 Protected area-community relationships

The issue of PA-community relationships is gaining attention from researchers, park managers, and international development interest (Zube, 1986). Dorji (2009) pointed out that the international interest is manifested through the spread of policies and practices at the national level. For instance, the US National Park Service came up with a Native American Relationship policy which accommodates the practice of traditional activities in the National Park Service, e.g., policy religious practices and utilization of natural resources like fish, wildlife, plants and other objects (Scovill, 1987). In addition, it calls for the involvement and consultations of the Native Americans whenever the planning and management decisions affect their interests.

Generally, PA-community relationships are complex worldwide, including both positive and negative social outcomes (Kappelle, 2001). Moreover, research has shown that while PA-community relationships in developed and developing countries usually vary, land use restrictions are common disbenefits and the main cause for negative PA-community relationships. PA-community relationships are thus influenced by many factors which span from the displacement of people, local resource utilization, place attachment and park services to local people, to local participation in park management and operations, and local involvement in park-related tourism (McCleave *et al.*, 2006, Kappelle, 2001, Brechin *et al.*, 1991, Zube and Busch, 1990). Research has focused primarily on economic benefits of protected areas communities and their flow-on effects to

local communities, where restrictions on resource use are significant issues and major source of conflicts between PAs and their adjacent communities (Mlay, 2014).

According to Mlay (2014), PA-community conflicts over resources will remain inevitable because they mostly develop from irresolvable conflict of interest between the demands of conservation and the economic needs and demands of local people. Rural communities see protected areas as unnecessarily large and consumptive use of resources as unproblematic, whereas PA management has opposite view. This difference in perceptions is a cause for concern, considering that, as argued by Infield and Namara (2001), for PAs, the bottom line regarding PA management will remain conservation and communities on the other side will pursue development objectives, even if it conflicts with conservation.

Human-wildlife conflict (HWC) is a problem not confined to particular geographical regions or climatic conditions, but it is common to all areas where humans and wildlife co-exist and share limited natural resources. As such, the competition between the wildlife and humans over natural resources is intense in developing countries, where human population suffers higher costs (Distefano, 2005).

1.2.2.1 PA-community relationships in developed countries

Many of the studies undertaken in developed countries have mainly focused on local social effects of protected natural areas (e.g., Manning, 1999, Nickels *et al.*, 1992) and/or their local economic outcomes (e.g., Elsasser *et al.*, 1995, Dawson *et al.*, 1993). McCleave *et al.* (2006) building on to Kappelle (2001)'s study, focused on multiple dimensions of the PA-community relationship (lifestyle, recreation, and place attachment; tourism; and interactions with the park management agency) while also considering the factors affecting the nature of the relationship (people factors, i.e., psycho-social characteristics, stakeholder group(s) and opinion on a 'hot topic', and community factors, i.e., community's history, physical environment, and stage of tourism development). A PA-community relationship study in Norway by Kaltenborn *et al.* (1999) examined factors affecting farmers' willingness to participate in local protected area planning. It identified mixed perceptions of land stewardship among local farmers but park management was generally mistrusted since they were seen as outsiders. Overall, local farmers were uncertain about the purpose

of land protection and management. Elsewhere, in New South Wales, Australia, Brown and Lipscombe (1999) examined changes in lifestyle for landowners adjacent to a new national park, South East Forests National Park. The landowners felt they had a more regulated and restricted lifestyle after the new park was gazetted. Other important issues raised were the negative effect of the national park on the local timber industry which was considered a major disadvantage to the community, necessitating relocation of some families, as well as access and privacy concerns regarding park visitors crossing private property to gain entry to the park. In New Zealand, Kappelle (2001) explored the relationships between a local community and PAs in Arthur's Pass and the Waimakariri Basin. His study indicated that PA-community relationships were complex, characterised by a harsh and yet rewarding physical environment, a history of conflicting attitudes towards the PA, and a changing conservation management style.

These studies highlight both positive and negative relationships between PAs and local people. On the positive side, parks are perceived to provide advantages such as available recreation, living close to natural features, improved public services (police, fire fighters) and a lack of undesirable social conditions like unemployment, crime and drug abuse. Moreover, influxes of park visitors stimulate local economies, encourage tourism development, provide jobs and improve local facilities effects. On the negative side, parks are seen to limit opportunities for farming and industry, restrict traditional resource gathering activities and reduce the availability of land for public services and housing. Undesirable effects from PA tourism include increased land prices and local taxes, more traffic and pollution, increased crime and seasonal influxes of outside workers.

The growing realisation that PAs cannot achieve their natural heritage protection goals without including human concerns explains the change in the international conservation paradigm where protected areas are no longer seen as separate and incompatible with people (Garratt, 1984). Ecosystem management which is an approach to PA management emerging out of the United States Forest Service, has taken up the challenge of including the socio-cultural component (Salwasser, 1998). Ecosystem management emphasises the maintenance of all the parts and processes of the ecosystem, including human parts, which when applied to protected area management, aims to bring

the complexity, dynamics and interrelatedness of park resources and local communities into focus (Salwasser, 1998). In view of this, Community Based Natural Resource Management (CBNRM) in North America has often taken the form of community forestry programmes and projects, i.e., National Forests in the USA and Crown forests in Canada. These programmes spread rapidly throughout North America over the past two decades as part of the global dissemination of community forestry as an alternative to fortress conservation and centralized state control over natural resources. Dressler *et al.* (2010) pointed out that, despite much promise, community forestry has also been subject to a number of complaints including, that its establishment violated the rights of local and indigenous populations, and that it has emphasized primary commodity production and export at the expense of social and environmental considerations.

1.2.2.2 PA-community relationships in developing countries

Most studies in developing countries have examined local people's reliance on local natural resources (e.g., Pollisco, 1995, Hough, 1988). Cases where local populations are physically displaced from their traditional homes and resource-gathering grounds are given particular attention (e.g., Raval, 1994, Rao and Geisler, 1990). The main focus has been on balancing local development needs (such as poverty alleviation) with the biodiversity and conservation aims of protected natural areas (Furze *et al.*, 1996, Wells and Brandon, 1992). The realisation that the removal of local communities from designated conservation areas created the basis from which most current conservation-based conflicts emanate, led to the conceptualisation of solutions through initiatives such as the Integrated Conservation and Development Projects (ICDPs) and CBNRM. As such much research in developed countries revolves around the costs (human-wildlife conflicts) and benefits of living closer to PAs (mainly through CBNRM programmes).

1.2.2.2.1 Human-wildlife conflicts

Human-wildlife conflict is one of the main problems for Africa's rural populations in terms of personal security and economic loss, and the situation is getting worse (Hill *et al.*, 2002). High rates of unemployment and increasing poverty, has led to the over-exploitation of natural resources and the increase of illegal activities including poaching leading to an increase in conflicts between local communities living adjacent to PAs (Le

Bel *et al.*, 2011). This situation is worsened by insufficient benefits from wildlife to communities resulting in their decreased tolerance levels towards wildlife. The direct costs to local communities include threat to human life and economic losses with a decrease in agriculture performances. Human-wildlife conflicts are also extremely costly in terms of wildlife conservation through revenge killings of problem animals (Akenten, 2015). Moreover, the use of snares, traps, poisoned water and poisoned carcasses may affect the entire biodiversity chain where non-targeted animals are also killed. In addition, local revenue generated through hunting tourism can also be reduced when there is excessive removal of trophy animals under problem animal control activities (Le Bel *et al.*, 2011). In the end, people tend to develop a negative attitude towards wildlife management and conservation initiatives proposed by the government or conservation authorities which in turn can lead to non-cooperation of local communities and increased instances of poaching and other illegal activities (Holmes, 2013).

Crop raiding is a cause of much conflict between farmers and wildlife throughout the world. A report by Hill *et al.* (2002) from a workshop that brought together people from across Africa who have been addressing crop-raiding indicated that in Africa the great dependence of a large proportion of the human population for their survival on the land, coupled with the presence of many species of large mammal leads to many sources of conflict between people and wildlife. This in turn creates increasing friction between PA managers, and local communities living in the regions that border these protected areas. In certain cases human-wildlife conflict is undermining what have been, to date, quite successful conservation programmes, such as the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) Programme in Zimbabwe.

In their study on human-wildlife conflicts in Southern Africa, Le Bel *et al.* (2011) recorded an increase in HWC cases in recent years in Mozambique with 281 people killed between 2006 and 2010, 1,116 hectares destroyed in 2008 mainly by elephant and hundreds of problem animals killed each year. The most affected provinces in Mozambique are Cabo Delgado and Gaza followed by Manica, Maputo, Tete and Zambezia. Monitoring and killing were the two most popular methods employed to deal with HWC where killing of the problem animals occurred mainly in Maputo, Zambezia

and Cabo Delgado provinces. In Malawi, Vwaza Marsh Wildlife Reserve (VMWR) Annual Reports (2003-2004 through to 2008-2009) consistently highlight (i) problem animal incidents, and (ii) the ongoing challenges associated with problem animal control, alleviating damage, and adequately responding to communities' demand for compensation (Anthony and Wasambo, 2009). The historical background of these communities is characterised by a general dissatisfaction with reserve authorities in part due to village evictions and damage to crops and property caused by wildlife (Nxumayo *et al.*, 2008, Msiska, 2002). In another case involving Mole National Park in Ghana and its adjacent communities, the results from the study indicate that communities largely suffer chronic crop raiding by elephants (Akenten, 2015). These cases show that incidents of human-wildlife conflicts that are not adequately resolved assure the maintenance of tense relationships between PAs and communities, which have undesirable social consequences and pose risks for the PAs and their resources in the longer term.

1.2.2.2.2 Community Based Natural Resource Management (CBNRM)

What became commonplace in wildlife management projects in Southern Africa, were economic incentives for institutional change to conserve wildlife (Bond, 2001). There have been community-based conservation programs in the Southern African region, for example, Botswana, Malawi, Namibia, Zambia and Zimbabwe, introduced programs devolving certain rights in resource management to communities (Fabricius *et al.*, 2013). CBNRM in Southern Africa began in Zimbabwe in the 1980s through CAMPFIRE, with parallel programmes emerging in Namibia, Zambia and Botswana (Dressler *et al.*, 2010). These initiatives focused on providing benefits to local communities through a utilitarian approach to wildlife. Individually and collectively, these efforts rose to prominence during the 1990s, exciting many in the global conservation and development community.

Varying accounts have been made of the successes and short comings of CBNRM projects. For example, in Zambia, the Administrative Management Design (ADMAD) ended up adding bureaucracy onto local communities and alienating them with increased enforcement (Marks, 1999). Moreover, the program did not fully appreciate the social significance of hunting and hunters continued to poach and game scouts were under considerable social resistance from neighbours who were often their friends and relatives

(Gibson and Marks, 1995). On the contrary, Namibia had some success by focusing on the development of community conservancies, which sought to create ecotourism opportunities in marginal grazing lands (Dressler *et al.*, 2010). The Living in a Finite Environment (LIFE) programme resulted in key linkages and partnerships being created in Namibia's CBNRM program between local communities, non-governmental organisations (NGOs), the national government wildlife agency, the University of Namibia, private enterprises, and the Ministry of Environment and Tourism (Hoole, 2008). In Botswana, a Participatory Rural Appraisal approach was followed with communities that led to their identification of CBNRM projects, and a number of community-based organisations (CBOs) were ultimately registered with the Botswana government, many of which generated revenue from joint venture agreements (Arntzen *et al.*, 2003).

Elsewhere, in Nepal, CBNRM arose through forest policies developed and implemented by state forestry agencies. The Nepal community forestry (CF) policy emerged in 1976 because of the failure of the country to stop deforestation and the need for policies that were responsive to local needs and indigenous resource use. This change represented a paradigm shift from the state-controlled policies to user-based decentralised control policies (Gilmour and Fisher, 1991). However, the shift towards CBNRM in Nepal has largely failed to strike a reasonable balance between the conservation of forests and the socio-economic needs of forest-dependent poor people. Similarly, in the Philippines, CBNRM arose in response to colonial conservation policy and practice that centred on coercion and injustice, restricting indigenous peoples' use of forest resources. Despite good intentions, the CBNRM's original objectives of local empowerment for rights to land, livelihood and conservation effectively supported state interests at the expense of rural people and livelihoods (Dressler *et al.*, 2010).

1.2.2.3 PA-community relationships in Zimbabwe

Like much of the PA-community relationships in developing countries, researches in Zimbabwe have been mainly done within the context of land conflicts between PAs and adjacent communities, human-wildlife conflict and CAMPFIRE.

1.2.2.3.1 Land and human-wildlife conflicts

Mombeshora and Le Bel (2009)'s study on parks-people land conflict between Gonarezhou National Park and Chitsa community heralds how the Chitsa people played up the historical loss of their chieftaincy and land to justify resettlement in the park from which they were forcibly removed during the 1960s. The study makes a number of important observations which include that traditional mechanisms of conflict resolution carry the promise of helping to resolve seemingly intractable challenges of disputes between traditional leaders (involving elders) and between local people and the park, policy actors and Chitsa people appear to have differentially framed the causes of the conflict, and evictions that may appear to be good for biodiversity sometimes turn out to be bad for it especially when evictees have incentives not to support wilderness conservation. These observations give important insights to this study: (i) highlight the importance cultural traditions especially in resolving conflicts which indicates the importance of community involvement especially in issues that affect the communities themselves, (ii) highlight the importance of hearing the views of all the parties involved in a relationship, and (iii) forced relocation is often not good for wildlife conservation.

Conflicts between human and wildlife have become one of the biggest obstacles for CBNRM in Zimbabwe, a situation which has been aggravated by the 1999 Land Reform which resulted in Africans settling on former white owned commercial farms, as well as game safari land and sections of National Parks (Chaumba *et al.*, 2003). In Zimbabwe, between 2002 and 2006, more than five thousand cases of human-elephant conflicts (HEC) were recorded resulting in 774 elephants being killed during subsequent problem-animal-control operations (Le Bel *et al.*, 2011). The major impact of human-wildlife conflict is crop destruction followed by animal predation and human casualties. A study by Le Bel *et al.* (2011) revealed that communities in Mbire, Chiredzi and Hwange districts in Zimbabwe generally perceived wildlife as a threat to both people and domestic animals although their perceptions differ as to whether disease transmission, destruction of crops and human and livestock predation were the key threats. Community ways of dealing with human-wildlife include reporting wild animal attacks to traditional leaders, problem Animal Control unit, or a councillor, as well as killing problem animals. Community members also reflected negativity in relation to responses by responsible authorities to problem animals across. In Omay communal lands adjacent to Matusadona National Park,

Muboko *et al.* (2016b) recorded cases of crop raiding and loss of human life caused by elephants. Loss of human life included the records of 26 people killed by elephants between 2008 and 2012. In another related study, Matema and Andersson (2015) examined human-wildlife conflict in Mbire District in Zimbabwe and pointed to an upsurge in lion attacks on livestock and people, and the complex human-wildlife conflicts about access to, and governance of, wildlife resources.

Similarly, Gandiwa *et al.* (2013a) reported that some communities bordering Gonarezhou National Park experienced conflicts with wildlife in form of crop damage and livestock depredation by large carnivores. In another study on conflict between wildlife and people in Kariba town, Mhlanga (2001) recorded conflicts between wildlife and people in Kariba town in which elephants and buffaloes damaged and destroyed property and frightened or killed people, and baboons vandalised homes. Despite encountering these losses, residents were not compensated for death, injury or property damaged by animals. In response, people drive elephants away from residential areas using stones and burning fire logs, injured or even killed buffaloes using snares.

1.2.2.3.2 CAMPFIRE

Zimbabwe instituted CAMPFIRE in the late 1980s to promote community-based natural resource management in its rural districts. The Department of National Parks and Wildlife Management (DNPWM) conceived the CAMPFIRE program as a policy response to potential threats to wildlife within and outside national parks (Zunza, 2012). CAMPFIRE was one of the first national CBNRM programs (Murombedzi, 2003). Over the first decade of its existence, the program garnered positive reviews and served as a model for similar efforts in Zambia, Botswana, Namibia, and elsewhere (Jones and Murphree, 2001). More recently, however, the program has attracted critical scrutiny. Disappointing social, economic, and ecological outcomes observed in the field have diluted the initial enthusiasm (Mashinya, 2007).

While some Zimbabwean districts did benefit from income at household level, in others no tangible benefits were provided to the local people (Dressler *et al.*, 2010). Murombedzi (2001) argued that there were challenges with community complexities emanating from the fact that rural the institutional forms adopted in CAMPFIRE tended to

be outgrowths of higher-level government agencies and did not originate within less formal institutions at the community level. More commonly, the absence of well-defined property rights and rights to manage wildlife at community level resulted in limited incentive to conserve (Hoole, 2008).

A study by Zunza (2012) on local benefits of CAMPFIRE in Mahenye community adjacent Gonarezhou National Park, Zimbabwe concluded that, the income received by local communities was small and was declining mainly due to corruption and lack of accountability by the elite, there was limited employment mainly of community members in CAMPFIRE projects, agriculture had been negatively impacted by crop destruction by wildlife and disease transfer from wildlife to domestic animals, and that there was competition for pastures between wild animals and domestic animals. These conclusions indicate that the communities in Mahenye could not have been happy with the CAMPFIRE project especially considering that they were benefiting very little and at the same time suffering costs from wildlife depredation.

Mashinya (2007) in her study on participation and devolution in Zimbabwe's CAMPFIRE program, recorded that in communities adjacent Matusadona National Park, under Nyaminyami Rural District Council, revenues were still sufficient to support local development efforts but were however, not equitably shared. Families had not received direct payments for participating in CAMPFIRE since the mid 1990s for the reason that it would be more beneficial to use the money for general community infrastructure improvements. However, despite continuing strong revenues there have been no new investments in community projects since 2001, i.e., there was no school construction underway, no road improvements, no maintenance for community grinding mills, and no meaningful effects to mitigate human-animal conflicts.

These cases have emphasised the fact that the role of PAs has expanded from biodiversity conservation to improving human welfare (Naughton-Treves *et al.*, 2005). Moreover, communities living in and around PAs have important and longstanding relationships with these PAs that embrace subsistence practices essential to sustaining livelihoods, and often contribute to maintenance of biodiversity (Eagles *et al.*, 2002). Since most local communities were displaced to pave way for PA creation, they were

discontented to the extent that they retaliated against the wildlife and were constantly becoming a direct threat to the sustainability of wildlife conservation and tourism (Dewu and Røskaft, 2017, Massé, 2016). This further points to the fact that PAs are ‘social spaces’ (Ghimire and Pimbert, 1997) and as such, cannot be separated from their human context in terms of management regimes (Brechin *et al.*, 2002). Governments are increasingly realising that conservation policies that attempt to keep communities out of the decision-making process and/or out of the sharing of benefits are therefore unlikely to be sustainable in the long-term (Tomicevic *et al.*, 2011).

Although highly debated, the role of positive PA-community relationships in improving wildlife conservation, tourism and the welfare of local communities cannot go unnoticed (Molina-Murillo *et al.*, 2016, Tessema *et al.*, 2010). Local people’s support for PAs management is therefore an important element of biodiversity conservation and tourism development (Sekhar, 2003). This support can be guaranteed if there is a mutually beneficial relationship between the three elements (wildlife conservation, tourism and local communities). Tourism can be an alternative and a viable source for economic development for local communities (Datta and Banerji, 2015). Hence, when carefully planned and effectively managed, tourism has the potential to provide significant benefits to PAs and nearby communities (Eagles *et al.*, 2002), especially to rural communities in developing countries that are strongly dependent on natural resources (Tosun, 2000).

1.2.3 Conservation and tourism

Biodiversity conservation and tourism are interdependent (Liburd and Becken, 2017). PAs and tourism thus have a close relationship (Millican, 2016, Campbell *et al.*, 2008, Bushell and McCool, 2007) which offers mutual benefits that include a desirable tourism product, a source of revenue for authorities that can assist in biodiversity conservation and benefits for surrounding communities which are however sometimes associated with costs (Strickland-Munro *et al.*, 2010). Tourism embraces all movement of people outside their community for not more than one consecutive year for all purposes except migration or regular daily work (Raina, 2005). The most common reasons for this movement include holidays, attendance at conferences, and movement on sporadic or infrequent business. In many countries, establishing PAs for tourism is bringing fundamental changes to the local

communities, increasing the proportion of employment in the service and retail sectors while significantly reducing the exploitation of natural resources for consumptive uses (Higginbottom, 2004). In Zimbabwe, wildlife resources are a major draw card for tourists. Tourism in Zimbabwe is thus largely dependent on natural resource attractions and related activities (Chikuta, 2015, Manwa, 2007). This makes wildlife one of the pillars for tourism in Zimbabwe, hence it is included in the national tourism brand, 'Zimbabwe, a world of wonders,' instigated by the Zimbabwe Tourism Authority (ZTA). The national tourism brand is underpinned by the country's unique people and culture, a rich history and heritage, the majestic Victoria Falls, the Great Zimbabwe ruins, wildlife and nature, the mystique Eastern Highlands, the Kariba Dam and the mighty Zambezi river (ZTA, 2015). Wildlife is thus an important national asset, which, if well managed, will maximise the return for the population in income and wealth creation, in employment creation and enhancing the reputation of the country, thus driving tourism and related activities (Zeitlin, 2011, Eagles *et al.*, 2002).

Tourism is a system that comprises four elements, i.e., the market, travel, destination and marketing (Eagles *et al.*, 2002). The destination consists of attractions and services used by the traveller. In order to sell travel, the destination must be aware of the benefits to be gained from tourism and the pitfalls to be avoided. Through marketing, the destination reaches out to the people in the market and encourages them to travel (Mill and Morrison, 1985). There are certain motivators which play an important role in increasing the mobility of people from one place to another, e.g., physical motivators which are connected with the individual bodily health and well-being, and cultural motivators which are connected with the individual's desire to travel to learn about other countries, their people, and their heritage and culture (Goeldner and Ritchie, 2006b). Also of importance are also interpersonal motivators related to a desire to visit relatives and friends, or meet new people and develop new friendships; and status and prestige motivators identified with the need for personal esteem and personal development (Goeldner and Ritchie, 2006b). Tourism is considered to be an industry whose product (the tourism product) focuses on facilities and services designed to meet the needs of the tourist (Dixit and Sheela, 2001). The tourism product comprises the country's tourist attractions, transport, and accommodation, all of which influence customer satisfaction (Dixit and Sheela, 2001).

Of these three basic components of a tourist product, attractions are very important, for without attractions, the tourist will not be motivated to visit a particular destination (Bhatia, 2006). Attractions are those elements in a product which determine the choice made by tourists to visit one destination rather than another (Raina, 2005). The attractions could be cultural, like sites and areas of archaeological interest, historical buildings and monuments, flora and fauna, beach resorts, mountains, national parks or events like trade fairs, exhibitions, arts and music festivals, among many others (Bhatia, 2006). Natural resources are frequently the key elements in a destination's attraction. These include natural beauty like landforms, hills, rocks, gorges, and terrain; flora and fauna; beaches; islands; spas; and scenic attractions.

1.2.4 Tourism trends

1.2.4.2 Global travel and tourism trends

Modern tourism is closely linked to development and encompasses growing number of new destinations. According to United Nations World Tourism Organisation (UNWTO), these dynamics have turned tourism into a key driver for socio-economic progress and currently, the business volume of tourism equals or even surpasses that of oil exports, food products or automobiles (UNWTO, 2016). Tourism has become one of the major players in international commerce, and represents at the same time one of the main income sources for many developing countries (Christie *et al.*, 2014). This growth goes hand in hand with an increasing diversification and competition among destinations. The contribution of tourism to economic well-being however depends on the quality and the revenues of the tourism offer. Worldwide, the tourism industry has experienced steady growth almost every year. International tourist arrivals increased from 439 million in 1990 to 1.13 billion in 2014 (Table 1.3).

Table 1.3: Global tourist arrivals in millions (mil) and market share percentage (%) by region

Region	1990		2000		2010		2012		2013		2014	
	mil	%	mil	%	mil	%	mil	%	mil	%	mil	%
Europe	265	60.4	386.6	57.4	489.4	51.6	540.9	52.1	566.9	52.1	580.1	51.2
Asia & Pacific	56	12.8	110.4	16.4	205.4	21.6	233.6	22.5	249.7	23.0	264.0	23.3
Americas	93	21.2	128.2	19	150.1	15.8	162.5	15.6	167.5	15.4	181.6	16.0
Africa	15	3.4	26.2	3.9	49.5	5.2	51.9	5.0	54.5	5.0	55.7	4.9
Middle East	10	2.3	22.4	3.3	54.7	5.8	50.1	4.8	48.6	4.5	51.7	4.6
Global	439	100	674	100	949	100	1,039	100	1,087	100	1,133	100

Source: Regional Tourism Organisation of Southern Africa (RETOSA, 2015)

Over the decades, tourism has experienced continued growth and deepening diversification to become one of the fastest growing economic sectors in the world. The travel and tourism industry is one of the world's largest industries with a total receipts of over US\$1,248.4 billion in 2014 from US\$423 billion in 1990 (Table 1.4) (RETOSA, 2015). These figures show the economic importance of tourism globally.

Table 1.4: Global tourist receipts in US\$ billions (bil) and market share (%) by region.

Region	1990		2000		2010		2012		2013		2014	
	bil	%	bil	%	bil	%	bil	%	bil	%	bil	%
Europe	201.7	47.6	231.7	48.8	411.2	42.5	454.1	40.7	492.2	41.1	511.6	41.0
Asia& Pacific	77.1	18.2	85.3	17.9	255.9	26.5	329.0	29.5	360.3	30.1	377.0	30.2
Americas	122	28.7	131.4	27.6	215.0	22.2	249.1	22.3	264.1	22.1	273.7	21.9
Africa	9.0	2.1	10.3	2.2	30.4	3.1	34.4	3.1	35.8	3.0	36.4	2.9
Middle East	13.7	3.2	16.8	3.5	54.5	5.7	49.0	4.4	45.2	3.7	49.7	4.0
Global	423.0	100	475.0	100	967	100	1,115.6	100	1,197.6	100	1,248.4	100

Source: RETOSA (2015)

Travel and tourism is an important economic activity in most countries around the world contributing significantly to Gross Domestic Product (GDP) and employment. Besides its direct economic impact, the sector has significant indirect and induced impacts World Travel and Tourism Council (WTTC, 2016). The direct contribution of travel and tourism to GDP reflects the ‘internal’ spending on travel and tourism (total spending within a particular country on travel and tourism by residents and non-residents for business and leisure purposes) as well as government ‘individual’ spending, i.e., spending by government on travel and tourism services directly linked to visitors, such as museums or national parks. The total contribution of travel and tourism includes its ‘wider impacts’, i.e., the indirect and induced impacts on the economy. The ‘indirect’ contribution includes the GDP and jobs supported by: (i) travel and tourism investment spending, i.e., an important aspect of both current and future activity that includes investment activity such as the purchase of new aircraft and construction of new hotels; (ii) government ‘collective’ spending, which helps travel and tourism activity in many different ways as it is made on behalf of the community at large, e.g., tourism marketing and promotion, resort area security services, resort area sanitation services, etc; and (iii) domestic purchases of goods and services by the sectors dealing directly with tourists which include, for example, purchases of food and cleaning services by hotels, of fuel and catering services by airlines,

and IT services by travel agents. In 2015, the direct and total contribution of travel and tourism to GDP globally was 2.8 % and 3.1% respectively. Similarly, in the same year the direct and total contribution of travel and tourism to employment was 2.4% and 2.6% respectively (Table 1.5) (WTTC, 2016).

Table 1.5: Global economic contribution of travel and tourism (%), 2010 - 2015

Economic indicator	2010	2011	2012	2013	2014	2015
Direct contribution to GDP	2.4	5.3	4.1	4.3	4.1	2.8
Total contribution to GDP	1.3	5.8	4.0	3.9	3.6	3.1
Direct contribution to employment	0.7	1.9	2.5	1.9	2.2	2.4
Total contribution to employment	-0.9	2.6	2.7	2.4	1.8	2.6

Source: WTTC (2016)

In spite of a number of factors threatening to disrupt a steady trend of growth like economic instability, security concerns, and natural disasters, tourism has remained strong. Natural disasters have a significant effect on tourism, as people shun away from any destination that is in a phase of recovery (UNWTO, 2016). Shocking events such as Japan's tsunami, a typhoon in the Philippines, and terrible earthquakes in Nepal, New Zealand and Italy have significant impacts on tourism because the clean-up process can take years, further damaging an already stressed economy. However, despite world encompassing challenges, global travel is still managing to record strong growth statistics. Reasons for this include technological advancement in the world, lower oil prices, and the fact that over the years, people have become relatively wealthier; have more disposable income, and more leisure time in the form of paid leave, allowing them greater freedom with their money and time (UNWTO, 2016).

1.2.4.2 Regional tourism trends

Tourism in Africa is generally growing in terms of both receipts and arrivals. For example, in the year 1990, the African region recorded about 15 million tourists of which 2.6 million visited Southern Africa, and in 2014, the number of tourists rose to 55.8 million in Africa, and specifically 24,2 million in Southern Africa (Table 1.6) (RETOSA, 2015). However, Africa international tourism arrivals fell to 62.5 million in 2015.

Table 1.6: Southern Africa tourist arrivals (millions) and market share (%)

Year	World Arrivals	Africa Tourist Arrivals	Southern Africa Tourist Arrivals	Southern Africa Market Share Of the World	Southern Africa Market Share of Africa
	Tourist arrivals in millions			Market share (%)	
1990	439.0	15.0	2.6	0.5	17.3
2000	674	26.2	16.0	2.4	61.1
2010	949	49.7	20.3	2.1	40.8
2012	1039	52.2	22.4	2.2	42.9
2013	1087	54.8	23.3	2.1	42.5
2014	1,133.0	55.8	24.2	2.1	43.4

Source: RETOSA (2015)

In 2015, Zimbabwe was one of the destinations with the strongest growth in international arrivals amongst Mauritius, Ghana, Sudan, and Seychelles (UNWTO, 2016). Africa in 2015 held a 5.3% share in worldwide tourism arrivals, and a 3.1% share of worldwide tourism receipts. Generally, tourism receipts in Africa have been increasing as well from US\$ 6.4 billion in 1990 to US\$ 36.2 billion in 2014 (Table 1.7) (RETOSA, 2015).

Table 1.7: Southern Africa tourism receipts (US\$ billions) and percentage market share (%) Globally and in Africa 1990-2014

Year	World Tourist	Africa Tourist	Southern Africa Tourist	Southern Africa (World)	Southern Africa (Africa)
	Tourism receipts (US\$ billions)			Market share (%)	
1990	264.0	6.4	2.7	1.0	42.1
2000	475.0	10.3	4.6	0.97	44.7
2010	967.0	30.4	15.3	1.6	50.3
2012	1115.6	34.3	16.5	1.5	48.1
2013	1198	34.7	16.3	1.4	47.0
2014	1248	36.2	16.7	1.3	46.1

Source: RETOSA (2015)

1.2.4.3 Zimbabwe tourism trends

Zimbabwe's tourist arrivals have been fluctuating over the years, from 237,660 tourists in 1980 to 582,602 tourists in 1990. From 1990 there was a noticeable increase in tourist arrivals to 2.2 million tourists in 1999 due to the peace in the country and stable economic environment (Figure 1.1) (ZTA, 2000). This was followed by a decline in tourist numbers following the Fast track land reform of 1999 (ZTA, 2015) (Figure 1.1). Tourist numbers have been fluctuating from 1999 to 2008, when tourist numbers began to increase slowly following the adoption of the multi-currency regime. Tourist arrivals in Zimbabwe increased by 9% to 2,056,588 during year 2015, compared to 1,880,028 in 2014 (ZTA, 2015).



Figure 1.1: Foreign tourist arrival trend, 1990 - 2015

Source: ZTA (2000, 2007, 2010, 2015)

The tourism sector achieved a significant growth in tourism receipts from 60 million in 1990 to 202 million in 1999. However, like tourist arrivals, receipts have been low since 2000 (US\$ 124 million) to US\$ 99 million in 2005. Since 2006 tourism receipts have been increasing steadily. About US\$886 million was recorded in 2015 with more of the receipts being driven by the accommodation and restaurant sub- sectors (Figure 1.1)

(ZTA, 2015, ZTA, 2010, ZTA, 2007, ZTA, 2000). Although both arrivals and receipts have fluctuating since 1997, tourism receipts have been steadily increasing since 2008 which is indicating to low volume, high value tourism. In Zimbabwe, tourism's contribution to GDP has been steady over the years (around 5.6%). However, contribution to employment has been slightly decreasing since 2014 (Table 1.8) (ZTA, 2015).

Table 1.8: The economic impact of tourism (%), 2011-2015

Economic indicator	2011	2012	2013	2014	2015
Tourism Direct Contribution to GDP	5.6	5.7	5.5	5.6	5.2
Total Tourism Contribution to GDP	11.3	11.7	11.3	11.4	11.0
Tourism Direct Contribution to Employment	4.1	4.0	3.6	3.5	3.0
Tourism Total Contribution to Employment	8.7	8.8	8.2	7.8	7.7
Tourism Contribution to Capital Investment	6.2	6.3	5.9	5.5	6.3
Tourism Contribution to Export	8.9	10.7	10	9.5	9.0

Source: ZTA (2015)

There are many forms of tourism which include nature tourism, ecotourism, heritage tourism, cultural tourism, and adventure tourism among others (Pratt *et al.*, 2011). This study focuses on nature-based tourism (mainly wildlife tourism), whose success depends on the sustainable use of the natural resources. Ecosystems constitute the main capital for nature-based tourism and therefore need to be protected and conserved in order to allow both ecological and socio-economic systems to thrive (Kuenzi and McNeely, 2008). Nature-based tourism is one of the growing forms of tourism today (Kafle, 2014). Tourism which is based on nature is becoming a big international industry with major economic, social and environmental effect on local and global scale (Buckley, 2003). PAs, whose main mandate is wildlife conservation, are therefore important for nature-based tourism. However, trends in tourists' visits to the world's PAs is much less publicised (Jones and Ohsawa, 2016) and Zimbabwe is no exception. The Zimbabwe Tourism Authority publishes trends in tourists' visits to state owned PAs and as such not much is

known about trends in tourists' visits to other PAs such as private conservancies and game ranches.

Zimbabwe's national parks with a total of about 656 222 tourists in 2015, contribute significantly to the national arrivals (32%). Nature tourism is therefore an important form of tourism in the country. Of the 656 222 arrivals into the national parks around the country, more than half visited the Rainforest (the Victoria Falls) and the nearby Zambezi national park which leverage on *Mosi-oa-Tunya*, which is the prime attraction in Zimbabwe. Unlike the Rainforest, Zambezi and Hwange, other national parks are frequented by locals, mostly individuals, families, churches and schools (ZTA, 2015). The Rain Forest in Victoria Falls followed by Zambezi National Park as seen over the years, are the most popular attractions run by the National Parks and Wildlife Management Authority (ZTA, 2015).

1.2.5 Nature-based tourism

Nature Based tourism has been defined by Weiler and Hall (1992) as a broad spectrum of touristic activities, often commercialised and involving interaction with the natural environment away from the participant's home range. The principles of nature-based tourism are to increase knowledge about the area, use the resource sustainably and avoid degradation. According to Goodwin (1996), nature based tourism encompasses all forms of tourism (e.g., mass tourism, adventure tourism, low-impact tourism and ecotourism) which use natural resources in a wild or undeveloped form, including species, habitat, landscape, scenery and salt and freshwater features. However, nature-based tourism (often called 'nature tourism'), adventure tourism, ecotourism and sustainable tourism are terms which convey similar and partly overlapping meanings (Suta *et al.*, 2017, Olson *et al.*, 2001). These as defined in Table 1.9.

Table 1.9: Definitions of ‘nature-based tourism’ and the associated forms of tourism.

Form of tourism	Definition
Nature-based tourism	The segment in the tourism market in which people travel with the primary purpose of visiting a natural destination.
Nature tourism	Travel to unspoiled places to experience and enjoy.
Ecotourism	Traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas. Responsible travel to natural areas that conserves the environment and sustains the well-being of local people.
Wildlife tourism	Based on encounters with non-domesticated (non-human) animals in either the animals’ natural environment or in captivity. It includes activities historically classified as “non-consumptive” as well as those that involve killing or capturing animals.
Adventure tourism	Nature tourism with a degree of risk taking and physical endurance.
Sustainable tourism	Seeks to minimize the negative footprint of tourism developments and at the same time contribute to conservation and community development in the areas being developed.

Adapted from Kuenzi and McNeely (2008)

Nature-based tourism depends on the natural landscape or natural resources either as the setting for activities or where the land or resources are themselves the central component of the tourist activity, e.g., wildlife viewing and photography, fishing, downhill skiing, hunting, and ecotourism (Zeitlin, 2011). Conservation is therefore important to nature-based tourism and is an explicit component of nature tourism development (UNWTO, 2014). Challenges to nature conservation that mainly come from human mediated habitat disruption, or in the case of poor countries, from the pressure of a growing population and the needs of local communities to earn a living threaten conservation attempts (Oldekop *et al.*, 2016). These include short-term high-yield alternatives in land-use like oil-drilling or industrial agriculture, hunting and exploitation of other wildlife-related resources. More so, poaching is seen as a serious problem that

threatens the sector's long-term sustainability and its development opportunities in many countries (UNWTO, 2014).

Local communities play a crucial role in natural resource management and sustainability (Gasteyer *et al.*, 2016) and therefore need to be acknowledged and incorporated into wildlife tourism planning and management. The ability to maintain wildlife tourism can provide a vital incentive for local communities who benefit from the tourism to conserve the wildlife and habitat on which it depends (Walpole and Goodwin, 2001). The local communities' support therefore holds the key to their acceptance of wildlife tourism and thus its long-term sustainability. In this thesis, I address the issues of PA-community relationships in Zimbabwe as a way of enhancing local community support to wildlife tourism and its goals.

1.3 Gaps in knowledge

While PA-community relationships are diverse and span many disciplines and geographical contexts, many of the existing studies have been done on case-by-case basis emphasising single aspects of the relationship, for example, the social implications of the establishment of PAs on local people (e.g., Brandon *et al.*, 1998, Raval, 1994), local people's traditional use of PAs (e.g., Baird and Dearden, 2003) effects of national parks on tourism in local communities (e.g., Adams and Infield, 2003, Eagles and McCool, 2002), and participatory or collaborative planning and management (e.g., Furze *et al.*, 1996). PA-community relationships in Zimbabwe have mostly looked at history of PA creation (e.g., Mombeshora and Le Bel, 2009), human-wildlife conflicts (e.g., Matema and Andersson, 2015, Gandiwa *et al.*, 2013a), and CBNRM projects (e.g., Zunza, 2012, Martin, 1986). Although this work offers important insights into PA-community relationships, these studies tend to overlook the fact that PA-community relationships result from the interplay of a number of factors and not just one factor. While there are also other studies that have looked at multiple aspects of PA-community relationships, e.g., McCleave *et al.* (2006) and Allendorf (2010), these studies only emphasise on the effects of PAs on local communities and/or community perceptions on PAs. Although this is important, what these studies seem to overlook is the fact that a relationship is two-way, and as such the opinions

of both parties, i.e., communities and PA staff are important for enhancing mutual relationships between the two parties.

Moreover, there seem to be a challenge especially in developing countries where most researches on wildlife focus on conservation, while the majority of researches on wildlife tourism have ignored conservation of the tourism resource (wildlife) altogether limiting their scope to tourism impacts on host destinations and enhancing information tourist visitation. Therefore, not much attempt has been made in linking PA-community relationships and nature-tourism holistically. As such, in seeking innovative solutions to the problem of declining wildlife resources from human-related threats like poaching and habitat destruction, the lack of information bridging the natural and social sciences becomes evident.

1.4 Conceptual model of the study

In Figure 1.2, the study model that seeks to examine the issues surrounding conservation and PA development is presented. The model shows the significance of PA-community relationships in the current conservation discourse and the importance of PAs (and conservation) to nature-based tourism.

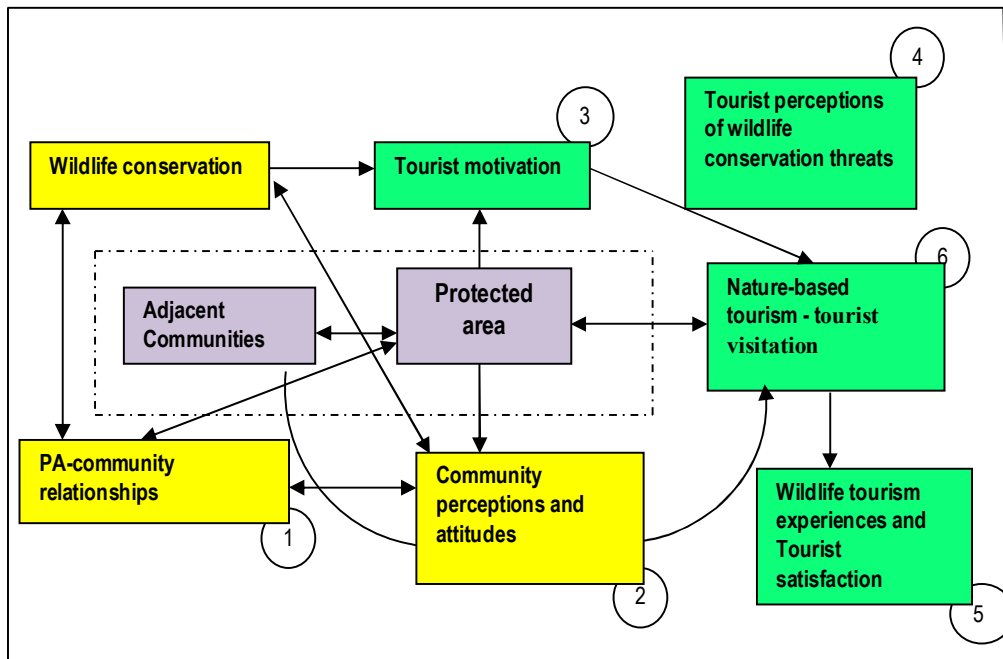


Figure 1.2: Model for park-people relationships in nature tourism and wildlife management.

The figure indicates: (1) relationship between PA staff and the community, (2) community perceptions of wildlife conservation and tourism, (3) tourist motivation for visiting the PA, (4) tourists' perceptions of the threats to the sustainability of wildlife tourism, (5) wildlife tourism experiences and tourists' satisfaction, and (6) trends in tourist visitation. *Notes: The purple boxes bordered by broken lines indicate the key aspects of the study (PA and adjacent communities), yellow boxes show issues surrounding PA-community relationships and conservation, whereas green boxes show tourism related issues. Numbered circles represent important themes that are interrogated in this study and arrows indicate relationships between themes.*

This model illustrates that harmonious PA-community relationships (Box 1) are vital for the long term success of wildlife conservation (Strickland-Munro, 2010, Tessema *et al.*, 2010, Bruyere *et al.*, 2009). This is because local people's support for PAs management is an important element of biodiversity conservation and tourism (Sekhar, 2003), and this support can be guaranteed if there is a mutually beneficial relationship between the three elements. Conflicts between PAs and the communities due to factors like

displacement of local people, human-wildlife and lack of benefits from PAs often result in increased poaching, habitat encroachment and destruction (Ramanach *et al.*, 2010, Graham *et al.*, 2005, Choudhury, 2004). Spiteri and Nepal (2006) postulate that wildlife conservation is almost impossible without addressing the needs and concerns of local communities.

Community attitudes and perceptions (Box 2) are important for PA-community relationships and through community attitudes and perceptions, management get to understand how they can engage with communities. A study by Allendorf *et al.* (2012) express that communities' perceptions can be used by management as a starting point to improve PA-community relationships through viable interventions that are meaningful to communities and their relationships with PAs. More so, conservation success is also affected by community attitudes and perceptions towards wildlife (Osmond, 1994). Kiss (1990) views that many communities in wildlife areas do not receive benefits and yet they bear the costs of living with wildlife and according to Osmond (1994) the communities develop a negative attitude towards conservation. Ebuga *et al.* (2011) put forward that by denying communities benefits and access to natural resources, they develop negative attitudes and engage in activities that are detrimental to conservation, like illegal hunting or habitat encroachment and destruction.

PAs are important for wildlife conservation and tourism (Strickland-Munro and Moore, 2013) and species diversity is an important motivation for tourists to visit PAs (Van Der Merwe and Saayman, 2008). Understanding tourist motivations for visiting a particular area (Box 3) can help entice more tourists to visit the area (Fodness, 1994). Different attractions and destinations feed different travel motives even when classified as similar types of products, and as such, marketers can use this information to position these destinations and to focus their marketing communication more effectively (Kruger and Saayman, 2010). Insights into tourists' travel motivation can benefit tourism marketers specifically with regard to market segmentation, product development, service quality evaluation, image development, and promotional activities (Yoon and Uysal, 2005, Kozak, 2001, Fodness, 1994).

In order to adequately provide a tourism experience for visitors, it is important to identify their motivations for travel (Beh and Bruyere, 2007). Wildlife tourism experience is considered an extremely important reason to visit the national parks (Scholtz *et al.*, 2013, Kruger and Saayman, 2010, Saayman and Saayman, 2009). Tourist satisfaction with wildlife tourism experience is influenced by a number of factors that include learning more about wildlife and exciting memorable wildlife encounters in their natural environments (Moscardo and Saltzer, 2005). Understanding tourists' experiences and satisfaction (Box 5) is of utmost importance for the tourism industry (Marzuki *et al.*, 2017), especially because of its effect on the future economy of the tourism industry, i.e., tourist satisfaction leads to destination loyalty (repeat-visitation and/or positive recommendations to friends and relatives) (Sadeh *et al.*, 2012, Petrick, 2003).

Tourists interested in taking trips to experience nature or trips for activities that are dependent upon a natural setting or resources are often concerned about the quality of the environment and about the sustainability of the resource itself (Zeitlin, 2011). Thus, tourism that damages or degrades the quality of the natural resources upon which it depends is not likely to be able to sustain its popularity with tourists (Zeitlin, 2011). Tourists often respond to calls from the international community and the media especially on issues related to animal welfare (Gandiwa *et al.*, 2014a) which may influence how they perceive a particular destination. Creating sustainable, environmentally friendly tourism destinations is central to nature-based tourism, hence tourist perceptions of the threats to the sustainability of wildlife tourism (Box 4) are essential for proper planning and management of a destination (Ballantyne *et al.*, 2009).

Finally, trends in tourists' visitation to PAs are established (Box 6). This is important for appropriate management of the PAs and the destination as a whole especially the allocation of budgets so that other important areas of concern (for example infrastructural developments within the country) are not compromised.

1.5 Problem statement

There is a noticeable increase in vices like poaching, encroachments into PAs and habitat destruction which can be partly attributed to conflicts between PAs and adjacent local communities. For example, an estimated 100 African elephants are killed each day by

poachers seeking ivory, meat and body parts, leaving only 400,000 remaining. As such elephant populations continue to decline, i.e., elephant numbers have dropped by 62% over the last decade, and they could be mostly extinct by the end of the next decade. As of 2017, there are still more African elephants being killed for ivory than are being born (WorldElephantDay, 2017). Similarly, 1,054 rhinos were illegally killed in South Africa alone during 2016. Namibia lost 80 rhinos to poaching, while in Zimbabwe at least 50 rhinos were poached in 2015 (UNODC 2016). Moreover, many cases of poaching through chemical poisoning of wildlife have been widely reported, e.g., in America and Europe (Guitart *et al.*, 2010), South Africa (Mateo-Tomás *et al.*, 2012), and Zimbabwe (Muboko *et al.* 2016). In 2013, about 135 elephants, 2 buffalos, 1 giraffe, 1 lion, 1 spotted hyena and 1 kudu were killed through poisoning in and around Hwange National Park, Zimbabwe (Muboko *et al.*, 2014b).

The loss of wildlife and habitat has potential impacts on nature-based tourism where biodiversity loss is threatening the very existence of iconic species that are essential to Africa's image as home to the world's top wildlife destinations. Biodiversity loss also jeopardises the basis of one of Zimbabwe's most important tourism products. The loss of wildlife caused by poaching and poisoning is therefore likely to significantly impact tourism development in Africa and Zimbabwe in particular, as well as the tourism sector worldwide linked to the African market with the subsequent reduction of the sustainable development opportunities linked to the sector. For instance, tourism performance in Zimbabwe's national parks is decreasing largely due to the deteriorating product base (ZTA, 2015). Despite these negative possibilities, there seem to be an information challenge especially in developing countries where most researches on wildlife focus on conservation, while the majority of researches on wildlife tourism have ignored conservation of the tourism resource (wildlife) altogether limiting their scope to the impacts of tourism on host destinations as well as enhancing tourist visitation. Information bridging the natural and social sciences is therefore limited.

Tessema *et al.* (2007) postulate that mutually supportive relationships between PAs and communities are important to the long term success of conservation efforts, which is critical if wildlife is to remain a niche, especially for the tourism sectors of developing

countries like Zimbabwe. Failure to acknowledge the importance of understanding relationships between PAs and communities has the potential to result in significant obstacles to effective management, community resentment of conservation initiatives, reduced social wellbeing, and unrealised tourism and recreation opportunities (Allendorf, 2010). Continuance of this situation without getting a solution, may lead to continual depletion of wildlife resources hence undermining the potential of tourism in countries whose tourism sectors are largely dependent on wildlife resources. This compromises the countries' potential tourism earnings and also affects the livelihoods of the surrounding communities who should be benefiting from the wildlife resources in the PAs. The findings of this study will serve to provide empirical evidence of the interactions between PA-community relationships and nature-based tourism that could help in strategy formulation for the long term success of wildlife conservation and tourism.

1.6 Objectives

The main objective of this study is to analyse the interactions between PA-community relationships and nature-based tourism in developing countries such as Zimbabwe. The study is guided by the following specific objectives:

1. To assess PA-community relationships in selected PAs in Zimbabwe,
2. To assess community perceptions of wildlife conservation and tourism,
3. To ascertain tourists' travel motivation and satisfaction with their wildlife experiences in Zimbabwe,
4. To examine tourist perceptions of wildlife tourism threats in large PAs, and
5. To determine trends in tourists visitation to PAs in Zimbabwe.

1.7 Research questions

In order to analyse the interactions between PA-community relationships and nature-based tourism, the research was guided by the following research questions that address the objectives outlined above:

1. Which factors mostly influence PA-community relationships in Zimbabwe?
2. How do communities perceive wildlife conservation and tourism?
3. a) What motivates tourists to visit PAs?

- b) To what extent are tourists satisfied with wildlife tourism experiences in Zimbabwe?
- 4. What are the tourists' perceptions of wildlife tourism threats in large PAs?
- 5. What are the trends in tourists' visitation to PAs in Zimbabwe?

1.8 Theoretical underpinnings of the study

Three main bodies of theory, i.e., the theory of socio-ecological systems (SES), the social exchange theory (SET), and the tourism system model inform the research purpose and objectives. These fields of scholarship and practice are explored for their potential applications in the research, with particular attention to developing countries where Zimbabwe is a part of.

1.8.1 Socio-ecological systems (SES)

Socio-ecological systems are linked systems of people and nature, emphasising that humans must be seen as a part of, not apart from, nature (Berkes *et al.*, 2000). There are many PAs now in which humans live and as such PAs represent a particular type of socio-ecological system (Cumming *et al.*, 2015, Ostrom, 2007). PAs can no longer be viewed as purely ecological islands (Janzen, 1983). Instead, it is becoming increasingly clear that PAs are social-ecological systems that both respond to and influence a wide range of ecological, social, and political processes. Maintenance of PAs is therefore heavily dependent on their compatibility with institutions in the broader social and economic system. Each PA has social and ecosystem characteristics, often including stated management goals, that influence (and are influenced by) governance, affecting economic outputs and social outcomes in the social-ecological system (Ostrom, 2009).

The primary goals of biodiversity conservation stem from the history of SESs (that of interaction between people and nature) and concern the maintenance of ecological dynamics at different spatial scales (Lindenmayer *et al.*, 2008), the functions and services of different ecological systems (MEA, 2005), and the capacity of species to evolve in the face of future environmental change (Stockwell *et al.*, 2003). Competition for the control of and access to natural resources is increasing worldwide, creating numerous conflicts and raising new questions concerning the relationships between humans and nature (Lockwood *et al.*, 2013). This thus calls for PA management to forge a new direction for policy and

governance of their roles in the SES of which they are a part. Social issues such as the willingness of stakeholders to share the responsibility for biodiversity conservation and choice of management activities or the rising awareness of socio-ecological interdependencies and physical reconnection with nature may represent more effective ways to implement conservation management (Mathevet *et al.*, 2010). In the context of biodiversity conservation, socio-ecological interdependencies are based on three principles which are: (i) the sense of a community of life (ownership or sense of belonging) that leads a stakeholder or social group to wisely use land and natural resources and to support humans or nonhumans in the belief that he/she shares certain values and objectives with all or some of the community members, (ii) the voluntary obligation (interest) of a stakeholder or social group to adopt a strategy of land- use and natural resource use which supports humans or nonhumans in the belief that some are better equipped than others to achieve these objectives, and (iii) obligations (laws and social rules) to sustainably use land and natural resources and to support others in harmony with nature (Mathevet *et al.*, 2016).

SESs are useful in stakeholder communication and thus help to structure the analysis of complex processes. Moreover, SESs involve collaboration across disciplines, sectors and require input from stakeholders in a participatory approach which can lead to better understanding and decision making. This inter-disciplinary collaboration is a positive step towards sustainability science which helps to close the deepening divides from mainstream science that are evident mostly in developing countries. Sustainability science helps to understand the fundamental character of interactions between nature and society and to encourage those interactions along more sustainable trajectories (Kates *et al.*, 2001).

However, as Pérez-Soba and Dwyer (2016) point out, SESs work well for the analysis of territorial and well defined case studies, but are difficult for broader (national) scales or for spatially scattered actions and initiatives. Nonetheless, despite this weakness, the theory of SES is important for this study considering that biodiversity conservation does not necessarily require suppression of local communities, as claimed by some conservationists (Mathevet *et al.*, 2016). Rather, of importance is the need for mutual recognition of the interest of the PAs by its staff, local communities, and by all the

stakeholders that act within and around the PA. Responsibility for others or on complementary interests of wealth production or self- protection are essential elements in the functioning of SESs at both individual and collective levels.

1.8.2 The social exchange theory (SET)

The theory's fundamental principle is that humans in social situations choose behaviours that maximize their likelihood of meeting self interests in those situations (Emerson, 1976). Social exchange theory includes a number of key assumptions, (i) individuals are generally rational and engage in calculations of costs and benefits in social exchanges, (ii) those engaged in interactions are rationally seeking to maximize the profits or benefits to be gained from those situations, especially in terms of meeting basic individual needs, (iii) exchange processes that produce payoffs or rewards for individuals lead to patterning of social interactions which not only serve individuals' needs but also constrain individuals in how they may ultimately seek to meet those needs, (iv) individuals are goal-oriented in a freely competitive social system where power lies with those individuals who possess greater resources that provide an advantage in the social exchange. Those with more resources hold more power and, ultimately, are in a better position to benefit from the exchange. Tied into this concept of power in a social exchange is the principle of least interest. Those with less to gain in terms of meeting their basic needs through a social exchange tend to hold more power in that exchange. In this regard, power therefore comes from less basic dependence on a social exchange.

One of the basic tenets of SET is that relationships evolve over time into trusting, loyal, and mutual commitments. To do so, parties must abide by certain "rules" of exchange which are mainly equity, reciprocity and negotiation. According to Homans (1974), individuals are most comfortable when they perceive they are receiving benefits from a relationship approximately equal to what they are putting into the relationship. Similarly individuals who perceive the presence of reciprocity in their social relationships are more likely to feel satisfied with and maintain those relationships. Parties of exchange may also negotiate rules in the hope of reaching beneficial arrangements (e.g., Cook *et al.*, 1983, Cook and Emerson, 1978). Negotiated agreements tend to be more explicit and the duties and obligations exchanged are fairly detailed and understood. According to Foa and

Foa (1980), there are six types of resources in exchange, i.e., love, status, information, money, goods, and services. Social interactions are also characterised by the concepts of rewards and costs. Individuals are motivated to gain rewards in social exchanges and in the absence of clear rewards, individuals may be primarily motivated to avoid costs in those exchanges. Costs are either punishments or forfeited rewards that result from social exchanges.

To understand a person's behaviour in social exchanges, it is important to understand the comparison level the person brings to the exchange. The comparison level is the threshold at which an outcome seems attractive to a person. Evaluations of social exchanges also include a comparison level of alternatives. As outcomes of relationships fall below the level of perceived outcomes from other relationship alternatives, individuals may choose to leave present relationships or social exchanges. However, the SET has its own weaknesses. For instance, while the exchange rules are apparent, it is not known which exchange rules apply to each resource as it is likely goods are exchanged in different ways and at different times. In addition, when it comes to the concept of equity, it is worth noting that social interactions are full of relationships that promote perceptions of inequality. Moreover, the exchange processes are not very clear (Liden *et al.*, 1997), and as a result, very little is known about the processes of social exchange.

Given the importance of positive PA-community relationships in the wildlife conservation, tourism and local community discourse, it is thus critical for conservation and tourism researchers to examine the nature of social interactions that enhance positive PA-community relationships. Hence the need to analyse the interactions between PA-community relationships and nature-based tourism. Notwithstanding the weaknesses mentioned above, it should still be acknowledged that the SET is important in the understanding of the interactions between PA staff and local communities.

1.8.3 The tourism system model

The tourism system model takes into account three basic elements which are the tourists, the geographical elements, and the tourism sector (Leiper, 1990, Leiper, 1979) (Figure 1). The tourist is the actor in this system considering that tourism itself is human experience. Leiper (1990) outlines three geographical elements in his model, i.e., the traveller-

generating region, the tourist destination region, and the transit route region. The traveller-generating region represents the generating market for tourism and, provides the 'push' to stimulate and motivate travel. It is from here that the tourist searches for information, makes the booking and departs. On the other side, the tourist destination region represents the 'sharp end' of tourism where planning and management strategies are implemented. The destination is the reason for the existence of tourism (Rojek and Urry, 1997), with a range of attractions and other special places and facilities that 'pull' tourists to visit destinations and create demand for travel in the generating region. The transit route region represents the short period of travel to reach the destination, and also includes the intermediate places which may be visited en route (Leiper, 1990). The third element of the tourism system model is the tourism sector, which represents the range of businesses and organisations involved in delivering the tourism product. Each of the elements of tourism system interacts to deliver the tourism product and also in terms of transactions and impacts.

The major advantages of Leiper's model (Leiper, 1990, Leiper, 1979) are its general applicability and simplicity which provide a useful 'way of thinking' about tourism, and also its ability to incorporate interdisciplinary approaches to tourism because it is not rooted in any particular subject or discipline but instead provides a framework within which disciplinary approaches can be located (Cooper, 2013). For these reasons, the tourism system model is useful to this study as it allows the incorporation of different forms of tourism, for example, this study analyses nature-based tourism and the importance of the push motivation factors (at the generating region), and the pull motivation factors (at the destination region which in this case are concentrated on the wildlife resources). Moreover, the model can be used at any scale or level of generalisation, from a local resort to the international industry.

1.9 Justification of the study

1.9.1 Scientific contributions

The study generates knowledge that contributes towards PA-community relationships and tourism literature. Some of the knowledge contributions of the study include a fuller understanding of the nature of PA-community relationships especially what influence these

relationships beyond the most commonly researched community participation and benefits from conservation. While models that encourage community participation in sustainable conservation through ICDPs have been developed, e.g., CAMPFIRE in Zimbabwe and Administrative Management Design (ADMADe) in Zambia, none of these studies have attempted to link PA-community relationships and tourism holistically. Using the social-exchange theory, this study, using the social exchange theory, the study brings out the complexities in exchanges that take place between PA staff and adjacent communities where exchanges are usually based on subjective cost-benefit analysis and the comparison of alternatives. This takes cognisance of the multiple factors that influence decisions in the exchange processes e.g., amount and nature of benefits received, costs due to wildlife depredation and the level of compensation provided, level of communication between the parties, and level of involvement in CAMPFIRE and tourism management.

In as much as the importance of PA-community relationships is recognised as critical to the conservation of wildlife, most studies have been done on a case-by-case basis (individual PA basis), which makes comparisons among different PAs difficult (Mhlanga, 2001, Brandon *et al.*, 1998, Raval, 1994, Heinan, 1993, Hamilton *et al.*, 1993, West and Brechin, 1991). While common PA-community relationship frameworks have been done for certain countries, e.g., New Zealand (McCleave *et al.*, 2006) and Nepal (Allendorf, 2010), no comprehensive study was done for Zimbabwe as evidenced by lack of literature in that respect. This study proposes a more comprehensive framework which can be used across PAs and which focuses on a number of factors, as opposed to a single aspect (factor). This framework may therefore enhance the understanding and development of approaches to balancing conservation and sustainable development around PAs (Allendorf, 2010).

The study also contributes to scientific knowledge on travel motivation and tourist satisfaction with wildlife tourism experiences. Most studies on tourist motivation to PAs were done in popular parks with high visitation like Kruger National Park in South Africa (e.g., Du Plessis and Saayman, 2015, Kamri and Radam, 2013, Scholtz *et al.*, 2013), with little on other parks with low visitation. Moreover, a small number of studies has investigated satisfaction with wildlife tourism opportunities (e.g., Fredline and Faulkner,

2001). These parks with low visitation may be facing challenges that, if well informed by research, can be rectified. Not paying necessary attention to these parks may compromise the parks', and the country's potential tourism earnings, for these parks may have unrealised potential to attract tourists. Basing on the tourism system model (Leiper, 1979), this study therefore addresses the knowledge gap by providing detailed information on the motives (push and pull), experiences and satisfaction of wildlife tourists especially in PAs with low visitation. Moreover, the study contributes to existing knowledge on the factors that influence the sustainability of wildlife tourism and the perceptions of tourists on threats to wildlife tourism, an area which has received little attention in scientific studies (e.g., Muboko *et al.*, 2016a, Hillery *et al.*, 2001). Finally, the study generates new knowledge on trends in park's visitors.

Overall, the study brings in new knowledge contributions to the theories of sustainability science and socio-ecological systems. Sustainability science is an emerging field of research dealing with the interactions between natural and social systems, and with how those interactions affect the challenge of sustainability, that is, meeting the needs of present and future generations while considerably reducing poverty and conserving the world's life support systems (Bäckstrand, 2003, Kates *et al.*, 2000). On the other hand, social-ecological systems which entail the connections between natural and social systems, indicates a commitment to adopt a holistic, systemic perspective towards human and non-human elements of a problem situation of interest (Halliday and Glaser, 2011). Understanding these theories thus helps fostering sustainability in wildlife conservation and tourism. The interdisciplinary nature of the study thus helps to further improve the theoretical and methodological awareness of the problem to advance the role of science in transitions towards sustainability thus contributing to the theories of sustainability science and socio-ecological systems.

1.9.2 Societal relevancy

The knowledge generated in this study is important to the local people, park management and government in general. By interrogating the dynamics of PA-community relationships and nature-based tourism, the research generates findings that can (i) enhance relationships between PAs and local communities and therefore improve the welfare of local

communities, (ii) inform policy makers on best practice guidelines that could help in strategy formulation for the promotion of wildlife conservation and tourism, and enhancement of community development, (iii) help PA management enhance the management of resources, (iv) help PA management to explore conflict resolution options which will reduce levels of human-wildlife conflict as well as help rural communities improve their capacity to live with problem animals, and (v) be instrumental in marketing wildlife tourism through understanding tourist motivations and their satisfaction with wildlife tourism experiences. Overall, the research provides insights to enhance sustainable development.

1.9.3 Zimbabwe as a case study

The choice of Zimbabwe as a case study was mainly motivated by the following factors:

- a) The recorded success of CBNRM, e.g., the CAMPFIRE, which has a known history of wildlife conservation and has become an influential example especially to other African countries (Balint and Mashinya, 2008),
- b) The country implemented the land reform programme whose effects on wildlife conservation have been widely reported (Gandiwa *et al.*, 2014a). PA-community relationships were likely to have been affected by land reform,
- c) There is no common framework that enables the understanding of PA-community relationships and facilitates comparisons among PAs in Zimbabwe. Failure to acknowledge the importance of understanding relationships between PAs and communities has the potential to result in significant obstacles to effective management including, community resentment of conservation initiatives, reduced social wellbeing, and unrealised tourism and recreation opportunities (Allendorf, 2010),
- d) It offered an opportunity to study PA-community relationships in PAs under different management regimes and land use patterns, and
- e) Despite the country having valuable wildlife resources including the ‘Big Five’ game animals, tourist visitation in many of the parks remains very low with the exception of Hwange and Mana Pools National Parks (ZTA, 2015).

1.10 Study area

Four study sites were selected purposively to give a broad understanding of PA-community interactions under different management regimes and land use patterns in Zimbabwe (Figure 1.3). Two of the study PAs are national parks: Gonarezhou, and Matusadona, and two are safari areas: Umfurudzi and Cawston Ranch. Consideration was given to involve both state and private PAs to allow for a broader assessment of PA-community relationships, and communities with and without CAMPFIRE. Some communities adjacent to Gonarezhou and Matusadona National Parks have CAMPFIRE, while those adjacent to Umfurudzi Park and Cawston Ranch have no CAMPFIRE. Umfurudzi Park, Gonarezhou National Park and Matusadona National Park are all state owned, whereas Cawston Ranch is privately owned. In terms of management, Umfurudzi Park and Gonarezhou National Park are under the management of a public-private partnership, Matusadona National Park is wholly publicly managed, and Cawston Ranch is privately managed. All the communities adjacent the four PAs practise small-scale substance and cash crop farming, and small scale livestock production. However, livestock production is minimal in areas around Matusadona due to the tsetse fly prevalence. More details on the description of the study sites are outlined in the ensuing chapters.

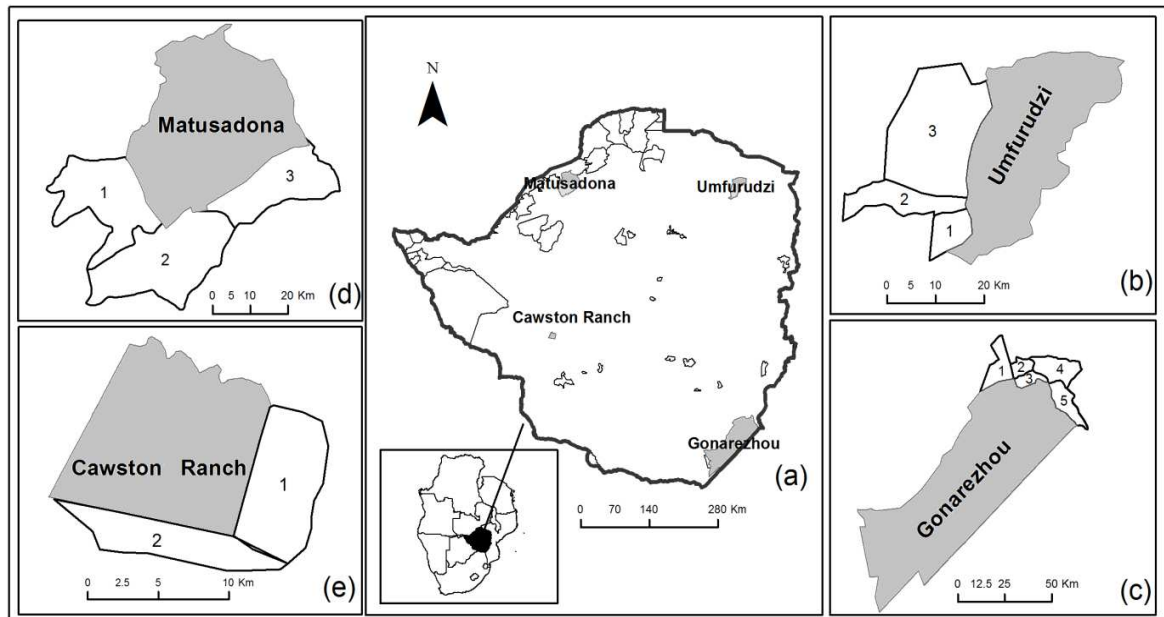


Figure 1.3: Location of the four study sites in Zimbabwe. (a) PAs in Zimbabwe among which are the four study PAs; (b) Umfurudzi Park and adjacent communities: 1- Sanye, 2- Mufurudzi 1, and 3- Mufurudzi 2; (c) Gonarezhou National Park and the adjacent communities: 1- Chizvirizvi, 2- Mupinga, 3- Chitsa, 4- Mutandahwe, and 5- Mahenye; (d) Matusadona National Park and adjacent communities: 1- Nebiri, 2- Musambakaruma 2, and 3- Musambakaruma 1; and (e) Cawston Ranch and adjacent communities: 1- Ward 10 and 2- Ward 9.

1.11 Outline of the thesis

The thesis is divided into ten chapters, in which Chapter 1 is the general introduction, Chapter 2 is a review chapter which conceptualises a framework for assessing PA-community relationships and sets the basis for chapters 3 to 6, Chapters 3-9 present original research, and Chapter 10, is a synthesis of the first nine chapters.

Chapter 1

In this opening Chapter, the foundations of this research in terms of problem formulation and structuring as well as the research questions and conceptual framework for the study are presented.

Chapter 2

This is a review Chapter in which a conceptual framework for assessing PA-community relationships basing on the view that PA-community relationships enhance conservation is proposed based on a meta-synthesis of existing literature.

Chapter 3

This Chapter explores the relationship between PAs and local communities and establishes the factors that influence the relationships in four PAs in Zimbabwe (Umfurudzi Park, Gonarezhou National Park, Matusadona National Park, and Cawston Ranch) using qualitative data obtained through focus group discussions and interviews.

Chapter 4

In this Chapter, the conceptual framework proposed in chapter 2 and additional factors obtained from the pilot study carried out in Umfurudzi Park are used to assess how local communities viewed their relationship with adjacent PAs. The determinants of PA-community relationships from communities' perspectives are also measured. Closed-ended questionnaires were used to collect data from 938 households in four study sites in Zimbabwe (Umfurudzi Park, Gonarezhou National Park, Matusadona National Park, and Cawston Ranch).

Chapter 5

This chapter compares the PA-community relationships from the perspectives of both PA staff and communities using 938 local people and 133 PA staff in four study sites in Zimbabwe: Umfurudzi Park, Gonarezhou National Park, Matusadona National Park, and Cawston Ranch.

Chapter 6

This chapter determines community perceptions of wildlife conservation and tourism, and establishes socio-demographic factors that influence these perceptions using 938 respondents in four study sites in Zimbabwe (Umfurudzi Park, Gonarezhou National Park, Matusadona National Park, and Cawston Ranch).

Chapter 7

In this Chapter, the case studies of Gonarezhou and Matusadona National Parks, and 128 respondents are used to establish tourist motivation for visiting PAs, assess tourist satisfaction with wildlife tourism experiences, and investigate the relationship between tourist motivation and satisfaction with wildlife tourism experiences.

Chapter 8

This Chapter determines tourist perceptions on the threats to the sustainability of wildlife tourism using 128 respondents from Gonarezhou and Matusadona National Parks.

Chapter 9

Using a case study of Gonarezhou National Park, Zimbabwe, this Chapter determines trends in park's visitors for the period, 1991-2014, and compares trends among local, regional and international tourists, as well as among day and overnight visitors.

Chapter 10

In this chapter, a synthesis of the main findings is presented and the major issues that emerge are highlighted and discussed. The issues derived from the discussion of PA-community relationships and nature-based tourism are integrated and synthesised. Moreover, aspects on contributions to sustainability science and socio-ecological systems integrating PA-community relationships, wildlife conservation and tourism in a framework for sustainability are addressed. Finally, the scientific and practical implications arising from the findings of this study are discussed.

The chapters in this thesis were written for publication as stand-alone articles. Some of the material in this chapter is therefore introductory and is developed in the following chapters as necessary.

CHAPTER 2: Towards harmonious conservation relationships: A framework for understanding protected area staff-local community relationships in developing countries*

** This Chapter is published as:*

Mutanga, C. N., Vengesayi, S., Gandiwa, E. and Muboko, N. 2015. Towards harmonious conservation relationships: A framework for understanding protected area staff-local community relationships in developing countries. *Journal for Nature Conservation*, 25: 8-16.

Abstract

This paper conceptualises a framework for assessing protected area (PA)-community relationships and is premised on the view that positive PA-community relationships enhance conservation. A meta-synthesis of existing academic literature with a qualitative orientation was used to review the PA staff-community relationships, and data were analysed using an inductive qualitative approach. From a review of 105 published documents focusing on wildlife conservation, community involvement and PA-community relationships, it emerged that relationships are mostly influenced by attitudes. With the case of PA-community relationships, the question that arises is ‘whose attitude’? The paper proposes that both PA staff attitudes and community attitudes play an important role in shaping these relationships. Based on these findings, we propose a PA-community relationship framework that illuminates the human-wildlife interface as critical space in shaping conservation attitudes. In particular, four major factors affecting PA staff-community relationships were identified: (i) history of creation of the PAs focusing on forced relocation, and the fences and fines approach; (ii) benefits and costs associated with living closer to PAs; (iii) socio-demographic factors in which the influences of sex, age, level of education, number of years stayed in the village, experience accrued from working in PAs, household size, number of livestock, sources of income, and level of income; and (iv) community involvement in conservation-related developmental projects. We conclude that enhanced PA-community relationships promote wildlife conservation through participatory approaches and collaboration between PA staff and communities. We recommend for continued assessment and monitoring of PA staff and community relationships in order to allow for sustainable conservation especially in developing countries.

Keywords: attitudes, community, factors, protected area, tourism, wildlife conservation

2.1 Introduction

The question of whether protected area (PA)-community relationships are important for the success of wildlife conservation is an issue of concern which is highly debated. Positive PA-community relationships can enhance local support for PA existence and wildlife conservation in the sense that if local people do not support PAs, they can refuse to cooperate with PA authorities or participate in their plans (Holmes, 2013, Holmes, 2007). While some have shown that local support have little influence on the success of wildlife conservation (e.g, Young *et al.*, 2013, Brockington, 2004, Bruner *et al.*, 2001), the issues of PA-community relationships appear to be of vital importance to wildlife conservation (Tessema *et al.*, 2010, Hausser *et al.*, 2009, Buscher and Whande, 2007, Brockington, 2004, Berkes, 2004, Borrini-Feyerabend *et al.*, 2002, Ramphal, 1993). There are also cases that show that some PAs can succeed even in the midst of local opposition and discontent (Walley, 2004, e.g., Jacoby, 2001). This has been attributed to the fact that some PAs have more resources than local communities to draw on during disagreements (Holmes, 2013). In these disagreements with the communities, PAs often tend to use force over local people (Milgroom and Spierenburg, 2008, Laudati, 2010) and local people may comply out of fear since there is some form of law enforcement in most PAs and also some PAs are national government/state owned. Thus, this partly demonstrates whether or not local communities' support has a bearing on wildlife conservation success.

While local community opposition to PAs may have minimal impact on wildlife conservation success, the idea of not considering local community support appears to be unethical (Holmes, 2013). Furthermore, the consideration of local community well-being is an important factor in successful wildlife conservation (Brockington, 2004). For successful wildlife conservation, Holmes (2013) recommends for the move towards solutions which are beneficial to both the PAs and the local people.

A relationship refers to the interactions between two or more people in which the participants are interdependent, i.e., the behaviour of each affects the outcomes of the other (Blumstein and Kollock, 1998). A good relationship involves both parties. While one side can take initiative, it still requires the other side to make a relationship a good one (Hinde 1979). In this study PA-community relationship therefore refers to the interrelated

interactions between PA staff and the local communities in which these two are interdependent and where the behaviour of each affects the outcomes of the other. Positive PA-community relationship means PA staff and the local community have good contact and interaction; they tolerate and relate well whereas negative PA-community relationship means PA staff and the local community have no interaction or no tolerance and do not relate well.

Some previous studies that have assessed PA-community relationships, for example, Brandon *et al.* (1998) and Raval (1994) have highlighted the social implications of the establishment of PAs on local people; Furze *et al.* (1996) and Berkes *et al.* (1991) examined participatory or collaborative planning and management whereas Eagles and McCool (2002) and Adams and Infield (2003) examined the effects of tourism in local communities adjacent to PAs. These studies, however, emphasise mostly the effects PAs or PA management have on the local communities and not the other way round. But, what effect does community behaviour have on PA-community relationship? Grunig and Huang (2000) reported that it is important to determine what all the parties who are involved in a relationship perceive of all of the members who are making an effort to maintain the relationship. This study attempts to fill this gap by incorporating PA staff perspectives of the factors that influence their relationship with the community. More so, many of these aforementioned studies emphasise particular aspects of PA-community relationships and yet PA-community relationships cannot be influenced by just one factor but a number of factors. This study, therefore, proposes a framework for assessing PA staff-community relationships that takes into consideration the attitudes of both PA staff and local communities and their determinant factors. Looking at the relationships from both PA staff and local community perspectives is important in exploring approaches and/or factors that promote collaboration and harmonious relations, hence, reducing conflicts between PA staff and local communities in wildlife conservation.

2.2 Methods

2.2.1 Research approach

We approached our review from a holistic, historical and comparative perspective (Gandiwa *et al.*, 2014a) to better understand PA-local communities' relationships. First,

the holistic perspective, allowed us to focus on the broader issues related to PA-local communities' relationships since it helps shed light on the connections between and interactions of various factors. Second, the historical perspectives allowed us to evaluate frameworks that were previously proposed on PA-local communities' relationships, and third, the comparative perspective allowed us to compare strengths and weaknesses of the existing frameworks, and hence, led us to proposing a new framework on understanding PA staff-local communities' relationships.

2.2.2 Data collection and analysis

We conducted a meta-synthesis of existing academic literature focusing on peer-reviewed journal articles, books, edited book chapters and academic theses related to PA-community relationships with a qualitative orientation (Atkins *et al.*, 2008). Using academic literature search engines, namely, Google Scholar, Scopus and Web of Science, we used the following key words or phrases: “protected areas”, “community”, “protected area-community relationships”, “tourism”, “wildlife conservation” and “attitudes” with also a combination of ‘AND’ between key words to retrieve relevant literature.

For each article, we first read the abstract, and all abstracts that contained at least two of the key word/phrases were considered and the documents were read through to check if they discussed PA-community relationship issues. After rigorous screening of a pool of initially selected documents, we finally settled on a total of 105 relevant documents which were then used for this review. Although, our literature search was not limited to any geographical region, we discovered that most of the articles we finally used in the analyses focused on Africa and Asia, hence, this points to the fact that our findings applies more to developing countries with, however, some aspects still applicable to developed countries.

We categorised the main issues and factors influencing PA-community relationships into themes. Thus, we used an inductive qualitative data analysis approach where we derived themes from interpreting each article and later grouping these into each of the identified themes (Thomas, 2006, Strauss and Corbin, 1998). Furthermore, these themes allowed us to analyse the strengths and weaknesses, and determinants of PA-community relationships based on presence and absence of key issues in each article.

Specifically, weaknesses and strengths of the existing models were analysed and assessed by looking closely at the details the authors reported about that framework, comments other researchers gave about the frameworks, and an assessment the current authors made on the frameworks. Strengths/weaknesses were measured based on: (1) whether the framework assesses the relationship from the sides of both PA staff and communities and (2) whether the framework covered multiple factors in discussing the determinants of PA staff-community relationships. Factors that influence PA-community relationships were determined based on factors mostly mentioned in the reviewed documents.

2.3 Results and discussion

2.3.1 Comparison of existing PA-community relationship frameworks

Multiple factors are often at play in influencing PA-community relationships which include history of creation of PAs, benefits associated with living closer to PAs, problems PAs cause for communities, problems communities cause for PAs, community attitudes and perceptions towards PAs, PA staff attitudes and perceptions towards communities, and socio-demographic factors. These factors form the basis for comparison of existing frameworks as elaborated in Table 1. While Zube and Busch (1990), Brechin *et al.* (1991), Kappelle (2001), Eagles and McCool (2002), and McCleave *et al.* (2006)'s frameworks are helpful in understanding PA-community relationships, they do not clearly capture some of the factors that influence PA staff-community relationships like problems caused by communities or by protected areas, and community or PA staff attitudes towards each other (Table 1). On the other hand, while Allendorf (2010), discusses a number of factors, her framework, like the other frameworks discussed in Table 1, focuses only on one party's perspectives of a two-party relationship (the communities') and yet a relationship should be reciprocal (Hinde 1979).

Table 2.1: A comparison of PA-community relationship frameworks by factors identified through literature review. *Notes:* * indicate that the framework does not clearly capture the corresponding factor. ** indicate factors discussed by some authors independent of any of the frameworks listed below.

Factor	Park-people relationships: An international review (Zube and Busch, 1990)	Resident peoples and protected areas: a framework for inquiry (Brechin <i>et al.</i> , 1991)	The community-conservation land relationship in Arthur's Pass and the Waimakariri Basin (Kappelle, 2001)	Framework Tourism in national parks and protected areas (Eagles and McCool, 2002)	The New Zealand people-park relationship: an exploratory model (McCleave <i>et al.</i> , 2006)	A framework for the park-people relationship: insights from protected areas in Nepal and Myanmar (Allendorf, 2010)
History of creation of protected areas	Focuses on traditional land uses within and adjacent to the park, e.g., hunting, agriculture, religious practices and pastoralism	Emphasises on the effects of local people displacement	History of natural resource extraction and the effects of the creation of parks	*	Highlights the community history especially loss of livelihoods (e.g., land-based jobs) through park establishment and consider the new parks in the context of lost employment opportunities	*
Benefits associated with living closer to protected areas	Benefits provided through protected area services to the local community including involvement in tourism within the protected area	Benefits include local resource utilisation, nature preservation and eco-development	Include employment within the parks, recreation and tourism	Mainly tourism-related benefits	Benefits include employment opportunities within the parks, recreation and tourism	Benefits include resource extraction, recreation and religious activities
Problems protected areas cause for communities	*	*	*	*	*	Focuses on ways protected areas impact on communities, e.g., crop damage and livestock depredation by wildlife
Problems communities	**	**	**	**	**	**

cause for protected areas Community's attitudes and perceptions towards protected areas	*	*	*	*	*	Highlights different perceptions people have towards conservation and ecosystem, benefits on services, resource extraction, recreational and aesthetics, country benefits, management, lack of access for extraction and recreation, and wildlife depredation and crop damage
Protected area staff's attitudes and perceptions towards the communities	**	**	**	**	**	**
Socio-demographic factors	**	**	**	**	**	**

2.3.2 A framework for PA staff-community relationships

As most of the PA-community relationship studies have only dealt with community perspectives of the relationship, this framework contributes new knowledge on the component of PA staff perspectives of the relationships. This is important since PA staff are an important component in the conservation matrix globally, hence, understanding their views is important in ensuring a balanced view to conservation from both the perspectives of PAs and local communities. Subsequently, the framework examines the human-wildlife interface focusing on the structural, causal relationships among three components: (1) antecedent constructs (determinants of PA-community relationships) which include: history of creation of PAs, benefits associated with living closer to PAs versus costs, socio-demographic factors and Integrated Conservation and Development Projects (ICDPs); (2) the central constructs: community attitudes and PA staff attitudes; and (3) one outcome construct: PA staff-community relationships (Figure 2.1). The framework provides a new perspective of assessing PA-community relationships from both the PAs' and communities' point of views.

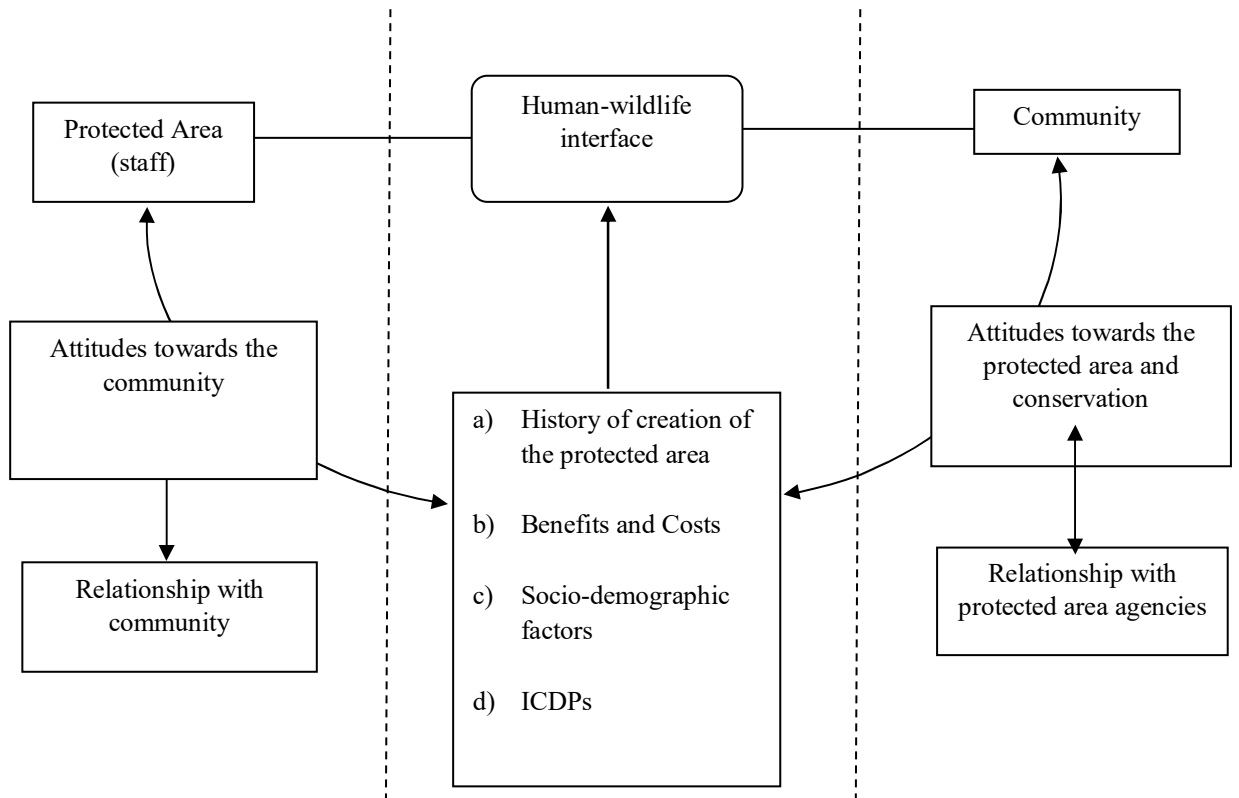


Figure 2.1: Framework denoting reciprocity in PA-community relationships. *Note:* ICDP - Integrated Conservation and Development Project. The direction of lines indicates interconnectedness of the determinants.

2.3.3 Determinants of PA staff-community relationships

2.3.3.1 History of creation of PAs

The establishment of PAs has been associated with forced removal of the local communities from their original areas of residency and prohibition of access to resources in the PAs like meat, grazing areas and firewood (Fischer *et al.*, 2011, Mombeshora and Le Bel, 2009, Borrini-Feyerabend *et al.*, 2006). The impacts of these forced removals were not taken into account when the PAs were established and in subsequent management of these areas (Mhlanga, 2001). This led to problems between PAs and the communities creating social, economic and political tension in some cases (Graham *et al.*, 2005, Choudhury, 2004). As a result, this resentment of PAs and what they stand for is thought to have resulted in increased poaching, habitat encroachment and destruction (Romañach *et al.*, 2011, Wasser *et al.*, 2010, DeGeorges and Reilly, 2009, Lynagh and Ulrich, 2002) which is detrimental to wildlife conservation and tourism. This background continues to influence the communities' perceptions of wildlife, PAs and tourism to date. According to Muchapondwa *et al.* (2009), the decline

in wildlife populations is linked to the displacement of poor rural communities who subsequently lost their traditional right to use natural resources such as wildlife, resulting in them having little or no incentive to conserve them. In support of this, Borrini-Feyerabend *et al.* (2004) points out that recognising communities as rightful managers or co-managers of the natural resources on which they depend for their livelihoods and cultural identity could help reduce conflicts and enhance constructive cooperation between PAs and local communities. However, Simelane *et al.* (2006) suggested that the history of being removed or of certain forms of exclusion from PAs has no effect on communities' attitudes towards the PAs although local communities are concerned that PAs are the domain of an exclusive and foreign class.

2.3.3.2 Benefits and costs associated with living closer to PAs

Benefit sharing is critical in gaining local support for wildlife conservation (Tessema *et al.*, 2010, Dale *et al.*, 1990). Allendorf *et al.* (2012) postulate that when communities' needs are met, the communities are more likely to appreciate the PA, less likely to mention problems, and more likely to mention benefits. After their needs are met, communities' negative perceptions of management conflicts and crop damage decrease, and their positive perceptions of conservation, ecosystem service and extraction benefits increase (Allendorf *et al.*, 2012, Méndez-Contreras *et al.*, 2008). As such, communities that receive more wildlife-related benefits are more likely to support conservation while those that receive less benefits express dissatisfaction (Gandiwa *et al.*, 2013a, Kideghesho *et al.*, 2007, West and Brockington, 2006, Gadd, 2005, Gillingham and Lee, 2003, Holmes, 2003).

Prohibition of access to PA resources like grazing lands is a major cause for negative attitudes towards PAs (Tessema *et al.*, 2010, Schelhas *et al.*, 2002). However, Fischer *et al.* (2011) state that benefit sharing does not necessarily improve community welfare or incentives for wildlife conservation but rather the outcomes depend on the exact design of the benefit shares and the size of the benefits as compared with agricultural losses.

Snyman (2012) advances that in order to encourage community support for conservation and the consequent protection of natural resources, a direct connection needs to be ascertained between conservation and ecotourism and the benefits that accrue to the community from it, whether collective or individual. The timing of benefit

distribution is also important and should be as quick as possible in order to establish a link between income and conservation (Mulonga and Murphy, 2003). Other benefits mostly valued by communities include honouring historic resource use rights, sharing of tourism revenues, social services including employment, provision of transport and infrastructure development (Tessema *et al.*, 2010). Snyman (2012) also highlighted that unless community members are themselves employed in tourism or have a family member employed in tourism or conservation, there is limited awareness of the direct, tangible benefits of tourism and conservation. Tessema *et al.* (2010) put forward that communities view wildlife as significant because of the importance of wildlife included in tourism revenues, hunting and viewing opportunities, and bequest and cultural values. Some communities believe that wildlife and people can coexist and that PAs are highly important for wildlife, and have important economic values, for example, in the form of tourism revenue and ecological value, which include potential use for dry-season pasture and water points (Tessema *et al.*, 2010, Sekhar, 2003). Communities' opinions of the importance of tourists can also affect relationships between PAs and the communities (Simelane *et al.*, 2006). Opinions may include whether PAs are economically important to the region, whether tourists increase international exposure, provide information, create job opportunities, or increase the purchase of local arts and crafts. Ebua *et al.* (2011) stated that by denying communities benefits and access from natural resources, they develop negative attitudes and engage in activities that are detrimental to conservation. The community often express their dissatisfaction through formal political opposition such as legal challenges, lobbying, and protest marches, non-cooperation and sabotage (Holmes, 2007). Conflicts and negative attitudes towards the PAs are, therefore, correlated with restrictions over access to needed resources such as pasture and water for livestock (Kideghesho *et al.*, 2007). Holmes (2013), however, points out that PAs can survive despite long-term opposition and local discontent.

Kiss (1990) asserts that many communities in wildlife areas do not receive benefits and yet they bear the costs of living with wildlife. This is worsened by lack of adequate compensation to offset the losses (Harihar *et al.*, 2014). Accordingly, this results in communities developing a negative attitude towards conservation (Osmond, 1994). PA costs to communities include crop damage and livestock depredation by wildlife. Most of the constraints facing livestock keeping (e.g., depredation, inadequate pasture, diseases and lack of water) are linked to wildlife and PAs and, therefore, are

regarded as conservation-induced costs (Gandiwa *et al.*, 2013a, Kideghesho *et al.*, 2007). The level of crop damage influences local attitudes toward wildlife and conservation (Okello *et al.*, 2011, Naughton-Treves *et al.*, 2003, De Boer and Baquete, 1998). Communities who experience higher costs are more likely to oppose PAs than those who are minimally affected (Snyman, 2012, Shibia, 2010, Baral and Heinen, 2007, Gadd, 2005, Naughton-Treves *et al.*, 2003). Gandiwa *et al.* (2012) postulated that an increase in costs due to wildlife depredation may result in negative impacts on social life, household income, food security and potential conflict between the PAs and communities.

Communities with minimal conflicts with wildlife and experience less costs differ significantly from those with serious conflicts in their relationships with the PAs, those with minimal conflicts having more positive attitudes about their relationship with PAs (Tessema *et al.*, 2010, Kideghesho *et al.*, 2007). However, studies by Mehta and Heinen (2001); Arjunan *et al.* (2006) and Mutanga *et al.* (2013a) show that the level of costs caused by wildlife does not affect community attitudes towards wildlife and conservation, hence showing the contextual differences among regions and/or countries. Nevertheless, Redpath *et al.* (2013) points out that the ability of conservation and livelihoods to coexist depends on the willingness of parties to recognise problems as shared ones and to discuss them collaboratively.

2.3.3.3 Socio-demographic factors

Arjunan *et al.* (2006) and Snyman (2012) postulate that attitudes of communities around conservation areas differ according to income levels, sources of income, education, age, length of residency, and gender. These factors are indicators of PA-community relationships and are therefore important in managing relations between PAs and communities. Community members who benefit from their PAs, are dependent upon farming for income, and do not have multiple sources of income do not support the possibility of human-wildlife coexistence (Tessema *et al.*, 2010, Dickman, 2005).

Younger community members are more positive about conservation and tourism than older community members (Shibia, 2010) probably because younger people are usually more educated and understand conservation issues better than older people especially in developing countries in Africa and Asia. However, according to Tessema *et al.* (2007) older community members value PAs more than younger

community members. These differences can be attributed to the contextual differences among study areas. In some areas, as people get older, they become more understanding and tolerant. Moreover, younger people are usually involved in poaching, and therefore, are in constant battles with conservation authorities hence the negative perceptions of conservation. On the effect of gender on PA-community relationships, Kideghesho *et al.* (2007) indicated that gender has no effect on attitudes towards the relationship between PAs and communities. This is, however, contrary to other studies by Kaltenborn *et al.* (1999), Kaltenborn and Bjerke (2002) and King and Peralvo (2010) which show that gender affects attitudes on PA-community relationships due to gender differences in livelihood patterns within the communities.

While Songorwa (1999) argue that people who are more educated oppose conservation initiatives, a number of other authors indicate that community members with a higher level of education support PAs than those with lower levels of education (Kideghesho *et al.*, 2007). Røskaft *et al.* (2004) and McClanahan *et al.* (2005) attribute this to high level of understanding among the highly educated community members. Kaltenborn *et al.* (1999); McClanahan *et al.* (2005) and Kideghesho *et al.* (2007) add that education paves way to better opportunities for employment and provides alternative livelihood strategies which reduce dependency on resources from PAs for survival. Snyman (2012) also indicates that community members employed in tourism have a higher number of years of education than the average community member and these have a positive relationship with PAs. To that effect, Snyman (2012) and Allendorf *et al.* (2006) show a positive correlation between number of years of education and positive attitudes towards PAs. Mehta and Heinen (2001) also postulate that high school graduates are in a better position to understand the importance of PAs, and this results in positive relationships.

Kaltenborn *et al.* (1999) and Kideghesho *et al.* (2007) indicate that the number of livestock and level of wealth are important predictors of PA-community relationships. Owners of large herds of livestock are more negative to PAs than those with less and are often less supportive of conservation (Romañach *et al.*, 2011, Gadd, 2005). This is because community members with more livestock are more likely to experience greater losses to predation and are more likely to interact with the PAs in a negative way through restrictive, prohibitive and punitive laws. They also sometimes

get arrested and fined if found grazing or watering their livestock illegally in the PAs (Kideghesho *et al.*, 2007).

Community members with better sources of income other than farming tend to have positive attitudes towards conservation than those who derive income from farming and livestock (Tessema *et al.*, 2010). Similarly, socio-economic status of community members significantly affects attitudes towards PAs and conservation (Allendorf *et al.*, 2006). Community members with higher levels of income have more positive attitudes towards PAs than those with low levels of income. Community members who are wealthy are less dependent on PA resources and therefore have a positive relationship with the PAs. This is because community members with higher levels of income can afford to buy necessities and can avail of the associated security of livelihood diversification. They are, therefore, less dependent on PA resources and are not as affected by the negative impacts from PAs, such as restrictions on resource use and crop or livestock damage by wild animals, as those community members with lower levels of income. Community members who are wealthy therefore have a positive relationship with the PAs (De Boer and Baquete, 1998).

Different authors have different views on the effect of household size on PAs and conservation. De Boer and Baquete (1998) and Snyman (2012) argue that household size has no significant effect on attitudes towards PAs and conservation while Tessema *et al.* (2007) advance that larger families value PAs more than smaller families. This is probably due contextual differences among the study areas or regions.

2.3.3.4 Integrated conservation and development projects

Since the establishment of PAs has often displaced rural communities from their traditional lands and denied them access to wildlife resources (Songorwa, 1999, Barrett and Arcese, 1995), many PAs have operated directly against the economic interests of local communities (Nepal and Weber, 1995, Wells and Brandon, 1992). The resultant increased poaching pressure has led to a growing recognition that this ‘fences and fines’ approach especially in most southern African countries has failed to achieve its objective of preserving wildlife (Swanson and Barbier, 1992, Kiss, 1990).

Accordingly, the main thrust to contemporary wildlife management approaches has been to include the local people to gain their cooperation and support, through integrated conservation and development, projects (Wells and Brandon, 1992). ICDPs

were first introduced in the mid-1980s by the World Wide Fund for Nature (WWF) in an attempt to address some of the shortcomings and problems associated with the 'fines and fences' approaches to conservation in protected areas (Larson *et al.*, 1988). These projects involve varying levels of local participation, ranging from pure benefit sharing, such as transfers from wildlife-related activities, to a more far reaching design of community-based management in which local communities are trained to manage and control resources. While the core objective of these projects is PA conservation (Brandon and Wells, 1992), the aim is to achieve this by promoting economic development and by providing local people with alternative income sources that do not threaten wildlife (IUCN, 2005).

Community based natural resource management (CBNRM) programs and Transfrontier Conservation Areas (TFCAs) are examples of ICDPs. CBNRM programmes foster community development through revenue sharing programs or through the promotion of independent ventures on communal lands like sport hunting, wildlife viewing, and cultural tourism (Balint and Mashinya, 2006). Their goal is to increase benefits from alternative livelihood activities as a way to reduce the threat to conservation from local people (Salafsky and Wollenberg, 2000). Examples of CBNRM programmes include the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe, Living in a Finite Environment (LIFE) in Namibia and Administrative Management Design Programme for Game Management Areas (ADMAD) in Zambia (Büscher, 2009). A number of studies have shown that some communities benefit from CBNRM projects, e.g., Caprivi Strip in Namibia (Barnes, 2008) and Mahenye in Zimbabwe (Gandiwa *et al.*, 2013a). Conservation gains are expected as local residents begin to accrue benefits from CBNRM projects and get incentivised to limit poaching and maintain wildlife habitat on their territory (Balint and Mashinya, 2006). Benefits enhance communities' attitudes towards PAs (Tessema *et al.*, 2010) and as Kideghesho *et al.* (2007) and Gandiwa *et al.* (2013a) point out, when communities receive wildlife-related benefits, they are likely to support conservation, which also enhances PA staff's attitudes towards these communities.

TFCAs, for example, the Great Limpopo Transfrontier Conservation Area between Mozambique, South Africa and Zimbabwe; The Maloti-Drakensberg TFCA between Lesotho and South Africa; and the Kavango-Zambezi TFCA between Angola,

Botswana, Namibia, Zambia and Zimbabwe, are relatively large tracts of land, overlapping frontiers between two or more countries and which embrace natural systems encompassing one or more PAs (Hanks, 2003). Barnes (1998) points out that TFCAs can generate income from tourism, particularly in satisfying the growing demand for “adventure nature-based tourism” in remote destinations, and from food and income from the consumptive use of natural resources. According to Hanks (2003), TFCAs also conserve biological diversity and contribute to the alleviation of poverty (Hanks, 2003). From the theoretical basis of the relationship between benefits and communities’ attitudes towards PAs, we can conclude that benefits from TFCAs may improve PA staff-community relationships, and therefore, contribute to positive PA-community relationships.

Some authors argue that the promotion of TFCAs was a response by environmental organisations to the complications experienced with community-based conservation and to exclude local partners who they considered not to be good ecological custodians (Hutton *et al.*, 2005, Chapin, 2004). However, according to Spierenburg *et al.* (2008), proponents of TFCAs insist that local people living in or close to TFCAs will benefit from the opportunities for economic growth that these areas offer, and that they will participate in the management of TFCAs. Nevertheless, Spierenburg *et al.* (2008) concluded that local communities are under-represented, under-respected, under-skilled and under-resourced actors in TFCAs. Andersson *et al.* (2013) and Gandiwa *et al.* (2014b) also put forward the argument that the formation of TFCAs is a highly political top-down process and as a result the local communities find themselves residing in newly designated TFCAs and yet have little knowledge to what they actually mean. This can also be said about many PA staff who are unsure of what TFCAs mean. This may mean that until the details of TFCAs are worked out, their role in enhancing PA-community relationship remains to be seen.

2.3.3.5 Attitudes and its influence on relationships

Attitudes are human psychological tendencies expressed by evaluating whether one likes or dislikes a particular object (Ajzen and Fishbein, 1980). Ajzen and Fishbein (1980) further point out that attitudes also consist of beliefs, which are associations that people establish between the attitude object and various attributes. Thus, attitudes of communities around PAs can be described through the positive and negative perceptions they have of the PAs. The assessment of peoples’ attitudes and perceptions

towards conservation has become an important aspect in many studies of wildlife conservation (Newmark *et al.*, 1993). Wildlife conservation's success mostly depends on the attitudes of people towards conservation (Triguero-Mas *et al.*, 2009, Kideghesho *et al.*, 2007, Struhsaker *et al.*, 2005, Osmond, 1994). Community attitudes towards PAs and conservation are affected by a number of factors which include the history of creation of PAs (Graham *et al.*, 2005, Choudhury, 2004), wildlife benefits (Tessema *et al.*, 2010), human-wildlife conflicts (HWC) (Gadd, 2005, Naughton-Treves *et al.*, 2003), ICDPs (Brandon and Wells, 1992) and socio-demographic factors, e.g., household income levels, education, age (Snyman, 2012), size of livestock herd (Kideghesho *et al.*, 2007), length of residency, gender (Arjunan *et al.*, 2006), sources of income and household size (Tessema *et al.*, 2010, Dickman, 2005).

PA staff's attitudes towards the communities may also affect their relationship with the communities. Where communities engage in activities that are detrimental to conservation such as poaching, human encroachment, mining and prospecting, and livestock conflicts, they will always clash with PA authorities (Gandiwa *et al.*, 2013b) and PA staff usually develop negative attitudes towards the communities. In contrast, PA authorities have positive attitudes to communities who appreciate and are more supportive of wildlife conservation and are, therefore, likely to have positive relationships with these communities.

2.3.4 Interaction among determinants

The framework in Figure 2.1 depicts the interactions occurring at the human-wildlife interface of the PAs (including their staff) and local communities. The proposed framework examines the relationship between the PA staff who are the custodians of wildlife and the communities on the other side who are either positively or negatively affected by the PAs. Four factors that influence PA-community relationships are identified and each of these factors affects the way PAs and communities relate with each other. With the history of creation of PAs, the communities may harbor deep rooted memories which may affect the way they look at and thereby relate with the PAs (Mombeshora and Le Bel, 2009). On the other hand, the importance that PAs place on the effects the history of creation of PAs have on communities may also affect the way they relate to the communities; for instance if they feel it is important that communities hold their cultural ceremonies to honour their ancestors inside the park, then they will respect the communities' entitlement to do so. In contrast, if the PAs do not feel that

these cultural ceremonies are important, then they might regard the communities as a nuisance.

Community benefits and costs from wildlife also affect the way both PAs and communities relate with each other. If communities do not receive benefits and bear costs from wildlife depredation, they are likely to have a negative relationship with the PA (Allendorf *et al.*, 2012, Kideghesho *et al.*, 2007). If the protected areas also do not see the importance of extending some benefits to the communities or minimising levels of wildlife depredation on people's crops and livestock, they are likely to have negative relationship with the communities. PAs also suffer costs in form of unsustainable behaviour by the communities which includes illegal hunting of wildlife, collaborating with external poachers, habitat encroachment, mining and prospecting among others (Gandiwa *et al.*, 2013b). With this kind of behaviour by communities, PA staff may regard some communities as poachers and consequently have negative relationships with them.

Different community socio-demographic factors like gender, household size, number of livestock and level of education among others may affect the way PAs and communities relate with each other; for instance a family with a large number of livestock is likely to incur more costs due to wildlife depredation and therefore may have a negative relationship with the PA (Romañach *et al.*, 2011). On the other hand more livestock may mean more encroachment into the PAs and so the PAs are likely to develop a negative relationship towards these local communities (Kideghesho *et al.*, 2007).

With successful ICDPs, communities are likely to benefit from wildlife and are therefore likely to have a positive relationship with the PAs. When the communities receive benefits, they are less likely to engage in activities that are detrimental to wildlife conservation like poaching and therefore the PAs are likely to have a positive relationship with them (Balint and Mashinya, 2006).

Four factors can directly influence PA staff-community relationships as explained earlier in this review and/or they can also affect either PA staff or community attitudes towards each other which in turn affect their relationships. Attitudes, being expressed by evaluating whether one "likes" or "dislikes" an object (Ajzen and Fishbein, 1980) may be influenced by each of the four factors. However, a person may

not like a PA, for example, because of the memories from the history of creation of the PA, but still have a positive relationship with the PA because of the amount of high benefits they get from the PAs and fewer costs they incur from wildlife. These factors do not work in isolation; neither do they work as a package. PA-community relationships may be influenced by different number of factors depending on contextual differences in the wildlife areas. Hence, the direction of lines in the framework (Figure 2.1) indicates the interconnectedness of the determinants.

2.4 Conclusion

We proposed a framework for assessing PA staff-community relationships that includes the views of both PA staff and communities, and their determinant factors. Besides the mostly studied community views on their relationships with PAs, this review has shown that PA staff attitudes also play a significant role in the broader relationships concerning PAs and local communities as shown by the proposed framework. Four major factors that affect PA staff-community relationships were identified and can further be tested for causal relationships: (i) history of creation of the PAs, (ii) benefits and costs associated with living closer to PAs, (iii) demographic factors, and (iv) community involvement in conservation-related developmental projects. We do not propose that the PA staff-community relationship determinants discussed here are exhaustive as a variety of other determinants can be used and can be tested for causal relationships.

In conclusion, the proposed framework gives a new perspective of looking at PA staff-community relationships especially in tropical areas of developing countries where there is a high biological diversity, and also where local communities largely depend on natural resources for their day to day survival. Thus, we argue that future studies should make an attempt to consider both sides of the relationships particularly at the local level as this may aid in improving the sustainability of wildlife conservation.

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CHAPTER 3: Protected area staff and local community viewpoints: a qualitative assessment of conservation relationships in Zimbabwe†

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Abstract

With the increase in illegal resource harvesting in most protected areas (PAs), the need to understand the determinants and relationships between PAs and local communities to enhance wildlife conservation is increasingly becoming important. Using focus group discussions and interviews, we established the determinants of PA staff-community relationship from both PA staff and local communities' viewpoints, and assessed perceptions of their relationship with each other. The study was guided by the following main research question, 'What is the nature of the relationship between PA staff and local communities and what are the main factors influencing the relationship?' Data were collected through focus group discussions and interviews from four PAs and their adjacent communities in Zimbabwe between July 2013 and February 2014. Our results showed that a total of seven determinants were identified as influencing PA staff-community relationship, i.e., benefit-sharing, human-wildlife conflict, compensation for losses from wildlife attacks, communication between PA staff and local communities, community participation in the management of CAMPFIRE projects, lack of community participation in tourism in PAs, and community perceptions of PA staff or PA staff perceptions of the community. Of the seven, only one determinant, benefit-sharing, was recorded as the main factor that differentially influences the perceptions of community and PA staff on their relationship. Furthermore, both the communities and PA staff reported mixed perceptions on their relationship with each other. We conclude that both communities' and PA staff's views on determinants are largely similar in all studied PAs irrespective of PA ownership, management and/or land use. Our findings could be relevant in policy making especially in developing countries in developing PA-community relationship framework in natural resource conservation.

Keywords: benefit-sharing, expectations, management regime, tourism, wildlife

3.1 Introduction

Most protected areas (PAs) have a history of human habitation before their establishment (Petrova, 2014, Tomicevic *et al.*, 2010). For instance, many local people were evicted from their former areas of habitation when most PAs were created (Romañach *et al.*, 2011, Muchapondwa *et al.*, 2009) and were further prohibited from accessing natural resources that were fenced inside the established PAs (Bennett and Dearden, 2014, Songorwa, 1999). However, wild animals within PAs often roamed outside park boundaries, destroying crops and killing livestock and sometimes people (Amaja *et al.*, 2016, Frank, 2016, Matema and Andersson, 2015, Snyman, 2012). The establishment of PAs was reinforced through protectionist conservation policies, later known as the ‘fences and fines’ approach or ‘fortress conservation’ (Igoe, 2004, Brockington, 2002). These policies created conflict between local people and PA staff (Strickland-Munro and Moore, 2013, Gandiwa *et al.*, 2012). The increase in illegal resource harvesting led to a realisation that the fences and fines approach was failing as a wildlife preservation method (Redford *et al.*, 2006, Swanson and Barbier, 1992) and this led to the introduction of integrated conservation and development projects (ICDPs) (Wilkie *et al.*, 2006, Adams *et al.*, 2004). ICDPs which were reported to have gained local people support, became a popular approach for working with communities in and around PAs (Gockel and Gray, 2009).

Some of the ICDPs which became popular through local community support in southern Africa include the Living in a Finite Environment (LIFE) in Namibia, the Administrative Management Design (ADMADe) in Zambia and the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe. In the Zimbabwean context, CAMPFIRE uses wildlife and other natural resources to promote devolution of rights to manage, use, dispose of, and benefit from natural resources to rural institutions (Muboko and Murindagomo, 2014, Child, 2004). CAMPFIRE is based on the principle that, if communities receive economic benefits from wildlife, they will appreciate and contribute to its conservation (Martin, 1986). Accordingly, more economic benefits are expected to accrue to communities when they have higher conservation ethics, for example, if communities desist from poaching, more animals will be available for hunting which will eventually mean more revenue for the communities. Evidence from some areas in Zimbabwe shows that poaching was rampant prior to CAMPFIRE (Fischer *et al.*, 2011), but its introduction in the late

1980s resulted in the decline of poaching in some areas (Child, 1995). Benefits from CAMPFIRE helped to promote positive relationships between PA staff and local communities (Mutanga *et al.*, 2015). In this study, positive PA-community relationship means PA staff and the local community interact well and tolerate each other. However, CAMPFIRE still remains with a number of challenges including the bouncing back of poaching in some areas just after a few years of its introduction (Muboko and Murindagomo, 2014, Fischer *et al.*, 2011).

Earlier studies have looked different aspects of PA staff-community relationships, e.g., human-wildlife conflicts (HWC) and benefit-sharing (Blackburn *et al.*, 2016, Sponarski *et al.*, 2015, Tessema *et al.*, 2010, Kideghesho *et al.*, 2007), communication between PA staff and communities (Baral and Heinen, 2007, Gadd, 2005), collaborative management (Furze *et al.*, 1996, Fiallo and Jacobson, 1995), communities attitudes (Tessema *et al.*, 2010), and PA staff attitudes towards communities (Mutanga *et al.*, 2015). However, few studies evaluate PA-community relationships between different conservation areas and tenure regimes. For example, Simelane *et al.* (2006) investigated PA-community relationships using five national parks in South Africa and Tessema *et al.* (2010) used four PAs in Ethiopia. Moreover, there is an observed tendency in the literature to study PA-community relationships using only the community's viewpoint (e.g., Allendorf, 2010, McCleave *et al.*, 2006, Roth, 2004), with very few studies analysing both PA staff and community perceptions (Bruyere *et al.*, 2009). These studies have highlighted significant differences in the perceptions of PA staff and communities. For example, while PA staff in Samburu and Buffalo Springs National Reserves in Kenya reported that they sufficiently initiated and maintained dialogue with their adjacent communities, the communities reported that communication with PA staff was limited and irregular (Bruyere *et al.*, 2009). Furthermore, in the same study, while PA staff perceived the benefits the communities got from PAs as satisfactory and sufficient, the communities were unsatisfied with the small percentage of community members employed by the park, and the amount of revenue-distribution between the parks and the communities where communities only got a very small percentage (Bruyere *et al.*, 2009). These differences in PA staff and community perceptions indicate the need for region or country specific studies to assess PA-community relationships if stakeholder concerns are to be addressed in order to

identify potential problem areas regarding PA management and wildlife conservation (Molina-Murillo *et al.*, 2016).

A knowledge gap exists in Zimbabwe considering that studies on PA-community relationships in the country have been done on single PAs and using only community's viewpoints, e.g., Mhlanga (2001) looked at conflict between wildlife and people in Kariba, and Mombeshora and Le Bel (2009) assessed park-people conflicts in Gonarezhou National Park. A recent attempt to comprehensively study conservation relationships from both PA staff's and local communities' perspectives is that of Mutanga *et al.* (2016b) who quantitatively assessed conservation relationships from 1,071 people from four PAs and adjacent communities. However, that study did not consider the heterogeneity that exist among community members and PA staff in different PAs hence it groups together all communities and all PA staff. This present study contributes to the PA-local community relationship literature through examining the determinants of conservation relationships and PA-community relationships from both the PA staff and local communities' viewpoints while taking into consideration the different communities and PAs, as well as sub-groups within communities to allow for an exploration of different experiences among community members. By understanding how PA staff and communities perceive the magnitude and value of each determinant in influencing PA-community relationships, PA management can effectively address relevant stakeholder needs and minimise conflicts between PA staff and adjacent communities. Moreover, the study compares these relationships under different management regimes in Zimbabwe. The study was guided by the following main research question, 'What is the nature of the relationship between PA staff and local communities and what are the main factors influencing the relationship?' The specific objectives of the study were: (1) to establish and compare the determinants of PA staff-community relationship across different ownership and management regimes, (2) to assess the kind of influence each determinant has on PA-community relationships, and (3) to compare PA staff and community perceptions of their relationship.

3.2 Materials and Methods

3.2.1 Study Sites

Four study sites were selected purposively to give a broad understanding of PA-community interactions in Zimbabwe. To select the PAs, we considered ownership

(both state ownership and private ownership) and type of management (i.e., publicly managed, privately managed or managed by a public-private partnership), land use patterns of the PA (national park or safari area), as well as whether the adjacent communities did or did not have CAMPFIRE. A national park is mandated for conservation through non-consumptive utilisation and therefore trophy hunting is not allowed. In a safari area controlled trophy hunting is permitted within the park and such trophy hunting is controlled through a quota system that aims to promote sustainable hunting. The four selected study sites were: Umfurudzi Park, Gonarezhou National Park, Matusadona National Park and Cawston Ranch, and their surrounding communities (Figure 3.1; Table 3.1). Although Umfurudzi Park is gazetted as a safari area, trophy hunting was temporarily suspended due to the population decline and local extinction of some species. All the sampled villages surrounding a PA are referred to as a community in this study, hence we have four communities: Umfurudzi, Gonarezhou, Matusadona and Cawston Ranch. While we acknowledge that there may be spatial and socio-economic differences between these villages, we grouped together all villages adjacent to a PA into one community because we wanted a more general outlook of PA staff-community relationships.

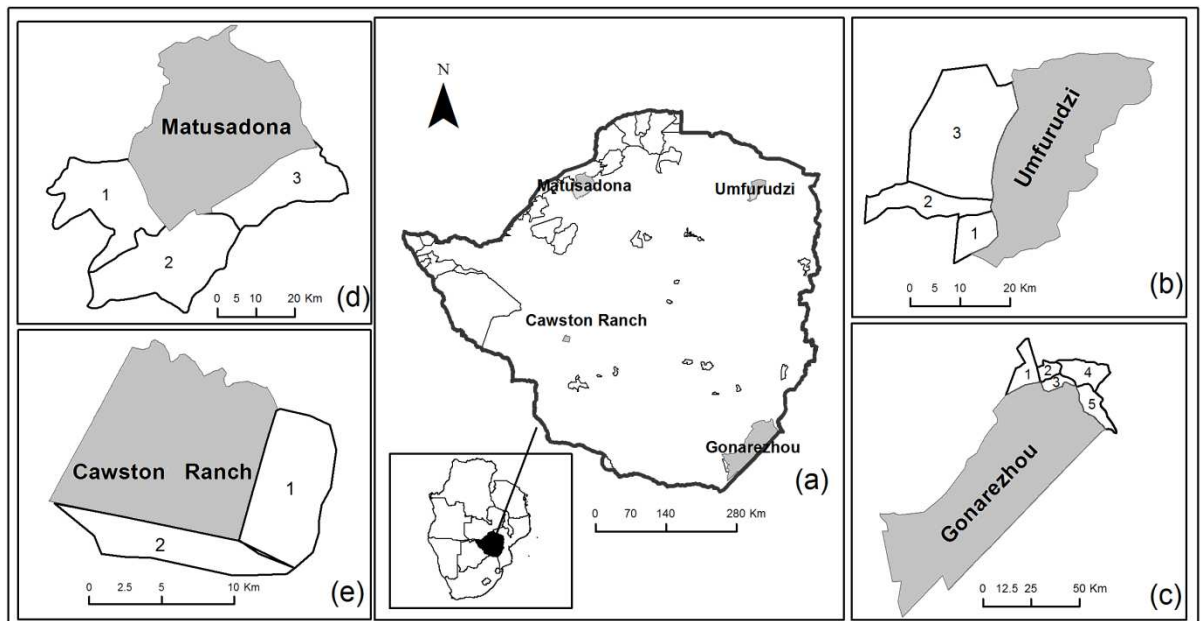


Figure 3.1: Location of the four study sites in Zimbabwe. (See Table 3.1 for details).

Table 3.1: General characteristics and organisation of the four PAs and their surrounding communities.

Attributes	Study site			
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch
Status	Safari Area	National Park	National Park	Safari Area
Ownership	Government	Government	Government	Private
Management	Public-private partnership	Public-private partnership	Public	Private
Year established	1981	1930 as a Game reserve, upgraded to a National Park in 1975	1963 as a Game reserve, upgraded to a National Park in 1975	1988
Size (km ²)	760	5,053	1,400	128
Forms of tourism	Photographic, sport fishing	Photographic, sport fishing	Photographic, sport fishing	Trophy hunting
Study areas (as depicted in Figure 3.)	1- Sanye, 2- Mufurudzi 1, and 3- Mufurudzi 2	1-Chizvirizvi, 2- Mupinga, 3-Chitsa, 4- Mutandahwe, and 5- Mahenyeye	1-Nebiri, 2- Musambakaruma 2, and 3- Musambakaruma 1	1-Ward 10 and 2-Ward 9.
Sources of community livelihoods	-Small-scale subsistence and cash crop farming -Small scale livestock production -Gold panning	-Small-scale substance and cash crop farming -Small scale livestock production	-Small scale subsistence and cash crop farming -Very little livestock production due to tsetse fly prevalence	-Small-scale subsistence and cash crop farming -Small scale livestock production
CBNRM projects	None	CAMPFIRE	CAMPFIRE	None
<i>Estimation of PA benefits to communities</i>				
Monetary benefits from PAs*	None	None	None	None
Non-monetary benefits from PAs	-Ecosystem services, e.g., flood control, fruits and clean air, casual workers are sourced from the local communities, few permanent employees are sourced from the communities	-Ecosystem services, controlled harvesting of thatching grass and firewood, controlled livestock grazing especially during drought, casual workers are all sourced from the local communities, few permanent employees are sourced from the communities, access to cultural and traditional sites	-Ecosystem services, casual workers are all sourced from the local communities, few permanent employees are sourced from the communities, access to cultural and traditional sites	-Ecosystem services, controlled harvesting of thatching grass, casual workers are sourced from the local communities, few permanent employees are sourced from the communities
Monetary benefits from CAMPFIRE per household	na	Head tax (usually about US\$1 per year)**	Head tax (usually about US\$1 per year)**	na
Collective benefits from CAMPFIRE	na	Include: schools, grinding mills, boreholes***, hardware store, trucks	Include: schools, grinding mills, boreholes, clinics	na

Notes: CBNRM = Community-Based Natural Resource Management; CAMPFIRE = Communal Areas Management Programme for Indigenous Resources; *Information on

income generated by each PA was difficult to access during the study; **In the past there were more monetary benefits per household but now people only benefit from the head tax; ***a borehole is a hole drilled in the ground to extract water; na means not applicable.

3.2.2 Data collection

3.2.2.1 Community perceptions of determinants and PA staff-community relationship

Data were collected using focus group discussions (FGDs) and in-depth interviews between July 2013 and February 2014 as explained below. FGDs were used to establish communities' perceptions of the determinants of PA staff-community relationship and of their relationship with PA staff. To establish the determinant factors of their relationship, respondents were asked to detail their expectations and explain whether the expectations were met or not. FGDs were guided by three main open ended questions meant to solicit more responses from the people: (1) what are your expectations from PAs and PA staff? (2) Explain whether your expectations are being met or not, and (3) how do you describe your relationship with the PA and why? Due to the exploratory nature of the study, we had no pre-determined list of answers and as such, all the determinants discussed in this paper were instigated from these FGDs. However, where a focus group did not mention certain issues raised by former group(s), a follow-up question(s) was raised in that regard. The instrument was piloted among local people in Umfurudzi, through two FGDs, one with ten males and the other with ten females, all from Magazi village adjacent Umfurudzi Park. This village (Magazi), although it was part of the relevant population, was excluded from the final sample to exclude any chances of peer influence of other participants (Haralambos, 2008).

Ten discussants were targeted for each FGD (Table 3.2) as recommended by Krueger and Casey (2000). Purposive sampling guided the initial selection of focus group discussants. Purposive sampling groups participants according to preselected criteria relevant to a particular research question (Babbie, 2007). Prior to purposive selection of FGDs participants, a formal request was made through community traditional leaders where ten participants were selected per FGD. FGDs participants were clustered according to their roles in the community. Four FGDs were held in each community, the first FGDs comprised community leaders, i.e., Chiefs, Village Heads and/or Counsellors, the second FGDs comprised male heads of the families, the third

FGDs comprised females with families while the final FGDs comprised unmarried young people (18-35 years). A total of 16 FGDs were held with 160 people (40 from each community) comprising 104 (65%) males and 56 females (35%) participating. Overall, 27 (17%) respondents had no formal education, 81 (51%) respondents had primary level education (Grade 0 - 7), 39 (24%) respondents had secondary education (Form 1- Form 4 or 6) and 13 (8%) respondents had tertiary education (college diploma, undergraduate degree or above).

Divisions into sub-groups for FGDs was done to ensure homogeneity among discussants so as to maximise disclosure and to allow for an exploration of different experiences considering that different groups of people have different roles in the community. Community leaders usually make overall decisions for their communities. They therefore have knowledge of what is generally happening in the communities, whether people are happy or not and what makes them happy or not happy. In the communities studied, the male heads usually have decision-making powers for their households and are expected to carry the social and economic responsibility for the well-being of household members. They usually work in agricultural wage labour and cash crop production (Bock and Shortall, 2006). Women are usually responsible for caring and feeding the children, and engaging in jobs such as working on farms, gardening, and doing household chores, including domestic water and firewood collection (Bock and Shortall, 2006). Finally, the youth are involved in projects like handcrafts, vegetable growing and home improvement. However, young people are often isolated and unable to get involved in many community development activities (Oakley and Garforth, 1997). The male heads and youths (males) are often involved in bush meat hunting for subsistence and for sale. All FGDs were held at convenient places within the study communities. FGDs were facilitated by the moderator, i.e., the first author, with the help of a trained observer carefully chosen from the communities. All conversations (FGDs and interviews) were electronically recorded and we also took down notes for back up. Discussions lasted between 60 and 90 minutes.

Table 2 shows the distribution of community members who participated in FGDs and the estimated population of community members in a district [population statistics were derived from Zimbabwe National Statistics Agency (2012)]. The districts are comprised of wards divided into villages and then households within each village. A ward is made up of six or seven villages (Gandiwa *et al.*, 2013a).

Table 3.2: Distribution of FG discussants among community members.

Area	District	Ward	Population	Estimated number of households	Average household size	Community leaders	Distribution of FG discussants		
							Male heads	Females with families	Youths
<i>Umfurudzi</i>									
Sanye	Shamva	27	3 640	731	5.0	3	3	4	3
Mufurudzi 1	Shamva	16	7 380	1 614	4.6	4	3	3	3
Mufurudzi 2	Shamva	14	3 853	800	4.8	3	4	3	4
<i>Total</i>				3 270		10	10	10	10
<i>Gonarezhou</i>									
Chizvirizvi	Chiredzi Rural	22	6 331	1 378	4.6	-	4	-	3
Mupinga	Chiredzi Rural	4	5 651	1 305	4.3	-	3	-	4
Chitsa	Chiredzi Rural	5	4 366	986	4.4	-	3	-	3
Mutandahwe	Chipinge Rural	29	12 949	2 450	5.3	5	-	5	-
Mahenye	Chipinge Rural	30	3 671	707	5.2	5	-	5	-
<i>Total</i>				6 749		10	10	10	10
<i>Matusadona</i>									
Nebiri	Kariba Rural	7	1 633	385	4.2	2	2	2	2
Nebiri	Kariba Rural	8	5 768	1 165	5.0	3	3	3	3
Musambakaruma 1	Kariba Rural	9	2 999	640	4.7	2	2	2	2
Musambakaruma 2	Kariba Rural	10	1 564	349	4.5	3	3	3	3
<i>Total</i>				2 395		10	10	10	10
<i>Cawston Ranch</i>									
Ward 9	Umguza	9	5 626	1 411	4.0	5	5	5	5
Ward 10	Umguza	10	2 887	607	4.8	5	5	5	5
<i>Total</i>				1 950		10	10	10	10

3.2.2.2 PA staff perceptions of determinants and community-PA staff relationship

Purposive sampling was used to select interviewees from PAs. The managers (or supervisors in the absence of a manager) on duty in the PAs at the time of data collection were purposively selected. The main goal of purposive sampling was to glean knowledge from individuals that were more knowledgeable about PA mandates versus reality with regards to PA-community interactions and how relationships were managed (Patton, 2005). These would best enable us to answer our research questions. Because not more than one manager was available in each of the four PAs during the time of data collection, we ended up interviewing rangers also, and we grouped them as PA staff. Thus, using the snowballing method, the purposively selected interviewees were asked to identify additional potential interviewees (Biernacki and Waldorf, 1981), who were assumed to have extensive knowledge on the PAs' relationships with neighbouring communities especially those who had worked in the PA for a long time. With the exception of Matusadona National Park where three interviews were carried out with the PA staff, four interviews were carried out with PA staff in the other three PAs, giving a total of 15 interviews. The sample comprised of 86.7 % ($n = 13$) males and 3.3 % ($n = 2$), i.e., Umfurudzi (3 males and 1 female); Gonarezhou (4 males, 0 female); Matusadona (3 males and 0 female), and Cawston Ranch (3 males and 1 female). Overall, 40 % ($n = 6$) interviewees had primary level education (Grade 0 - 7), whereas 60% ($n = 9$) had tertiary education (college diploma, undergraduate degree or above). Four interviewees had been working in the PAs for less than five years, one had between six and 10 years of working in the PA, whereas 10 had more than 10 years experience of working in the PAs. Interviews took place at the respective PAs and interviews lasted between 30 and 45 minutes. The interviews were guided by three questions: (1) what are your expectations from communities? (2) Explain whether your expectations are being met or not, and (3) How do you describe your relationship with the community and why?

3.2.3 Ethics statement

All participants gave their verbal and informed consent to participate in the study after they were verbally read all the elements of written consent. Verbal consent was considered appropriate over written consent considering that the procedures involved no risk and because information such as names or other identifiers was not recorded.

The research procedures which include ethics issues were approved by Chinhoyi University of Technology Research Committee.

3.2.4 Data Analysis

Following Ormsby and Kaplin (2005), qualitative data from both FGDs and interviews were analysed using content analysis where the key issues were grouped into themes. A thematic coding framework was designed based on the emerging themes and themes were colour coded using Microsoft Word. The internal coherence of the defined set of codes was checked by asking two other researchers (colleagues) to use them to code the same focus group discussions and interviews. The discrepancies were very minor which indicated that the codes were coherent and unambiguous, and were defined precisely enough (Newing, 2010). After coding, a text file was generated for each code that listed the relevant data. Careful, systematic analysis of these text files generated a rich description of the PA staff-community relationship for each study site (McCleave *et al.*, 2006). A comparative approach was used where PA staff and local community views of their relationship and the determinant factors were compared.

Determinants of PA staff-community relationships were established based on expectations on different issues mostly mentioned by focus group discussants and interviewees. A qualitative analysis approach was used to group the main expectations into themes where each theme represented a determinant. Focus group discussants and interviewees' responses were sorted into different influencing determinants. Determinants were created inductively for each group within each community and for each PA after consideration of the responses gathered from the FGDs and interviews (Allendorf, 2010). This approach allowed us to capture qualitative explanations of specific determinants thus classifying them into categories which enabled easy comparisons among the: (i) different groups within the same community, (ii) different communities, and (iii) PAs and communities. The categories were assigned based on community benefits received, human-wildlife conflict, compensation for losses from wildlife, communication between PA staff and local communities, community participation in the management of CAMPFIRE projects, community participation in tourism in PAs, wildlife conservation problems caused by community members, community perceptions of PA staff, and community perceptions of the management of PAs.

PA staff and local community perceptions of their relationship were classified into negative or positive relationships based on level of interaction between the two parties. Negative relationships mean PA staff and community members have undesirable (bad) interaction and positive relationships mean PA staff and community members have desirable (good) interaction. Bad interaction means there is no or there is low interface between PA staff and adjacent community, and good interaction means there is high interface.

In addition, to content analysis we conducted an objective analysis where we analysed people's expectations versus reality, i.e., whether their expectations have a base or whether they are in sync with the objectives of both PAs and CAMPFIRE.

3.3 Results

3.3.1 Community perceptions of determinants and PA staff-community relationship

Based on FGDs on community expectations from PAs, seven determinants of communities' relationships with PA staff emerged, i.e., benefit-sharing, human-wildlife conflict, compensation for losses from wildlife attacks, communication between PA staff and local communities, community participation in the management of CAMPFIRE projects, lack of community participation in tourism in PAs, and community perceptions of PA staff (Table 3.3). The community had many expectations from PAs such as grazing land and compensation for losses from wildlife depredation in Umfurudzi and Gonarezhou, employment (where a greater percentage of PA staff would come from the communities) in all communities, open and sufficient communication between the PAs and communities in all communities, and being consulted on decisions that impacted them. Many of these expectations were not being met and contributed to the reasons for the negative PA-community relationships in all the four communities.

The most common indicators of unmet expectations across all PAs and focus groups were unsatisfactory benefits from the PAs for example, lack of access to grazing land and water for livestock due to the boundary fence erected in Umfurudzi Park and Gonarezhou National Park and human-wildlife conflict. A villager from the male focus group in Umfurudzi community had this to say:

“They brought their cheetahs here. Now four of my cattle were killed. As if that is not enough, our crops, especially those of us who are close to the boundary,

are always destroyed by the kudus and sables. The worst part is that up to today, I have not been given even a single cent for my losses”.

Concerning grazing land, a village head from Gonarezhou National Park lamented:

“They fenced the park, now we no longer have grazing land or water for our cattle. Our cattle are dying in numbers”.

In the same community, a woman from another focus group explained:

“The Park erected the fence without even consulting us, our children used to go to school because we would sell the cattle to get money for school fees, but now they no longer go to school. In times of hunger, we would sell the cattle and use the money to buy food. Now because of this fence, our cattle are dying and those that are still alive are so thin that nobody wants to buy them. How then are we supposed to live?”

From Matusadona community, dissatisfaction with benefit sharing mainly arose from decreasing benefits from CAMPFIRE:

“When CAMPFIRE started, we used to benefit a lot in form of cash, ward offices, schools and many other things, but now we are not getting anything, the council is the only one benefiting. Actually, getting money from CAMPFIRE has become a thing of the past. We are in the second year now without getting a single cent but the hunters are still coming as before”, (villager, male focus group).

While some communities around Gonarezhou and Matusadona National Parks had CAMPFIRE, those in Umfurudzi Park do not have a similar privilege:

“We hear about this thing called CAMPFIRE, but we do not have it here. As such the park does not benefit us in any way. If the park would at least, build us schools, roads, dams and help us with electricity we would be very grateful”, (villager in the male focus group).

The issue of employment was another source of dissatisfaction in all communities:

“Very few people from our community are employed in the ranch; they prefer people from far away. At the end of the day, one has to do what one has to do to

survive. Those animals are our only means of survival”, (boy in the youth focus group in Cawston Ranch).

However, as communities are heterogeneous, not everyone shared the same opinions. For example, while many villagers were not happy with the benefit sharing, a few were content. For example one of the leaders in Cawston Ranch had this to say:

“They help us with a vehicle when we have important journeys, e.g., during illnesses or funerals and they also help us with a tractor for ploughing our fields.”

In the same vein, a village head from the community leaders’ focus group in Gonarezhou pointed out:

“CAMPFIRE helps us a lot. Besides communal benefits like grinding mills, hardware store, truck and tractor, people enjoy individual benefits like meat from the hunted elephants and occasional cash dividends”.

Majority of the focus group discussants in all communities reported negative perceptions on their relationship with PA staff. Explanations given mainly revolved around those aspects where communities expressed much dissatisfaction especially due to expectations not met. These include: (i) no interaction between the PAs and the adjacent communities; (ii) PAs were not concerned about the communities’ welfare, e.g., presence of boundary fences in some parts of Umfurudzi Park and Gonarezhou National Park led to restriction in livestock grazing; (iii) no/delayed response to human-wildlife conflicts, and (iv) limited benefits from PAs (Table 3.3). Similarly, the minority (all of whom were community leaders) who reported positive perceptions on their relationship with PA staff expressed satisfaction with some of their expectations which were being met. For example, during the community leaders’ focus group discussion in Matusadona, one counsellor had this to say:

“Although they often take long to respond to complains, PA staff are cheerful and they relate well with us. We drink beer together in beer halls and they even come to our homes for beer when they are free”.

Table 3.3: Determinants of PA-community relationships based on communities' expectations. Symbols in superscript form represent names of communities, that is, Umfurudzi community (^U), Gonarezhou community (^G), Matusadona community (^M) and Cawston Ranch community (^C). Where a symbol for a particular community is present indicates the community which raised the issue(s).

Determinant	Expectations	Current status			
		Community leaders	Male heads	Females with families	Youths
Benefit-sharing	Employment; construction of dams, boreholes, schools, roads, electricity, and hospitals; game meat; thatching grass; grazing land (^{U,G,M & C})	<u>Majority views:</u> Very few benefits (^U); limited use of natural resources mainly thatching grass (^G), limited benefits from CAMPFIRE e.g., boreholes (^{G & M}); low level of employment (^{G, M & C}); limited other benefits e.g., workshop services and transport (^C) <u>Minority views:</u> Use of natural resources permitted especially for leaders like chiefs (^{G & C}), considerable benefits from CAMPFIRE (^{G & M}), other benefits like workshop services available to many people (^C)	<u>Unanimous views:</u> No benefits (^U); Limited use of natural resources mainly thatching grass (^G), limited benefits from CAMPFIRE e.g., boreholes (^{G & M}); low level of employment (^{G, M & C}); a number of other benefits e.g., workshop services and transport but leaders got preferential treatment (^C)	<u>Unanimous views:</u> Same responses as from male heads for all communities	<u>Unanimous views:</u> Same responses as from male heads for all communities
Human-wildlife conflict	Effective problem animal control measures (^{U,G,M & C})	<u>Unanimous views:</u> High HWC, park officials take long to respond to complaints (^{U,G,M & C})	<u>Unanimous views:</u> High HWC (^{U,G,M & C})	<u>Unanimous views:</u> High HWC (^{U,G,M & C})	<u>Unanimous views:</u> High HWC (^{U,G,M & C})
Compensation for losses from wildlife	Monetary compensation for crop damage, or livestock depredation by wildlife (^{U,G,M & C})	<u>Unanimous views:</u> None (^{U,G,M & C})	<u>Unanimous views:</u> None (^{U,G,M & C})	<u>Unanimous views:</u> None (^{U,G,M & C})	<u>Unanimous views:</u> None (^{U,G,M & C})

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Communication	Open and efficient communication ^(U,G,M & C)	<u>Unanimous views:</u> Bad ^(U) , Limited to community leaders ^(G, M & C)	<u>Unanimous views:</u> Nonexistent ^(U) , Limited to community leaders ^(G, M & C) <u>Majority views:</u> informal and irregular ^(G, M & C) <u>Minority views:</u> Not open ^(G, M & C)	<u>Unanimous views:</u> Non existent ^(U) , <u>Majority views:</u> Limited to community leaders ^(G, M & C) <u>Minority views:</u> informal and irregular	<u>Unanimous views:</u> Non existent ^(U) <u>Majority views:</u> Not open ^(G, M & C) <u>Minority views:</u> informal and irregular
Participation in PA tourism management	Recognition of traditional knowledge; participate and receive benefits from tourism ^(U,G,M & C)	<u>Unanimous view:</u> No involvement ^(U,G,M & C)	<u>Unanimous view:</u> No involvement ^(U,G,M & C)	<u>Unanimous view:</u> No involvement ^(U,G,M & C)	<u>Unanimous view:</u> No involvement ^(U,G,M & C)
Collaborative participation in CBNRM management	To be involved in more important decisions in CAMPFIRE like revenue sharing decisions ^(G & M)	<u>Unanimous view:</u> Only a few are partly involved ^(G & M) <u>Majority view:</u> Although involved, the communities' views are not taken into consideration	<u>Unanimous view:</u> Only a few are partly involved ^(G & M) <u>Minority view:</u> Although involved, the communities' views are not taken into consideration	<u>Unanimous view:</u> Only a few are partly involved ^(G & M)	<u>Unanimous view:</u> The youths are not involved ^(G & M)
Perceptions of PA staff	PA management to be more sensitive to community needs, respond quickly to calls for problem animals and to consult and value community input ^(U,G,M & C)	<u>Unanimous view:</u> Not caring, e.g., the erection of the fence boundary ^(U & G) , Not considerate ^(C) , take long to respond to complaints ^(U, G, M) <u>Minority view:</u> They relate well with communities ^(U,G,M & C)	<u>Unanimous view:</u> Not caring, e.g., the erection of the fence boundary ^(U & G) , late to respond to complaints ^(U,G,M) , do not teach the community to participate in tourism ^(U,G,M & C) , Not considerate ^(C)	<u>Unanimous view:</u> Same responses as from male heads for all communities	<u>Unanimous view:</u> Same responses as from male heads for all communities

While communities have diverse expectations, not all of their expectations are the responsibility of PAs. The CAMPFIRE, or any other CBNRM projects as well as other institutions like the Local Government and Non-Governmental organisations also have an important role to play. PAs are certainly expected to provide some of the services like employment and conservation awareness programmes. However, many of the communities' expectations, for example, infrastructural development are beyond the mandate of PAs. More so, some of the expectations like grazing land for livestock and harvesting of thatching grass (Table 3.4), may, if not carefully planned or managed, go against what PAs stand for since their main objective is biodiversity conservation.

Table 3.4: Responsibilities of different institutions with regards to benefit provision to communities. Notes: '√' indicates that the respective authority is responsible for providing that benefit, '?' indicates that the respective authority may provide the benefit if it is possible, 'X' indicates that it is not the responsibility of the respective authority to provide that benefit although it may if it deems fit.

Community expectation	PA	CAMPFIRE	Other institutions like Local Government Agencies or Non-Governmental Organisations (NGOs)
Employment	√	√	√
Water provision	?	√	√
Schools	X	?	√
Hospitals	X	?	√
Electricity supply	X	?	√
Livestock grazing	?	√	√
Thatching grass	?	√	√
Roads	X	?	√
Vehicles for Transport	X	?	√
Tractors for ploughing in the fields	?	?	√
Conservation awareness programmes	√	√	√
Skills development workshops, e.g., in tourism	X	√	√

3.3.2 PA staff perceptions of determinants and community-PA staff relationship

Seven determinants of PA staff relationships with the local communities emerged from PA staff expectations for and from the communities that were derived during interviews, i.e., benefit-sharing, human-wildlife conflict, compensation for losses from wildlife attacks, communication between PA staff and communities, collaborative participation in CAMPFIRE management, collaborative participation in PA tourism management, and PA

staff perceptions of the community (Table 3.5). PA staff had expectations for the communities, for example, in all the four PAs, PA staff expected that adjacent communities had to benefit from their neighbouring PAs. On top of this, PA staff in all the four communities also expected adjacent communities to attend all conservation training workshops or awareness campaigns organised for them, where they are taught on the importance of conserving nature. Communities are therefore encouraged and are expected to desist from indulging in illegal activities that have negative impacts on conservation like poaching, encroachment, illegal harvesting of thatching grass and firewood collection among others. Furthermore, when they have grievances or are unhappy about something, PA staff expected communities to communicate their grievances using the right channels, that is going through their community leaders in a peaceful way. However, although PA staff expected this from communities, meeting these expectations is not necessarily a prerequisite for benefit-sharing. One interviewee from Gonarezhou National Park commented,

“The communities are totally unpredictable you know, one day you think you are together, they are all supportive, the next day they are totally against you, you organise a workshop for them, they don’t come. However, giving them controlled access to some wildlife resources like thatching grass, whenever we can is part of our social responsibility, it doesn’t matter whether they meet these expectations or not”.

Table 3.5: Determinants of PA-community relationship based on PA staff expectations. Symbols in superscript form represent names of PAs, that is, Umfurudzi (^U), Gonarezhou (^G), Matusadona (^M) and Cawston Ranch (^C). Where a symbol for a particular community is present indicates the community which raised the issue(s).

Determinant	Expectations	Current status
Benefit-sharing	Holding capacity building workshops for the local community (^{U,G,M & C}); employment (^{U,G,M & C}); improve infrastructure (^U); allow limited access to the use of wildlife resource; and CAMPFIRE benefits (^{G & M}); transport, subsidised game meat, tractors, water, and workshop services among other benefits (^C)	<u>Unanimous views:</u> Few benefits for communities (^U); Limited access to the use of wildlife resource like thatching grass (^G), CAMPFIRE benefits (^{G & M}); employment (^{G, M & C}), transport, subsidised game meat, tractors, water, and workshop services (^C), conservation awareness campaigns (^{U, G, M & C})
Human-wildlife conflict	Reduce human-wildlife conflict (^{U,G,M & C})	<u>Unanimous views:</u> Erection of the fence boundary (^{U, G}); tightening problem animal control measures (^{U,G,M & C})
Compensation for losses from wild animals	Partly compensate the community for their losses (^{U,G,M & C})	<u>Unanimous view:</u> None (^{U,G,M & C})
Communication between PA staff and local communities	Open and sufficient communication (^{U,G,M & C})	<u>Unanimous views:</u> Not regular and limited (^{U, G & M}); Scheduled meetings with community leaders (^C)
Community participation in the management of CAMPFIRE projects	Community to be involved in decision making for CAMPFIRE (^{G & M})	<u>Unanimous views:</u> Limited involvement in CAMPFIRE management (^{G & M})
Community participation in tourism in PAs	Enhance community participation and benefits from tourism (^{U,G,M & C})	<u>Unanimous views:</u> Community not involved (^{U,G,M & C})
Problems caused by the community	Communities to stop poaching and encroachment (^{U,G,M & C})	<u>Unanimous views:</u> Communities involved in illegal hunting (^{U, G, M & C}); human encroachment (^{U, G}); mining (^{U, G})

According to PA staff, some of these expectations, for example, community benefits from PAs (in Gonarezhou, Matusadona and Cawston Ranch) were met but to a very less extent. According to one interviewee from Gonarezhou National Park, harvesting of thatching grass is only done during the rainy season and is strictly controlled and monitored. Because there are many families who are in need of thatching grass (see Table 3.2), not all families can get a chance to harvest the grass every year. The few families that do get a chance in a season can only harvest one bundle each, which is not enough to thatch one hut. Another interviewee from Matusadona National Park pointed out that

benefits from CAMPFIRE are mainly collective, e.g., boreholes, and there are no benefits at household level. In the early beginning, CAMPFIRE benefits used to accrue at household level in form of dividends, but with population increases coupled with withdrawal of donor funding in CAMPFIRE projects, CAMPFIRE revenue has generally decreased and benefits are more generalised now. In terms of employment, one interviewee from Cawston Ranch mentioned that a greater percentage of all casual labour is sourced from the local communities. However, these kinds of jobs are seasonal and therefore not very dependable. With regards to permanent employment, another interviewee from Gonarezhou National Park pointed out that the park can only employ a few people of which only a small percentage comprises of local people and the rest are outsiders. Many of the employed local people occupy low positions with little income, e.g., lodge attendants and junior rangers. Moreover, many of the local people lack the necessary qualifications required to employ them in higher level positions. PA staff were aware of the fact that communities were not satisfied with the level of community employment in the PA. One respondent from Umfurudzi Park had this to say,

“Compared to the total number of employable local people, very few people benefit from employment in this park. Whilst we are trying our best, most the people do not seem to be satisfied. However, this is understandable, everyone wants a piece of the cake which can never be enough for everyone. But what can we do?”

Furthermore, according to one respondent from Gonarezhou National Park, the communities do not have a sustainable source of livelihood. Most of the communities rely on small-scale cash crop farming for income, which unfortunately do not give them much. Some parts surrounding Gonarezhou National Park are characterised by high temperatures and low rainfall, a climate which is not very conducive for crop farming. The respondent added on,

“This situation is worsened by wild animal destruction of crops as well as lack of financial resources for purchasing agricultural inputs”,

a problem which was found to be common in all the four study areas. One interviewee from Umfurudzi Park had this to say:

“There is limited capacity within the communities in terms of farming inputs which restrict them from realising better socio-economic benefits from crop production. Cash crop farming alone is thus not a very viable livelihood option for the communities hence the need for heavy reliance on wildlife resources.”

Besides, expectations from benefit-sharing which were partially met, other expectations were not met, for example, expectations for human-wildlife conflict and compensation for losses from wildlife. Expectations that were met had positive influence on PA-community relationships while those that were not met had negative influence (Table 3.5). Most PA staff in Umfurudzi Park and Gonarezhou National Park perceived their relationship with the community to be negative, while most of the staff in Matusadona National Park and Cawston Ranch PA staff perceived their relationships with the communities to be positive (Table 3.5). All communities (except a few community leaders with positive perceptions) reported negative perceptions on their relationship with PA staff whereas in two of the PAs (Umfurudzi Park and Gonarezhou National Park) PA staff perceived their relationship with the community to be negative, and in the other two (Matusadona National Park and Cawston Ranch), PA staff perceived a positive relationship with the community (Table 3.6).

Table 3.6: Summary of PA staff and community perceptions of their relationship. Notes: - = negative; + = positive

Study site	Community leaders		Community				PA staff	
	Majority view	Minority view	Unanimous view	Unanimous view	Females with families Unanimous view	Youths Unanimous view	Majority view	Minority view
Umfurudzi			-	-	-	-	-	+
Gonarezhou	-	+		-	-	-	-	+
Matusadona	-	+		-	-	-	+	-
Cawston Ranch	-	+		-	-	-	+	-

3.4 Discussion

Benefit-sharing is a determinant of PA-community relationships that emerged from both communities' and PA staff's perceptions. While communities do get some benefits, most respondents were not satisfied with the benefits, partly due to unmet high expectations and

livelihoods that are strongly dependent on natural resources, in an environment characterised by a growing human population chasing dwindling wildlife resources. Local human population around PAs was further increased by the resettlement programme instituted by the government during the 2000 Fast Track Land Reform Programme in Zimbabwe, for example Yongwe, Kushinga and Sangoramambo villages adjacent Umfurudzi Park. As such, many of these community members may not even be from the respective areas and may dilute the benefit-sharing that could most probably go to groups who are long standing in the area. While quantifying the financial benefits from CAMPFIRE is complicated by factors such as the size of the programme and the increasing populations within the communities, the gross financial benefits among communities are generally very low (Bond and Frost, 2005). Compared with the benefits obtained from agricultural production, the income from wildlife in most communities is purely supplementary although there are occasional substantial financial benefits, sometimes exceeding the estimated gross income from all agricultural sources (Bond and Frost, 2005).

Because the communities have many expectations, CAMPFIRE is overburdened by responsibilities, to the extent that proceeds from CAMPFIRE do not seem to satisfy everyone. Differences between minority community leaders' views and the rest of the groups on CAMPFIRE benefits and other natural resources could be attributed to marginalisation of minority groups due to the fact that some traditional leadership performed a key part in controlling use of local resources with local people ending up as passive recipients of revenue derived from wildlife which they now view as belonging to the Rural District Councils (RDCs) or government (Zunza, 2012, Bond, 2001).

Our results on the impact of benefit-sharing on PA-community relationships concur with Molina-Murillo *et al.* (2016)'s study of four PAs and their adjacent communities in Costa Rica which showed a link between the benefits communities receive and the perceived strength of the relationship between those communities and the respective PAs. The PA staff and community in each of the four study sites had similar views on benefit-sharing. While Umfurudzi community was not getting any benefits from the PA, Gonarezhou, Matusadona and Cawston Ranch communities received some benefits from

the PAs as also confirmed by the PA staff. Our results from Umfurudzi support studies by Tessema *et al.* (2010) and Ebuja *et al.* (2011) which showed that denied access to PA resources like grazing lands was a major cause for negative attitudes towards PAs in Ethiopia and South West Cameroon. Communities receiving few direct benefits tend to have negative attitudes as was the case in Gonarezhou. This concurs with previous studies conducted in Laikipia, Kenya and Western Serengeti, Tanzania, which reported that communities that receive few benefits than expected express dissatisfaction (Kideghesho *et al.*, 2007, Gadd, 2005).

However, it is also prudent to note that some of the communities' expectations are misdirected at PAs. Moreover, some of the communities' grievances such as not being able to illegally graze livestock in the PAs are outside the purpose of existence of many of the PAs. For example, according to Gonarezhou National Park (2011-2021), the purpose, significance and values for the park are to 'protect and conserve the wilderness, biodiversity, ecological processes, wild and scenic landscapes within the park boundary. The park's exceptional resource values will be sustained for present and future generations, while supporting its role in the Great Limpopo Transfrontier Conservation Area and regional economic development. The culture and history of the Shangaan people will be recognised as one of the key components of the park'. However, PAs can voluntarily assist by providing feeding schemes for animals outside the park, especially on a moral and ethical basis. While PA staff have some expectations from communities like desisting from illegal hunting of wild animals, encroachment and veld fires, this does not influence any benefit-sharing schemes in place. Supporting wildlife conservation in adjacent PAs helps to promote wildlife tourism which can create business opportunities for adjacent local communities such as curio selling, accommodation and food outlets for visitors.

Human-wildlife conflict is a determinant of PA-community relationships that emerged from both communities' and PA staff's perceptions. The PA staff and communities in all the four study areas had similar views on human-wildlife conflict. All the four communities experienced some costs from wildlife in varying degrees. Human-wildlife conflict is one of the main threats to biodiversity conservation and has become frequent and severe in developing countries, especially in Africa (Blackburn *et al.*, 2016,

Amaja *et al.*, 2016). In Zimbabwe, the situation with human-wildlife costs is worsened by the fact that the Government is yet to develop a national policy on compensation for community losses due to wildlife depredation. However, elsewhere, compensation schemes of such a nature are at the time controversial (Redpath *et al.*, 2013). For instance, Bulte and Rondeau (2005) proposes that it is better to address causes of the human-wildlife conflicts rather than address the symptoms because compensation can lead to a decrease in efforts to prevent damage and exacerbate conflicts with wildlife authorities.

Communication between PA staff and communities is another determinant of PA-community relationships that emerged from both communities' and PA staff's perceptions. A study by Mutanga *et al.* (2016b) showed that improvements in communication was associated with an increase in the odds of having positive PA staff-community relationships in four PAs and their adjacent communities in Zimbabwe. PA staff in Umfurudzi, Gonarezhou and Matusadona reported that their communication with adjacent communities was open but limited. It was only in Cawston Ranch where PA management had scheduled meetings with community leaders. Similarly, all communities reported that communication was informal, irregular and insufficient. It is likely that the negative relationship between PA staff and adjacent communities could partly be attributed to this irregular and insufficient communication. Ineffective communication between PA authorities and local people can lead to conflicts (Ormsby and Kaplin, 2005, Kent and Taylor, 2002). This result reveals the importance for PA management to examine their existing communication structures and ensure that effective communication is maintained. This could be done through increasing the frequency and the channels of communication, for example, by employing community liaison officers.

Community participation in the management of CAMPFIRE and/or tourism is another determinant of PA-community relationships that emerged from both communities' and PA staff's perceptions. The PA staff and communities had similar views on community participation in the management of CAMPFIRE and/or tourism in PAs across the study sites. Although Beierle and Konisky (2001) suggest that effective participation improves relationships, increases trust, and reduces conflict, none of the study communities participated in collaborative management of tourism in adjacent PAs. In

contrast, community members from Matusadona and Gonarezhou had limited participation in collaborative management of CAMPFIRE. Their limited participation in CAMPFIRE management meant that community members had no power to influence decisions, especially those regarding revenue-sharing.

Community perceptions of PA staff are a determinant of PA-community relationships that emerged from communities' viewpoints whereas problems caused by communities emerged from PA staff's viewpoints. Umfurudzi, Gonarezhou and Cawston Ranch communities had negative perceptions of PA staff which can be attributed to clashes between the communities and PA staff especially where illegal hunting is involved. Gandiwa *et al.* (2013b) confirmed that a total of 940 illegal hunters and 1,509 illegal fish poachers were arrested between 2000 and 2010 in Gonarezhou National Park, Zimbabwe. These arrests of community members by PA staff and the resultant negative perceptions of PA staff by communities shows that law enforcement policies have an influence on PA-community relationships. In response to the SADC Protocol on Wildlife Conservation and Law Enforcement passed in 1999, Zimbabwe Parks and Wildlife Management Authority, through the amended Parks and Wildlife Act (1975) finances wildlife conservation through revenue generated by the parks. Illegal hunting by communities may also cause PA staff to have negative perceptions about the communities.

Communities' negative perceptions of PA staff in Umfurudzi Park and Gonarezhou National Park was also mainly due to unfavourable changes brought about by public-private joint management of the parks, for example, the erection of the boundary fences. Fences were erected to minimise human-wildlife conflicts which are partly responsible for poverty within the communities as crops and livestock are destroyed and biodiversity loss as communities retaliate. Reducing biodiversity loss and poverty among communities are some of the objectives of the Convention on Biological Diversity (CBD) (Secretariat of the Convention on Biological Diversity, 2008). However, in Cawston Ranch, communities' negative perceptions of PA staff could be because of the private nature of the PA. Here the communities' negative perceptions could explain their lack of knowledge or understanding of the privately owned or managed PAs. As Langholz and Lassoie (2001) assert, privately

owned and managed PAs are multiplying throughout much of the world and yet little is known about them.

A few community leaders from all communities had positive perceptions of PA staff that they related well with, which can be attributed to the fact that community leaders are not usually involved in unsustainable activities like poaching and so are always treated well by PA staff. Moreover, some individuals from the communities who are employed in the PAs may have got their employment through recommendations from their leaders hence they are nice to them as a way of showing gratitude. When the PA staff have something to communicate to the villagers, they usually go through their leaders who will in turn inform the rest of the villagers. While this method is unpopular with the rest of the villagers, it brings closer PA staff and community leaders.

In Umfurudzi, both PA staff and the community had negative perceptions of their relationship mostly attributed to the lack of community benefits from the PA. This was largely due to the absence of any CBNRM project in Umfurudzi. Matusadona National Park staff perceived a positive relationship with the community likely because the community was benefiting in terms of employment and from CAMPFIRE. However, majority of Matusadona community members perceived a negative relationship with PA staff because as much as they benefited from employment and CAMPFIRE, the amount of benefits was perceived to be progressively declining over the years. This difference in perception between PA staff and the community presents a complex situation. To the PA staff, their positive perception could mean reduced pressure in terms of illegal hunting control efforts, whereas in actual fact illegal hunting is on the increase which has resulted in the rapid decline of elephants and other species in the park.

Gonarezhou community was benefiting from their neighbouring PA, for example, through employment and permitted access to park resources like thatching grass, but because there were often clashes between the PA staff and the communities due to illegal hunting, both PA staff and majority of the adjacent community members perceived a negative relationship. Contrastingly, Cawston Ranch community was benefiting from their neighbouring PA and because of this, PA staff perceived a positive relationship with the communities. However, the majority of Cawston Ranch community members perceived a

negative relationship with the adjacent PA. This was mainly due to clashes between PA staff and the community because of illegal hunting. Moreover, in Cawston Ranch, the community was not happy with benefit-sharing structure where community leaders were perceived to be getting preferential treatment from PA management than the rest of the community members. This indicates a direct relationship between expectations and PA-community relationships.

Negative PA-community relationships have the potential to reduce local support for wildlife conservation (Holmes, 2013, Holmes, 2007) who can, instead engage in activities that are detrimental to conservation such as illegal hunting and habitat encroachment (Gandiwa *et al.*, 2013b). The communities' negative perceptions of their relationship with PA staff could mean that conservation problems like illegal hunting and habitat encroachment remain a challenge. However, PA staff's positive perceptions about their relationship with local communities in Matusadona and Cawston Ranch is encouraging as lessons on positives can be taken and used in other areas with negatives.

We recognise that a division of PA staff, e.g., managers, senior rangers and junior rangers, would be very helpful given that they are likely to have some differences in perspectives. Thus we suggest future studies should consider such kind of division to capture more detailed information. While our results might be generally applicable to other PAs and their adjacent communities especially in developing countries, some of the issues raised are context specific (such as distribution of proceeds from CAMPFIRE or the effects of the erection of boundary fences on the adjacent communities) making the generalisability of this work limited. Furthermore, while the study assesses PA-community relationships from the views of both PA staff and local communities, we acknowledge that in some instances it may not entirely capture the complexities of how and why local people may behave towards PAs (Scott, 1990), as there could be exogenous factors influencing relationships external to the immediate parties involved.

3.5 Conclusion and recommendations

Seven determinants of PA-community relationships emerged from both communities and PA staff's expectations. While majority of community members in all the four communities reported negative perceptions on their relationship with PA staff, PA staff

perceptions of their relationship with local communities varied from negative to positive. Both communities' and PA staff's views on determinants are almost similar in all studied PAs regardless of PA ownership, management or land use. We conclude that although investigating communities' expectations is important for building and maintaining positive PA-community relationships, it is important to understand that what communities expect may often be different from reality. In most cases communities' expectations are misdirected at PAs instead of the proper responsible authorities. As such, communities may always be dissatisfied with PAs and this may undermine PA efforts to build and maintain positive relationship with adjacent communities. It is therefore important to educate communities about different entities and their responsibilities, including PAs, CBNRM projects, Local Government and Non-Governmental Organisations. Educating communities on how to properly communicate and channel their grievances to the responsible authorities is also important.

Although initiatives like CAMPFIRE may contribute to positive relationships between PAs and adjacent communities, our findings suggest that such initiatives alone are not enough to guarantee positive PA-community relationships. Other determinants like communication and human-wildlife conflicts also need to be carefully considered. Our results can be used by policy makers especially in developing countries to develop national PA-community relationship frameworks based on these findings. A PA-community relationship framework represents factors that influence relationships between PA staff and adjacent communities which can be used to shape PA management strategies to both PA staff and local communities' attitudes (Ormsby and Kaplin, 2005). The framework offers a systematic way to conceptualise the factors that both PA staff and local communities need to address in order to promote positive PA-community relationships. PAs would benefit from the use of the framework to address factors that influence PA staff and local community relationships, and pressures on resources at different levels. Furthermore, PA agencies and adjacent communities should continuously seek to improve collaboration between both parties, and address all the determinants which help improve their relationships.

3.6 Acknowledgements

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CHAPTER 4: Prospects for wildlife conservation: local community views and factors influencing conservation relationships in Zimbabwe‡

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Abstract

The objectives of this study were to: (i) assess how local communities view their relationship with adjacent Protected Areas (PAs), and (ii) determine the factors influencing PA-community relationships from communities' perspectives using a case study of Zimbabwe. Closed-ended questionnaires were used to collect data and systematic sampling was used to select 938 households in four study sites (i.e., Umfurudzi, Gonarezhou, Matusadona, and Cawston Ranch) in Zimbabwe from July 2013 to February 2014. Our results show that the majority of the respondents, i.e., 93.2% ($n = 69$) in Umfurudzi, 88.5% ($n = 246$) in Gonarezhou and 58.4% ($n = 178$) in Cawston Ranch perceived their relationship with adjacent PAs to be negative. Results from the four communities showed some variations in the number and level of importance of factors influencing PA-community relationships. The importance of two factors, i.e., communication between PAs and adjacent communities, and community perceptions on conservation was evident across all the four communities. We concluded that differences in management of PAs influence community perceptions of their relationship with PAs whereas differences in land use patterns have no bearing on community perceptions of their relationships with PAs. While the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) is important in extending benefits to communities, it is not enough to influence PA-community relationships on its own without the support of other factors like communication.

Keywords: benefits, CAMPFIRE, community, conservation, factors, perceptions, tourism

4.1 Introduction

Protected areas (PAs) are vital for biodiversity conservation, often providing habitat and protection from hunting for different wild animal species (Françoso *et al.*, 2015). The International Union for Conservation of Nature (IUCN), defines a PA as “a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Dudley and Stolton, 2008). The IUCN has developed six PA management categories that define PAs according to their management objectives, which are: Ia - strict nature reserve, Ib - wilderness area, II - national park, III - natural monument or feature, IV - habitat/species management area, V - protected landscape/seascape, and VI - protected area with sustainable use of natural resources (Dudley and Stolton, 2008). Mora and Sale (2011) argue that management of PAs for conservation brings up a range of challenges especially where the designation of the PAs is associated with restrictions on the use of resources by the local communities and often leading to their subsequent displacement. This has caused conflicts and poor relationships between conservationists and local communities in many protected regions and is often why many PAs face the human threat of illegal hunting, habitat encroachment and destruction (Matema and Andersson, 2015, Gandiwa *et al.*, 2013b, Mora and Sale, 2011).

Given the history of most PAs creation, many scholars are of the view that mutually supportive PA-community relationships are very important to the long term success of wildlife conservation (Tessema *et al.*, 2010, Hausser *et al.*, 2009). Barrow and Murphree (2001) define a community as an entity socially bound by a common cultural identity, living within a defined spatial boundary and having common economic interest in the resources of a given area. PA staff-community relationship refers to the interactions between PA staff and local communities in which these two are interdependent and where the behaviour of each affects the other (Mutanga *et al.*, 2015). Positive (i.e., good) PA-community relationship means PA staff and the local community interact well and negative (poor) PA-community relationship means PA staff and conservation do not interact well. Interaction refers to reciprocal action, effect, or influence between two or more people/groups of people. As such, relationships are based on the degree to which the parties involved trust one another, agree on the distribution of power or control, perceive

satisfaction with each other, and commit oneself to one another (Vedova, 2005, Hon and Grunig, 1999). Grunig and Huang (2000) identified trust, relationship commitment, control mutuality, and relationship satisfaction as the most important indicators of any relationship. Although some inequality is natural, stable relationships require that organisations and publics each have some control over the other (Hon and Grunig, 1999).

Poor PA-community relationships often result in the lack of support for conservation initiatives by the communities (Mutanga *et al.*, 2015). The realisation that if communities do not support PAs, they can resist conservation initiatives by PA authorities or other governance structures (Holmes, 2013, Holmes, 2007), led to the introduction of integrated conservation and development projects (ICDPs) (Wilkie *et al.*, 2006). Community-based natural resource management (CBNRM) programmes are an example of ICDPs and these include the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) which was implemented in Zimbabwe (Child, 2004). CAMPFIRE utilises wildlife and other natural resources to promote devolution of rights to manage, use, dispose of, and benefit from natural resources to rural institutions and improved governance and livelihoods (Martin, 1986). The argument is that if communities receive economic benefits from wildlife, they will change their attitudes and participate in wildlife conservation and management (Murombedzi, 2001).

Since the introduction of CAMPFIRE, poaching was significantly reduced in some areas as the neighbouring communities started obtaining economic benefits from legal wildlife utilisation and began to assist in wildlife protection (Child, 1995). However, in other areas, poaching subsided only temporarily with CAMPFIRE and then bounced back after a few years (Fischer *et al.*, 2011). This shows that there are other factors besides ICDPs that are important in influencing PA-community relationships. Apart from the history of PA creation and ICDPs (benefit-sharing), a number of studies have highlighted other factors that influence PA-community relationships, e.g., human-wildlife conflict, communication, community involvement in PA management, and community attitudes and perceptions. The community's attitudes and perceptions are a major component of the PA-community relationship (Allendorf, 2010). Wildlife conservation's success thus depends on the attitudes of people towards conservation (Allendorf *et al.*, 2012, Osmond, 1994).

Community members who benefit from their PAs and are dependent upon farming for income do not usually support the idea of co-existing with wildlife (Dickman *et al.*, 2011, Tessema *et al.*, 2010). The level of crop damage influences local community attitudes toward wildlife and conservation (Okello *et al.*, 2011, Naughton-Treves *et al.*, 2003, De Boer and Baquete, 1998). As such, communities with minimal conflicts with PAs differ significantly from those with serious conflicts in their relationships with the PAs, with those with minimal conflicts having more positive attitudes about their relationship with PAs (Tessema *et al.*, 2010, Kideghesho *et al.*, 2007).

Open and sufficient communication helps in settling disputes and managing expectations and perceptions in such a way that fosters trust (Moorman *et al.*, 1993, Etgar, 1979). Complications in communication between PA authorities and local communities therefore lead to conflicts and negative relationships between the two (Ormsby and Kaplin, 2005). Where ineffective communication exists, trust between communities and PA staff is low and the relationship between the two can be difficult to put right (Mutanga *et al.*, 2016b). Community involvement in PA management is a viable tool in resolving conflicts between the PA and the communities, and at times it facilitates tourism benefits to stakeholders (Emphandhu and Chettamart, 2003). Andrade and Rhodes (2012) point out that community involvement promotes a win-win outcome between the communities and PAs. According to Goodwin (2002), community involvement can therefore be important in the sense that the income that is yielded from the tourism industry can be used for enhancing the lives of community members and for the maintenance and conservation of resources in the parks. Steinmetz *et al.* (2014) further state that when communities are involved, they can help with taking care of wildlife resources and this includes reducing cases of poaching and sabotaging of PAs.

With all these factors having been brought to light, what still remains unclear is how local communities view their relationship with PAs. Moreover, less has been documented to determine the influence of the factors indicated earlier on PA-community relationships in communities adjacent to PAs under different management regimes, as well as communities with and without CAMPFIRE. The objectives of this study were therefore to: (i) assess how local communities view their relationship with adjacent PAs, and (ii)

determine the influence of the different factors on PA-community relationships from communities' perspectives using a case study of Zimbabwe.

4.2 Materials and methods

4.2.1 Study areas

The study was conducted in communities adjacent to two national parks: Gonarezhou, and Matusadona, a safari area, i.e., Umfurudzi, and a private wildlife area, i.e., Cawston Ranch (Figure 4.1). The four PAs were selected purposively to give a broad picture of PA-community interactions in Zimbabwe. PAs were selected based on ownership, management regimes and land use patterns. Consideration was also given to involve communities living adjacent to protected areas with and without CAMPFIRE (Table 4.1).

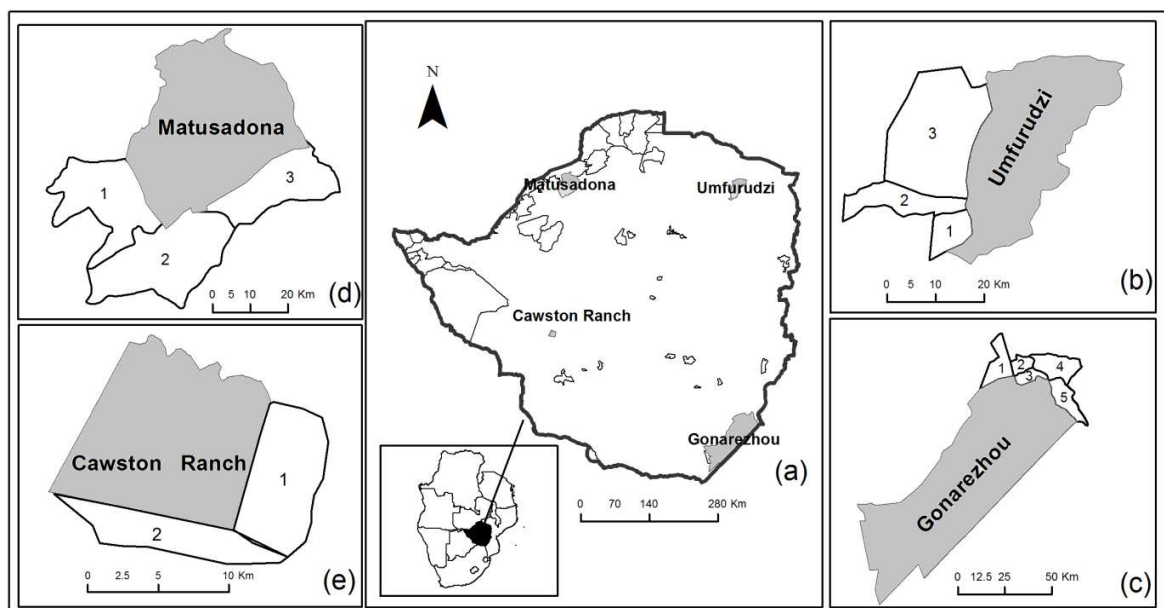


Figure 4.1: Location of the four study sites in Zimbabwe (See Table 4.1 for details).

All the sampled villages surrounding a PA are defined as a community in this study; hence we have four communities: Umfurudzi, Gonarezhou, Matusadona and Cawston Ranch (Table 4.1). We acknowledge that communities are not homogeneous, and there may be differences within or between the sampled villages. However, in this paper, we were more interested in the bigger picture of PA-community relationships, not particular villages. All these areas share boundaries with the PAs.

Table 4.1: General characteristics of the four PAs and their surrounding communities. Data sources: Utete and Mwedzi (2012); Gandiwa *et al.* (2013a); Muboko *et al.* (2014a); Muposhi *et al.* (2014).

Attributes	Study site			
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch
Status	Safari Area	National Park	National Park	Private wildlife area
Ownership	Government	Government	Government	Private
Management	Public-private partnership	Public-private partnership	Public	Private
Year established	1981	1930 as a Game reserve, upgraded to a National Park in 1975	1963 as a Game reserve, upgraded to a National Park in 1975	1988
Size (km ²)	760	5,000	1,400	128
CBNRM projects	None	CAMPFIRE	CAMPFIRE	None
Tourism facilities	Campsites	Lodges, camp sites	Lodges, camp sites	Bush camps
Study areas (as depicted in Figure1)	Shamva District: 1-Sanye (ward 27), 2-Mufurudzi 1 (ward 16), and 3-Mufurudzi 2 (ward 14)	Chiredzi District: 1-Chizvirizvi (ward 22), 2-Mupinga (ward 4), 3-Chitsa (ward 5) and Chipinge District: 4-Mutandahwe (ward 29), and 5-Mahenye (ward 30)	Kariba Rural District: 1-Nebiri (wards 7 and 8), 2-Musambakaruma 2 (ward 10), and 3-Musambakaruma 1 (ward 9)	Umguz District: 1-Ward 10 and 2-Ward 9.
Local languages	Shona	Shangani	Tonga, Shona	Ndebele
Sources of community livelihoods	-Small-scale substance and cash crop farming -Small scale livestock production -Gold panning	-Small-scale substance and cash crop farming -Small scale livestock production	-Small scale subsistence and cash crop farming -Very little livestock production due to tsetse fly prevalence	-Small-scale substance and cash crop farming -Small scale livestock production
Sample size:	74	278	281	305
Response rate:	92.5%	92.7%	93.7%	93.8%

Note: CBNRM stands for Community-Based Natural Resource Management. CAMPFIRE is a form of CBNRM project implemented in Zimbabwe. Six or seven villages make up a ward (Gandiwa *et al.*, 2013a). Shona people identify themselves by clans such as Karanga, Korekore, Nda, Manyika or Zezuru which are not captured in this Table.

4.2.2 Data collection

We used systematic sampling to select households within communities adjacent to the selected PAs. Using maps that we obtained from the PAs that showed the adjacent villages, we chose transects through the communities that would allow us to cover all the study villages (Messer and Townsley, 2003). When we entered a village, we randomly marked

the first household as the starting point, from which we selected a random direction. Following the transects in the chosen directions, we interviewed every third household close to the transect. Sampled households were in the range of less than 10 km from the PA boundary as these were believed to have much interaction with the PA (Gandiwa *et al.*, 2014b, Kappelle, 2001). Questionnaires with closed-ended questions were used in data collection. The literature review informed the variables for this study. The survey questionnaires consisted of three major sections: (i) eight factors that influence PA-community relationships (history of creation of PAs, benefit-sharing, problems caused by PA existence to communities, communication between PA staff and communities, community involvement in PA management, community perceptions on tourism, conservation, and PA staff), (ii) communities' perceptions of their relationship with the PAs, revolving around relationship dimensions of trust, commitment, control mutuality and satisfaction, based on Grunig and Huang (2000)'s relationship measurement scale, and slightly modified to apply to PA staff-community relationships, and (iii) respondents' socio-demographic data.

The questionnaires were finalised after a pilot test with 38 community members from Magazi village adjacent Umfurudzi Park. This village was excluded from the final sample. Questionnaires were administered with the help of field assistant carefully selected from the communities. The field assistants had received instructions about the objectives of the study, the details of the questionnaires, how to select the interviewees and gather the data. The necessary permission and prior informed consent were obtained before the interviews. The questionnaire respondent was the household head, irrespective of their gender but had to be an adult of 18 years and above. Data were collected from July 2013 to February 2014. Respondents were asked to indicate how much they agreed with the given statements on a 7-point Likert scale ranging from "strongly disagree / very less extent" to "strongly agree / very great extent" (Malhotra and Peterson, 2006). The 7-point Likert scale was used to expand response options available to respondents (Colman *et al.*, 1997). Each questionnaire took approximately 20 to 30 minutes to complete.

Out of a population of about 14, 364 households (3, 270 in Umfurudzi; 6,749 in Gonarezhou; 2,395 in Matusadona; and 1, 950 in Cawston Ranch), a total of 1 000

questionnaires were distributed to the study communities. According to Krejcie and Morgan (1970)'s table for determining sample size from a given population, a population of 15, 000 households would require a sample size of 375 households ($df = 1$ for desired confidence level $0.05 = 3.84$). Basing on this, we settled for 1, 000 households from which 938 usable questionnaires were returned (i.e., Umfurudzi 74, Gonarezhou 278, Matusadona 281; Cawston Ranch 305). Hence it is believed that the sampling is adequate. The overall response rate was 93.8%. Respondents comprised of 58% males ($n = 541$) and 42% females ($n = 397$). About 44% ($n = 414$) of the respondents were aged between 18 and 35, 47% ($n = 509$) were aged between 36 and 75, whereas 2% ($n = 15$) were above 76 years of age. Approximately 4% ($n = 39$) had stayed in the village for less than 2years, about 50% ($n = 464$) had stayed between 3 and 20 years, and almost 46% ($n = 434$) had stayed for more than 20 years. About 43% of respondents ($n = 404$) had less than five members in their families, whereas 47% ($n = 534$) had six or more members in their families. Approximately 52% of respondents ($n = 485$) had less than five livestock, about 40% ($n = 372$) had livestock that ranged between six and twenty, whereas 8% ($n = 79$) had more than 21 livestock. About 88% of respondents ($n = 824$) earned less than US\$1,000 per year, whereas 12% ($n = 114$) earned more than US\$1,000.

4.2.3 Data analysis

To determine respondents' perceptions, descriptive statistics (frequencies) of respondents were calculated per each possible response on the 7-point Likert scale. Responses 1 to 3 represented a negative perception of the relationship; 4 represented a neutral perception; and 5 to 7 represented a positive perception. Positive perceptions mean that communities perceived their relationship with PA staff to be good, neutral perceptions mean that communities perceived their relationship with PA staff to be impartial, whereas negative perceptions mean that communities perceived their relationship with PA staff to be poor. We used ordinal logistic regression using the Statistical Package for the Social Sciences Version 21 (SPSS, Chicago, IL) to determine the influence of factors on PA staff-community relationships. Ordinal logistic regression is used to predict an ordinal dependent variable, i.e., a categorical variable with ordered categories like Likert items, given one or more independent variables (Fullerton, 2009). In our case, we had one ordinal dependent variable (PA-community relationship revolving around relationship dimensions

of trust, commitment, control mutuality and satisfaction, measured on a 7-point Likert scale) and eight ordinal independent variables (history of creation of PAs, benefit-sharing, problems caused by PA existence to communities, communication between PA staff and communities, community involvement in PA management, community perceptions on tourism, conservation, and PA staff).

To test for suitability of our data for analysis with ordinal logistic regression, multicollinearity and proportional odds were examined and the results were in line with the required conditions. We used multiple linear regressions to test for the multicollinearity of each independent variable where we considered tolerance and variance inflation factor (VIF). Multicollinearity was not a problem as indicated by tolerance levels ranging from 0.30 to 0.96 as well as VIF values between 1.1 and 3.3. Mertler and Vannatta (2002) proposed a tolerance level greater than 0.10 while De Vaus (2002) established the VIF value of 5.0 or below. We tested for the assumption of proportional odds using the likelihood ratio test to ascertain the significance of predictors to the model. All the predictor variables were statistically significant at $p < 0.05$ suggesting that for our models, the proportional odds assumption appears to hold (Bruin, 2006). To determine the overall explanatory power of the independent variables, we used Cox and Snell (1989)'s R^2 , and Nagelkerke (1991)'s R^2 . The nearer the adjusted R^2 is to 1, the better the prediction accuracy of the model. To ascertain the scale's internal consistency, the scales were tested for reliability using the Cronbach's alpha coefficient (α). The scales' reliabilities ranged from 0.62 to 0.84. Hair *et al.* (1992) state that Cronbach Alpha of at least 0.5 is acceptable in new measures.

4.3 Results

4.3.1 Communities' views of their relationship with adjacent PAs

Umfurudzi, Gonarezhou and Cawston Ranch communities generally perceived their relationship with adjacent PAs to be negative while Matusadona community generally perceived a positive relationship. In Umfurudzi, 93.2% ($n = 69$) had negative perceptions and 6.8% ($n = 5$) had neutral perceptions (Figure 4.2). Poor PA staff-community relationships in Umfurudzi were shown by the majority of the respondents (95.9%) being worried about wild animal attacks on crops, livestock and humans, about 73.3% having the

view that tourism did not offer them any financial opportunities as compared to the losses they incurred due to wild animal depredation, whereas about 92.7% thought that PA staff were unfriendly.

In Gonarezhou 88.5% ($n = 246$) had negative perceptions, 7.9% ($n = 22$) had neutral perceptions, while 3.6% ($n = 10$) had positive perceptions (Figure 4.2). High negative perceptions in Gonarezhou signify poor PA staff-community relationships. This was mainly attributed to restrictions on the use of natural resources as attested to by 94.7% of the respondents. About 94.3% were worried about wild animal attacks on crops, livestock and humans. About 83.8% were disturbed by the fact that PA staff did not communicate well with them, where information was passed on informally and irregularly and chances were that most of the time the community missed out on important information or they got the information when it is already too late. Moreover, about 95% of the respondents were not happy because they were not consulted in decision making in the PAs especially on decisions that impacted on them.

In Matusadona 33.1% ($n = 93$) had negative perceptions, 23.8% ($n = 67$) had neutral perceptions, whereas 43.1% ($n = 121$) had positive perceptions (Figure 4.2). Positive PA staff-community relationships were mainly caused by benefits from tourism. About 69.9% of respondents were happy about the coming of tourists to the park and 61.9% actually thought that tourism benefits the whole community, especially hunting tourism through CAMPFIRE. However, about 84.3% of the respondents were worried about the damage caused by wild animals to their crops and livestock where as 29.2% were concerned about the less benefits from wildlife especially decreasing benefits from CAMPFIRE.

In Cawston Ranch, 58.4% ($n = 178$) had negative perceptions, 15.4% ($n = 47$) had neutral perceptions while 26.2% ($n = 80$) had positive perceptions (Figure 4.2). About 93.4% of the respondents were worried about benefit-sharing, with 67.3% concerned about PA staff not being helpful and understanding to their problems and needs, while 55.4% were concerned about damage caused by wild animals to their crops.

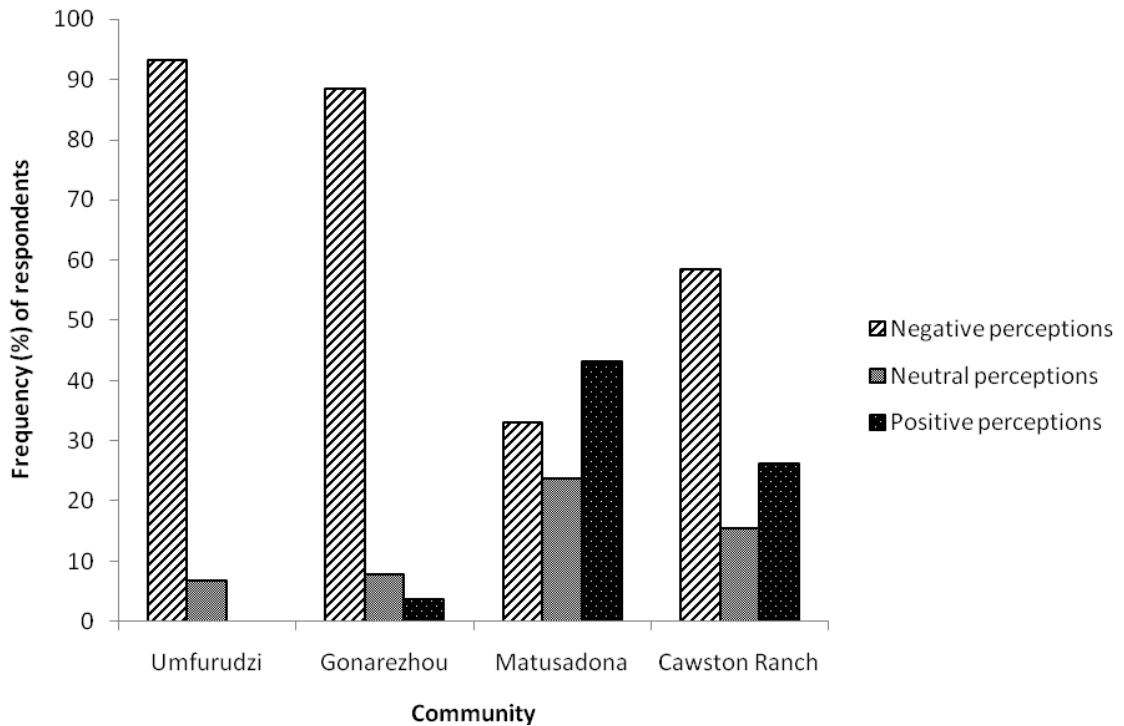


Figure 4.2: Communities' perceptions of their relationship with adjacent PAs.

4.3.2 The influence of factors on PA-community relationships

The ordinal regression models from the four samples explained a significant amount of the original variability, i.e., Umfurudzi [$\chi^2(8) = 54.06$, $p < 0.001$], Gonarezhou [$\chi^2(8) = 330.3$, $p < 0.001$], Matusadona [$\chi^2(8) = 269.21$, $p < 0.001$], and Cawston Ranch [$\chi^2(7) = 367.26$, $p < 0.001$]. The ordinal logistic regressions from the four samples achieved satisfactory goodness of fit. Pearson and deviance statistics were both not significant ($p > 0.05$) in all the samples suggesting that the models were a good fit to the data. Changes in PA-community relationships were estimated by 53% [$R^2 = 0.53$ (Cox & Snell)] and 54% [$R^2 = 0.54$ (Nagelkerke)] in Umfurudzi, 70% in Gonarezhou ($R^2 = 0.70$ for both Cox & Snell, and Nagelkerke), 62% in Matusadona ($R^2 = 0.62$ for both Cox & Snell, and Nagelkerke), and 70% in Cawston Ranch ($R^2 = 0.70$ for both Cox & Snell, and Nagelkerke) (Table 4.2).

Table 4.2: Ordinal logistic results for factors influencing PA-community relationships.
Dependent variable is PA-community relationship

Model	Coefficient (SE)	95% Confidence Intervals for Odds Ratios			Cox & Snell	R ²	
		Lower	Odds	Upper		Nagelkerke	Model
Umfurudzi community					0.53	0.54	$\chi^2(8) = 54.06^{***}$
History of PA creation	-0.28(0.26) ^a	0.45	0.75	1.26			
Communication	0.49(0.24)*	1.02	1.63	2.58			
Perceptions of tourism	0.23(0.27) ^a	0.74	1.26	2.13			
Perceptions of conservation	0.44(0.16)*	1.32	1.56	2.14			
Perceptions of PA staff	0.72(0.46) ^a	0.84	2.05	5.0			
Problems caused by PA existence	-0.21(0.22) ^a	0.53	0.81	1.25			
Benefit-sharing	0.62(0.14)*	1.44	1.57	2.09			
Community involvement	0.46(0.44) ^a	0.68	1.6	3.73			
Gonarezhou community					0.7	0.7	$\chi^2(8) = 330.3^{***}$
History of PA creation	-0.24(0.11)*	0.63	0.79	0.98			
Communication	0.64(0.1)***	1.56	1.9	2.31			
Perceptions of tourism	0.39(0.09)***	1.23	1.48	1.77			
Perceptions of conservation	0.9(0.08)***	2.08	2.45	2.88			
Perceptions of PA staff	0.33(0.12)*	1.36	1.54	2.08			
Problems caused by PA existence	-0.02(0.09) ^a	0.83	0.98	1.16			
Benefit-sharing	0.34(0.11)**	1.14	1.41	1.75			
Community involvement	0.01(0.11) ^a	0.8	0.99	1.24			
Matusadona community					0.62	0.62	$\chi^2(8) = 269.21^{***}$
History of PA creation	-0.09(0.5) ^a	0.83	0.92	1.01			
Communication	0.36(0.06)***	1.27	1.44	1.62			
Perceptions of tourism	0.64(0.11)***	1.55	1.9	2.34			
Perceptions of conservation	0.38(0.08)***	1.25	1.46	1.71			

Perceptions of PA staff	0.38(0.08)***	1.25	1.47	1.71			
Problems caused by PA existence	-0.01(0.07) ^a	0.87	0.99	1.14			
Benefit-sharing	0.33(0.1)**	1.15	1.39	1.69			
Community involvement	0.23(0.07)**	1.11	1.26	1.45			
Cawston Ranch community					0.7	0.7	$\chi^2(7)=367.26$ ***
Communication	0.38(0.07)***	1.27	1.46	1.67			
Perceptions of tourism	0.35(0.06)***	1.25	1.41	1.59			
Perceptions of conservation	0.17(0.07)*	1.03	1.19	1.37			
Perceptions of PA staff	0.35(0.06)***	1.25	1.41	1.59			
Problems caused by PA existence	-0.19(0.06)**	0.73	0.83	0.94			
Benefit-sharing	0.09(0.12) ^a	0.72	0.92	1.17			
Community involvement	0.39(0.12)**	1.11	1.47	2.0			

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ^aNon-significant

As shown in Table 4.2, in Umfurudzi, three out of the eight tested factors were significant in explaining PA-community relationships, i.e., communication between the park and the adjacent community with an odds ratio of 1.63 (95% CI, 1.02 to 2.58), Wald $\chi^2(1) = 4.22$, $p < 0.05$; community perceptions on conservation with an odds ratio of 1.56 (95% CI, 1.32 to 2.14), Wald $\chi^2(1) = 7.40$, $p < 0.05$; and benefit-sharing with an odds ratio of 1.57 (95% CI, 1.44 to 2.09), Wald $\chi^2(1) = 3.34$, $p < 0.05$. This means that an improvement in these factors was associated with an increase in the odds of having a positive PA-community relationship. In Gonarezhou six of the eight factors were statistically significant in explaining PA-community relationships. An improvement in the following five of the six factors was associated with an increase in the odds of having a positive PA-community relationship: community perceptions on conservation with an odds ratio of 2.45 (95% CI, 2.08 to 2.88), Wald $\chi^2(1) = 114.64$, $p < 0.001$; communication with an odds ratio of 1.9 (95% CI, 1.56 to 2.31), Wald $\chi^2(1) = 41.08$, $p < 0.001$; community perceptions on tourism with an odds ratio of 1.48 (95% CI, 1.23 to 1.77), Wald $\chi^2(1) = 17.76$, $p < 0.001$; community perceptions on PA staff with an odds ratio of 1.54 (95% CI, 1.36 to 2.08), Wald $\chi^2(1) = 6.35$, $p < 0.05$; and benefit-sharing with an odds ratio of 1.41

(95% CI, 1.14 to 1.75), Wald $\chi^2(1) = 9.80$, $p < 0.01$. However, an increase in the effects of the history of PA creation was associated with a decrease in the odds of having a positive PA-community relationship, with an odds ratio of 0.79 (95% CI, 0.63 to 0.98), Wald $\chi^2(1) = 4.51$, $p < 0.05$ (Table 4.2).

In Matusadona, six of the eight factors also could explain PA-community relationships where an improvement in each of the factors was associated with an increase in the odds of having a positive PA-community relationship. The factors were: communication with an odds ratio of 1.44 (95% CI, 1.27 to 1.62), Wald $\chi^2(1) = 33.90$, $p < 0.001$; community perceptions on tourism with an odds ratio of 1.9 (95% CI, 1.55 to 2.34), Wald $\chi^2(1) = 36.96$, $p < 0.001$; community perceptions on PA staff with an odds ratio of 1.47 (95% CI, 1.25 to 1.71), Wald $\chi^2(1) = 23.0$, $p < 0.001$; community perceptions on conservation with an odds ratio of 1.46 (95% CI, 1.25 to 1.71), Wald $\chi^2(1) = 22.21$, $p < 0.001$; community involvement with an odds ratio of 1.26 (95% CI, 1.11 to 1.45), Wald $\chi^2(1) = 11.59$, $p < 0.01$; and benefit-sharing with an odds ratio of 1.39 (95% CI, 1.15 to 1.69), Wald $\chi^2(1) = 11.16$, $p < 0.01$ (Table 4.2).

In Cawston Ranch, seven factors were tested for influence on PA-community relationships. History of creation of the PA was not considered because the community in Cawston Ranch was resettled in that area (from other places) during the fast track land reform period (2000 - 2004) and the PA was already well established by then. Six of the seven tested factors were found to be statistically significant in explaining PA-community relationships. An improvement in five of the six factors was associated with an increase in the odds of having a positive PA-community relationship, i.e., community perceptions on PA staff with an odds ratio of 1.41 (95% CI, 1.25 to 1.59), Wald $\chi^2(1) = 32.18$, $p < 0.001$; community perceptions on tourism with an odds ratio of 1.41 (95% CI, 1.25 to 1.59), Wald $\chi^2(1) = 32.18$, $p < 0.001$; community involvement with an odds ratio of 1.47 (95% CI, 1.11 to 2.0), Wald $\chi^2(1) = 7.1$, $p < 0.01$; communication with an odds ratio of 1.46 (95% CI, 1.27 to 1.67), Wald $\chi^2(1) = 27.75$, $p < 0.001$; and community perceptions on conservation with an odds ratio of 1.19 (95% CI, 1.03 to 1.37), Wald $\chi^2(1) = 5.38$, $p < 0.05$. Contrastingly, an increase in the number of problems caused by PA existence to adjacent communities such as crop and livestock depredation, was associated with a

decrease in the odds of having a positive PA-community relationship with an odds ratio of 0.83 (95% CI, 0.73 to 0.83), Wald $\chi^2(1) = 9.13$, $p < 0.01$.

4.4 Discussion

4.4.1 Communities' views of their relationship with adjacent PAs

Umfurudzi, Gonarezhou and Cawston Ranch communities generally perceived their relationship with adjacent PAs to be negative while Matusadona community generally perceived a positive relationship. Negative perceptions in Umfurudzi Park and Gonarezhou National Park could be attributed to boundary disagreements between the parks and the communities, for example, the boundary conflicts between Gonarezhou National Park and the Chitsa community. Unfortunately this is something that PA staff cannot fix on their own because the issue of boundaries or PA gazettement is a legal issue and therefore cannot just be changed without proper legal processes. Moreover, Umfurudzi Park and Gonarezhou National Park are under joint public-private management, whereas Cawston Ranch is privately managed. Private involvement is usually associated with a culture of business. This may involve more investment and reinforcement in conservation which may include trading off human needs. For example, Umfurudzi Park and Gonarezhou National Park were fenced as a way of reducing poaching, but in the process limiting benefits to the local people like grazing land. This shows that PA management can affect PA-community relationships. Because more emphasis is put on protecting the wildlife resource, decisions are often made about PAs and communities are only informed afterwards, and this explains the negative perceptions of PA-community relationships by the communities adjacent to these PAs. Study sites with hunting (consumptive tourism), for example, Cawston Ranch, have negative relationships with adjacent communities, and still, one of the national parks with non-consumptive tourism (Gonarezhou) also has a negative relationship with the adjacent community. This shows that unlike PA management, land use does not affect PA-community relationships. Liu *et al.* (2010) point out that relationships between the PAs and the local community can be harmonious, conflicting or both. Matusadona perceived a generally positive relationship mainly because of the benefits the community was receiving especially from CAMPFIRE.

4.4.2 The influence of factors on PA-community relationships

With regards to our results on the influence of history of PA creation on PA-community relationship in Gonarezhou, it is possible that the communities may harbor deep rooted memories which may affect the way they look at and relate with the PAs as argued by Mombeshora and Le Bel (2009). Our results from Gonarezhou concur with many authors who posit that the history of creation of PAs cause tension between the PAs and the communities (Romañach *et al.*, 2011, Graham *et al.*, 2005, Choudhury, 2004). Contrastingly, Simelane *et al.* (2006) suggested that the history of being removed or of certain forms of exclusion from PAs has no effect on PA-community relationships as was reported in Umfurudzi and Matusadona. As long as their expectations were met and they were happy, the communities were less likely to mention the history. Although Umfurudzi, Gonarezhou and Matusadona communities went through the same predicament of displacement for PA creation and experienced limited access to natural resources, Matusadona community still perceived a generally positive relationship with the PA. This could be because the community has adapted to the reality of living with the park and have therefore learnt to deal with it (Mbereko, 2008).

Communication had an influence on PA-community relationships in all communities. Kent and Taylor (2002), posit that communication is an important characteristic of a relationship and without it the relationship would weaken. The difficulty of communication between PA authorities and local people can lead to conflicts (Ormsby and Kaplin, 2005, Hough, 1994, Hough, 1988). The negative PA-community relationships in Umfurudzi, Gonarezhou and Cawston Ranch can be partly attributed to their communication with the PAs which the communities perceived to be limited, unclear and unrepresentative as PA staff mainly communicated with community leaders and usually did not involve the general public (C.N. Mutanga, personal communication). In Matusadona they perceived their communication to be usually fairly good and this may help explain the community's fairly positive perception of their relationship with the PA.

Community perceptions of PA tourism (visitation to the PAs by tourists), PA staff, and conservation had an influence on PA-community relationship in three communities at different significant levels. Our results concur with Allendorf (2010) who advance that

community's attitudes and perceptions are a major component of the PA-community relationship. Community perceptions of tourism were found to be significant in explaining PA-community relationships in all communities except Umfurudzi. Mutanga *et al.* (2015b), recorded negative perceptions of tourism by the communities in Umfurudzi, Gonarezhou, Matusadona and Cawston Ranch and attributed them to the lack of financial benefits from tourism. Negative PA-community relationships in Gonarezhou and Matusadona are most likely partly explained by the negative perceptions of tourism.

Community perceptions on conservation were important in influencing PA-community relationships in all communities. Communities in Umfurudzi, Gonarezhou, Matusadona and Cawston Ranch were found to have positive perceptions towards conservation (Mutanga *et al.*, 2015b). As Mutanga *et al.* (2015b), point out, this may indicate that the communities generally understand the importance of wildlife conservation regardless of previously recorded cases of human-wildlife conflict (Matema and Andersson, 2015, Muboko *et al.*, 2014a, Gandiwa *et al.*, 2013b) and limited access to natural resources (Fischer *et al.*, 2011), which are believed to trigger negative perceptions of conservation (Snyman, 2012, Gadd, 2005).

Community perceptions of PA staff had an influence on PA-community relationship in Gonarezhou, Matusadona, and Cawston Ranch. In Gonarezhou and Cawston Ranch, the communities perceived that PA staff were not tolerant with them (Mutanga *et al.*, 2017) thus partly explaining the communities' negative perceptions of the relationships with the PAs. Matusadona community indicated that PA staff in Matusadona related well with the community hence the community's positive perception of their relationship with the PA. The good interaction between PA staff and communities could be because wildlife conservation problems caused by the communities like poaching and encroachment were few, which means that clashes between PA staff and communities were also few. However, community perceptions of PA staff had no influence on PA-community relationship in Umfurudzi. This was most likely because the community in Umfurudzi was more concerned with benefits (or lack of) to be worrying about how PA staff treat them. As argued by a number of authors, prohibition of natural resources like grazing lands is a major cause for negative relationships with PAs (e.g., Tessema *et al.*,

2010, Gadd, 2005, Naughton-Treves *et al.*, 2003, Schelhas *et al.*, 2002). Moreover, if communities do not receive benefits and bear costs from wildlife depredation (Matema and Andersson, 2015), they are likely to have a negative relationship with the PAs (Mutanga *et al.*, 2015).

Problems caused by PA existence to communities like loss of crops and livestock to wild animals as well as safety to human lives, had an influence on PA-community relationships only in Cawston Ranch community and no significant influence in Umfurudzi, Gonarezhou and Matusadona communities. This can be because Umfurudzi, Gonarezhou and Matusadona communities have had a long history of wildlife utilisation. For example the Shangani people in Gonarezhou have been habiting the South East Lowveld for many years and co-habiting with wild animals. These communities often consider some animal species important for aesthetic and traditional purposes. Moreover, although most conservation-induced costs like human-wildlife conflicts and diseases are causes for negative PA-community relationships (Snyman, 2012, Shibia, 2010), it is likely that Gonarezhou and Matusadona communities are more concerned with the benefits they get from wildlife, especially from CAMPFIRE, that they are less likely to mention problems. Allendorf *et al.* (2012), and Méndez-Contreras *et al.* (2008) argue that after their needs are met, communities' negative perceptions of management, conflicts and crop damage decrease, and their positive perceptions of conservation, ecosystem service and extraction benefits increase. On the other hand, Cawston Ranch community which seemingly enjoys most PA-related benefits (e.g., employment, transport, workshop services, tractors for ploughing their fields, game meat and thatching grass) than the other three communities, is mostly worried about problems associated with PAs. This is probably because Cawston Ranch community is sitting in a comfort zone where benefits are concerned such that they no longer look at what they already have but are constantly looking for more problems that need to be solved.

Community benefits from PAs existence had a significant influence on PA-community relationships in Umfurudzi, Gonarezhou and Matusadona and no significant influence in Cawston Ranch. Our results from Umfurudzi, Matusadona and Gonarezhou concur with other authors who posit that benefit-sharing influence the way PAs and

communities relate with each other (Allendorf *et al.*, 2012, Tessema *et al.*, 2010, Kideghesho *et al.*, 2007). The communities surrounding Umfurudzi Park were receiving no benefits from the Park and they perceived their relationship to be very negative. The Gonarezhou community had access to some benefits like limited access of natural resources from the Park such as thatching grass (Figure 4.3) and employment of some local people as permanent or casual workers. Some parts of Gonarezhou community like Mahenye received benefits from CAMPFIRE which included grinding mills, hardware stores, community trucks and occasionally game meat. However, the community still perceived a negative relationship with the PA. This is because the community was receiving fewer benefits than expected. Most importantly, in Umfurudzi and Gonarezhou, the communities are mostly concerned about inadequate pasture, mainly due to the erected fence boundaries (Figure 4.3) hence the communities' negative perceptions of their relationships with PAs. Stem *et al.* (2003), Tessema *et al.* (2010) and (Ebua *et al.*, 2011), argued that denied access to PA resources like grazing lands is a major cause for PA-community relationships. Communities receiving fewer benefits than expected tend to have negative relationships with neighbouring PAs.

On the other hand, Matusadona community enjoys some benefits like employment and non-financial benefits from CAMPFIRE (e.g., schools and grinding mills) hence the positive perception of their relationship with the PA. This shows that benefits do not necessarily have to be monetary in nature (Amin *et al.*, 2015) but even other benefits like meat for food security and thatching grass for housing can mend relationships between the PA and adjacent communities. As argued earlier on, Cawston Ranch community is different most likely because since they already enjoy a number of benefits from PAs, they are now more concerned with solving other problems. While benefit-sharing may influence PA-community relationships in Umfurudzi, Gonarezhou and Matusadona but not in Cawston Ranch, it does not necessarily imply that Cawston Ranch may stop extending benefits to communities, but rather it should channel more resources into those factors with more influence like community perceptions on PA staff. In the same vein, while CAMPFIRE or CBNRM projects are incremental in extending benefits to communities, they are not enough to influence PA-community relationships on their own. For example, Gonarezhou community had CAMPFIRE, but perceived negative relationship with the PA,

whereas Matusadona community also has CAMPFIRE, but perceived a positive relationship with the PA.

In terms of community involvement, our results from Matusadona National Park and Cawston Ranch concur with Beierle and Konisky (2001); Liu *et al.* (2010); Tessema *et al.* (2010) and Ebua *et al.* (2011), who argue that community involvement in PA management improves PA-community relationships. Although to a lesser extent, Matusadona community was involved in CAMPFIRE management, and that probably partly explains the community's positive perception of their relationship with the PA. As argued earlier on, Umfurudzi and Gonarezhou communities are most likely concerned with the issue of grazing land, to be worried about being involved in PA management.



Figure 4.3: Left - Benefits from Protected Areas to local communities (e.g., thatching grass) and Right - boundary/control fences in southeast Zimbabwe. *Photo credits: E. Gandiwa.*

In this study we provide important insights of local communities' views of their relationship with PAs, and the role of land use, PA management and CAMPFIRE in influencing PA-community relationships. However, the study has certain limitations which include a small sample size in Umfurudzi. Only three factors were significant in Umfurudzi probably because of the small sample size. We suggest that further analysis

could be done with a bigger sample to compare results. Moreover, because we wanted a more general outlook of PA-community relationships, we lumped together all villages adjacent to a PA into one community although we acknowledge that important differences may be found within and across villages. We suggest that future studies should consider villages or wards in each community as units of analysis, as well as research on other factors that potentially influence PA-community relationships.

4.5 Conclusion

Communities generally perceived a negative relationship with adjacent PA staff, although slightly positive in Matusadona. Based on our results we conclude that relationships between communities and PAs are influenced by differences in management of PAs, whereas differences in land use patterns have no bearing on community perceptions of their relationships with PAs. The tested determinants of PA-community relationships had varying influence and levels of significance across the four study sites which can be attributed to contextual differences among the communities. Moreover, there are other factors that also influence PA-community relationship besides the tested eight factors as shown by the different regression coefficients of the models.

It is important that PA authorities channel more resources towards communication between the PAs and communities as well as improve community perceptions of conservation, tourism and PA staff as these were found to be the commonly significant factors in three of the communities (Gonarezhou, Matusadona and Cawston Ranch). This can be done through improving communication channels between PA staff and communities, as well as extending more benefits to the communities like employing local people, enhancing access to natural resources such as thatching grass. However, communities also have a bigger role to play in building harmonious PA-community relationships since a relationship is a two way process. We recommend the following to the communities: (i) engaging in activities that are complementary to conservation like reducing fires, stopping illegal hunting, desisting from harbouring poachers, reporting any poachers or suspects within the communities, and engaging PA staff whenever they do cultural activities related to nature; (ii) making initiatives to empower themselves through furthering their education and skills development so that they are employable in better

paying jobs in the PAs; and (iii) engaging in revenue-generating projects like poultry, as well as artifact and curio selling businesses, so as to reduce dependency on PA resources.

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CHAPTER 5: Beyond a single perspective to conservation relationships: exploring factors influencing protected area staff and local community relationships in Zimbabwe**

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Abstract

We explored the relationships between protected area (PA) staff and adjacent communities in and around four PAs in Zimbabwe. A total of 938 local people and 133 PA staff participated in the survey conducted between July 2013 and February 2014. Our results showed that communities generally perceived a negative relationship with PA staff, while PA staff generally perceived a positive relationship with local communities. Only benefit-sharing had a different effect on PA staff-community relationship for the PA staff and community samples. In contrast, communication, perceptions (both communities' and PA staff's), community involvement in conservation, history of PA creation, and problems caused by PA existence to the communities or by communities to PAs had the same effect on PA staff-community relationship from both perspectives. We recommend that both conservation agencies and communities should pay more attention to factors that influence PA staff-community relationships so as to nurture positive relationships between PA staff and local communities.

Keywords: Conservation; factors; perceptions; tourism; community

5.1 Introduction

Most state protected areas (PAs) were initially inhabited by or used by people who were displaced when these PAs were established (Muboko and Murindagomo, 2014, Mombeshora and Le Bel, 2009, Borrini-Feyerabend *et al.*, 2006). Many people largely depend on the resources found within PAs for their survival (Lockwood and Kothari, 2006). As a result, people whose livelihoods primarily involve the direct exploitation of local natural resources often come into conflict with PA's management, for example, where issues such as illegal resource harvesting, habitat encroachment and destruction, and human-wildlife conflict are involved (Matema and Andersson, 2015, Muboko *et al.*, 2014a, Gandiwa *et al.*, 2013a). These conflicts continue to influence local communities' perceptions of wildlife, PAs, PA staff, and tourism among other factors (Triguero-Mas *et al.*, 2009, Kideghesho *et al.*, 2007).

Community involvement and support for the conservation of natural resources has been suggested as a prerequisite for the long-term sustainability of PAs (Andrade and Rhodes, 2012, Tessema *et al.*, 2010, Fiallo and Jacobson, 1995). Thus, it is widely postulated that PAs cannot coexist in the long term with communities that are hostile to them (Holmes, 2013, McNeely, 1995, Pimbert and Pretty, 1995, West and Brechin, 1991), despite some authors, for example, Brockington (2004) and Stern (2008), arguing that local community support is not necessarily crucial for the survival of PAs. Accordingly, there is growing scientific literature on PA staff-community relationships as being of vital importance to wildlife conservation (Tessema *et al.*, 2010, Hausser *et al.*, 2009, Buscher and Whande, 2007, Berkes, 2004, Brockington, 2004, Borrini-Feyerabend *et al.*, 2002).

Earlier studies highlighted various factors that influence PA staff-community relationships which this present study builds on. Grunig and Huang (2000) identified trust, relationship commitment, control mutuality, and relationship satisfaction as the most important indicators of successful relationships. Other studies have identified various factors that influence PA staff-community relationships such as history of PAs creation (Mombeshora and Le Bel, 2009, Choudhury, 2004), benefit-sharing (Allendorf, 2010, Tessema *et al.*, 2010), problems faced by the communities from the PAs such as loss of crops and livestock, and safety to human lives (Harihar *et al.*, 2014, Kideghesho *et al.*,

2007), communication between PA staff and communities (Bruyere *et al.*, 2009, Ormsby and Kaplin, 2005), community involvement in conservation (Tessema *et al.*, 2010, Fiallo and Jacobson, 1995), and community attitudes and perceptions (Allendorf, 2010, Triguero-Mas *et al.*, 2009). Recently, Mutanga *et al.* (2015) observed other factors influencing PA staff-community relationships, that is, PA staff perceptions on communities and problems faced by PAs from the communities such as illegal resource harvesting and veld fires. However, relationships between PA staff and communities have largely been evaluated taking into consideration the communities' perspectives with PA staff's perspectives having been largely ignored (Bruner *et al.*, 2001). Thus, there is a limited understanding of conservation relationships between PA staff and local communities from these two perspectives. This study attempts to fill this gap by incorporating PA staff perspectives of the factors that influence their relationship with the community. PA staff-community relationship refers to the interactions between PA staff and local communities based on interdependence, and where the behaviour of each affects the other (Mutanga *et al.*, 2015).

Understanding both sides of a relationship can contribute highly to enhancing biodiversity conservation considering that PA staff and local communities are interdependent and their perceptions of each other can positively or negatively affect natural resource conservation. Since perceptions are regarded as attitude-forming processes (Allendorf *et al.*, 2012), negative perceptions by the local communities could imply that conservation problems such as illegal resource harvesting and habitat encroachment could remain a challenge, while negative perceptions by PA staff could also imply that they will put little effort to maintain positive relationships with local communities.

Previous studies on PA staff-community relationship have mainly focused on single PAs as study sites (e.g., Allendorf *et al.*, 2012, Tomicevic *et al.*, 2011, McCleave *et al.*, 2006, Adams and Infield, 2003) and on the single perspectives, that is, local community perspectives on their relationships with PAs (Allendorf, 2010, Nagendra *et al.*, 2010, McCleave *et al.*, 2006, Kappelle, 2001). Here, we contribute to scientific knowledge on conservation relationships through focusing on multiple PAs with varying management regimes and also examine the conservation relationships from two perspectives, that is, those of PA staff and local communities. The present study explores PA staff-community

relationships in four conservation areas in Zimbabwe covering both state and private PAs, and adjacent communities with and without the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE). The objectives of this study were twofold: (i) to assess how communities and PA staff view their relationship and (ii) to determine factors influencing PA staff-community relationships from the perspectives of both PA staff and communities.

5.2 Materials and methods

5.2.1 Study area and study sites

Zimbabwe was chosen as a case study due of its known history of wildlife conservation and the land reform programme whose effects on wildlife conservation has been widely reported (Gandiwa *et al.*, 2014a). Stratified sampling design (Hair *et al.*, 2006) was employed to divide PAs into state and privately owned PAs and adjacent communities into with and without CAMPFIRE. CAMPFIRE utilises wildlife and other natural resources, and promotes devolution of rights to manage, use, dispose of, and benefit from natural resources to rural institutions and improved governance and livelihoods (Martin, 1986). CAMPFIRE is based on the principle that if communities receive economic benefits from wildlife, they will change their attitudes, hence effectively conserve and manage the natural resources (Murombedzi, 2001).

Four study sites located in different districts of Zimbabwe were selected purposively to give a broad view of PA staff and community views on conservation relationships in Zimbabwe, i.e., Umfurudzi Park, Gonarezhou National Park, Matusadona National Park and Cawston Ranch (Figure 5.1). The wide geographical distribution and varying management regimes provided a good opportunity for a detailed assessment of PA staff-community relationships.

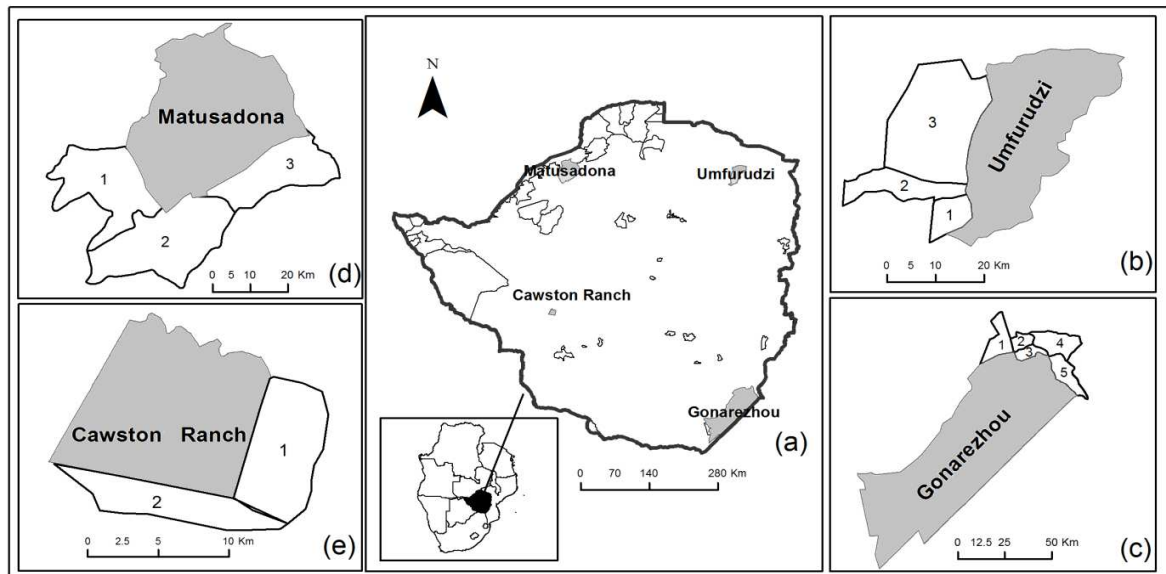


Figure 5.1: Location of the four study sites in Zimbabwe (See Table 5.1 for details).

All the sampled villages surrounding a PA are referred to as a community in this study, hence the four communities (i.e., Umfurudzi, Gonarezhou, Matusadona, and Cawston Ranch). All sampled villages surrounding a PA live within a defined spatial boundary, are socially bound by a common cultural identity, and are assumed to have common socioeconomic and cultural interest in the resources of the neighbouring PA (see Barrow and Murphree, 2001). Moreover, grouping the villages together into a single community allowed for easy comparison among the study sites. Table 5.1 outlines the general characteristics of the four study sites, that is, PAs and their surrounding communities.

Table 5.1: General characteristics of the study sites: four PAs and adjacent communities, Zimbabwe.

Attributes	Study site			
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch
Status	Safari Area	National Park	National Park	Safari Area
Ownership	Government	Government	Government	Private
Management	Public-private partnership	Public-private partnership	Public	Private
Year established	1981	1930 as a Game reserve, upgraded to a National Park in 1975	1963 as a Game reserve, upgraded to a National Park in 1975	1988
Size (km ²)	760	5,053	1,400	128
Animal species	Mixed species of both carnivores and herbivores	Wide variety of both large carnivores and herbivores	Wide range of carnivores and herbivores	Mainly small herbivores
Tourism facilities and attractions	Chalets, tented camps, camp sites, caves with paintings, mountains	Tented camps, camp sites, waterfalls, cliffs and natural water pans	Lodges, camp sites	Bush camps
Forms of tourism	Photographic, sport fishing	Photographic, sport fishing	Photographic, sport fishing	Trophy hunting
Study areas (as depicted in Fig. 1)	1- Sanye, 2- Mufurudzi 1, and 3- Mufurudzi 2	1-Chizvirizvi, 2- Mupinga, 3-Chitsa, 4- Mutandahwe, and 5- Mahenye	1-Nebiri, 2- Musambakaruma 2, and 3-Musambakaruma 1	1-Ward 10 and 2-Ward 9.
CBNRM projects	None	CAMPFIRE	CAMPFIRE	None
Sources of community livelihoods	-Small-scale subsistence and cash crop farming -Small scale livestock production -Gold panning	-Small-scale substance and cash crop farming -Small scale livestock production	-Small scale subsistence and cash crop farming -Very little livestock production due to tsetse fly prevalence	-Small-scale subsistence and cash crop farming -Small scale livestock production
Local languages	Shona	Shangani	Tonga, Shona	Ndebele
Potential conflicts between PAs and communities				
<i>Community benefits from PAs</i>	No benefits	Mainly CAMPFIRE benefits	-Employment benefits -CAMPFIRE benefits	A number of material benefits, e.g., game meat, employment
<i>Human-wildlife conflict</i>	Loss of crops and livestock	Loss of crops and livestock	Minimal crop and livestock destruction	Loss of crops
<i>Compensation for losses from wildlife</i>	No compensation	No compensation	No compensation	No compensation
<i>Community involvement in decision-making</i>	None	Limited involvement only in CAMPFIRE management	Limited involvement only in CAMPFIRE management	None

Source: Gandiwa *et al.* (2012); Muboko *et al.* (2014a); Muposhi *et al.* (2014); Muposhi *et al.* (2015); Mutanga *et al.* (2015b). Notes: CBNRM = Community-Based Natural Resource Management; CAMPFIRE = Communal Areas Management Programme for Indigenous

Resources. Shona people identify themselves by clans such as Karanga, Korekore, Ndau, Manyika or Zezuru which are not captured in this Table.

5.2.2 Data collection

We used systematic sampling to select households within communities adjacent to the four selected PAs. The communities comprised wards divided into villages and then households within each village setup; hence, the household was used as the sampling unit. A ward is made up of six or seven villages (Gandiwa *et al.*, 2013a, Madzudzo, 1997). Systematic sampling was used because samples are easier to draw and execute. Moreover, a systematic sample spread the members selected for measurement more evenly across the entire population, thus, is more precise and representative of the population (Thompson, 2012). As part of data collection, we used maps of the PAs showing the adjacent villages to choose transects through the communities that would allow us to cover all the study villages (Messer and Townsley, 2003). Sampled households were restricted to within 10 km of the PA boundary due to the likelihood of increased local people-PA interaction (Gandiwa *et al.*, 2014b). On entering a village, we randomly marked the first household as the starting point, after which a random direction from that household was selected and then every third household close to the transect was interviewed. Convenience sampling was used to select PA staff respondents and questionnaires were distributed to all the PA staff that happened to be on duty during the data collection period so as to get as many respondents as possible.

Close-ended questionnaires were used as these are comparatively easy to administer and manage, especially considering large sample sizes. Moreover, close-ended questionnaires are quick and easy to code and interpret, and therefore are amenable to rapid statistical analysis (Leung, 2001) despite their limitations in gathering in-depth and detailed information (Barribeau *et al.*, 2005). However, in our case we were more interested in determining respondents' perceptions using predetermined specific indicators (factors) informed by the literature review, hence the suitability of close-ended questionnaires. The questionnaires were revised after a pilot test with 38 community members from Magazi village adjacent to Umfurudzi Park to remove ambiguities and misunderstandings. Since Magazi village had already been involved in the research, it was

not included in the final sample for fear that those who participated in the pilot study could influence the later behaviour of research subjects (Haralambos, 2008). The measures used for the pilot study and actual data collection were therefore slightly different.

The questionnaires consisted of three major sections, that is: (i) factors that influence PA staff-community relationships in which eight factors (namely, history of PA creation, benefit-sharing, problems caused by PA existence to adjacent communities, communication between PA staff and communities, community involvement in conservation, community perceptions on tourism, conservation, and PA staff), were used for the community questionnaire. The PA staff questionnaire, however, had six factors because the other two factors: perceptions on conservation and perceptions on tourism were removed since conservation and tourism are part of the PA responsibility. (ii) Community/PA staff perceptions of their relationship with each other, were assessed using Grunig and Huang (2000)'s relationship measurement scale and slightly modified to apply to PA staff-community relationships; and (iii) respondents' demographics. Respondents were asked to indicate how much they agreed with the given statements on a 7-point Likert scale ranging from 'strongly disagree/very less extent' to 'strongly agree/very great extent' (Malhotra and Peterson, 2006). The 7-point Likert scale (with 1-3 representing a negative perception of the relationship; 4 representing a neutral perception; and 5-7 representing a positive perception) was used to expand response options available to respondents (Colman *et al.*, 1997) and enable respondents to make better discrimination (Fornell *et al.*, 1996).

A total of 1000 questionnaires were distributed to the study communities and 938 were returned (response rate = 93.8%) (i.e., Umfurudzi 74, Gonarezhou 278, Matusadona 281; Cawston Ranch 305). As for the PA staff, a total of 180 questionnaires were distributed and 133 were returned (response rate = 73.9%) (i.e., Umfurudzi 22, Gonarezhou 37, Matusadona 28; Cawston Ranch 46; see Table 5.2 for details on demographic profiles). For the community sample, a questionnaire was given to a household head or an adult with at least 18 years who could read and write present at the target households at the time of survey. For those who could not read and write, an interview was conducted by research assistants with the aid of the close-ended

questionnaire. For the PA sample, a questionnaire was given to every staff member on duty during survey period. Data were collected between July 2013 and February 2014.

Table 5.2: Demographic profiles of respondents. Values are numbers of respondents, and percentages in parenthesis.

Demographic profiles of community respondents, n = 938			
<i>Gender</i>		<i>Household size</i>	
Male	541(57.7)	<5	404(43.1)
Female	397(42.3)	6-10	381(40.6)
<i>Age(years)</i>		>10	153(16.3)
18-25	177(18.9)	<i>Total number of livestock</i>	
26-35	237(25.3)	<5	485(51.7)
36-45	201(21.4)	6-10	238(25.4)
46-55	107(11.4)	11-15	84(9.0)
56-65	131(14.0)	16-20	50(5.3)
66-75	70(7.5)	21-25	26(2.8)
76+	15(1.6)	26-30	20(2.1)
<i>Highest level of education</i>		>30	33(3.5)
No formal education	159(17.0)	<i>Level of income per year</i>	
Primary education	442(47.1)	<US\$1000	824(87.8)
Secondary education	308(32.8)	US\$1000-\$2000	68(7.2)
Adult education	13(1.4)	US\$2001-\$3000	18(1.9)
College diploma	11(1.2)	US\$3001-\$4000	7(0.7)
University graduate	5(0.5)	US\$4001-\$5000	6(0.6)
<i>Number of years stayed in the village</i>		US\$5001-\$6000	5(0.5)
<2	39(4.2)	>\$6000	10(1.1)
3-10	134(14.3)	<i>Neighbouring Protected Area</i>	
11-20	330(35.2)	Umfurudzi	74(7.9)
21-30	153(16.3)	Gonarezhou	278(29.6)
31-40	137(14.6)	Matusadona	281(30.0)
41-50	52(5.5)	Cawston Ranch	305(32.5)
>50	92(9.8)		
Demographic profiles of PA staff respondents, n=133			
<i>Gender</i>		<i>Job position</i>	
Male	113(85.0)	Park Manager	1(0.8)
Female	20(15.0)	Assistant Park Manager	2(1.5)
<i>Age(years)</i>		Senior Game Ranger	7(5.3)
18-25	22(16.5)	Game Ranger	110(82.7)
26-35	64(48.1)	Community Liaison Officer	1(0.8)
36-45	22(16.5)	General Hand	7(5.3)
46-55	14(10.5)	Skinner	2(1.5)
56-65	8(6.0)	Driver	1(0.8)
66-75	3(2.3)	Chef	1(0.8)
76+	0	Mechanic	1(0.8)
<i>Highest level of education</i>		<i>Protected Area</i>	
No formal education	8(6.0)	Umfurudzi	22(16.5)
Primary education	29(21.8)	Gonarezhou	37(27.8)
Secondary education	74(55.6)	Matusadona	28(34.6)
Adult education	0	Cawston Ranch	46(21.1)
College diploma	14(10.5)		
University graduate	8(6.0)		
<i>Number of years working in the Protected Area</i>			
<5	49(36.8)		
6-10	52(39.1)		
>10	32(24.1)		

Completion of each questionnaire or interview took 20-30 minutes. Questionnaires were administered with the help of local research assistants with at least 4 years of secondary education who were trained and received instructions about the objectives of the study, and how to collect data. We obtained permission and/or informed consent to conduct and participate in the survey from property holders, district authorities, traditional leaders, and respondents.

5.2.3 Data analysis

Collected data were grouped into two sets, that is, for communities and PA staff (see Appendices 5.1 and 5.2 for descriptive statistics for community and PA data, respectively). Frequencies were used to summarise responses on community-PA relationship. The eight factors from the community perspectives and six factors from PA staff perspectives on PA staff-community relationships were analysed using the ordinal logistic regression. Ordinal logistic regression predicts an ordinal dependent variable given one or more independent variables (Fullerton, 2009). Ordinal variables are categorical variables with ordered categories, for example, Likert items, among other ways of ranking categories (Lall *et al.*, 2002, Ananth and Kleinbaum, 1997). In our case, we had one ordinal dependent variable, 'PA staff-community relationship', with seven ordered categories: '1 = Strongly Disagree', '2 = Disagree', '3 = Somewhat Disagree', '4 = Neither Agree nor Disagree', '5 = Somewhat Agree', '6 = Agree' and '7 = Strongly Agree'. This meant that we could not use the binary choice model for the analysis of the data but multinomial or ordered choice models that allow for more than two dependent variables (Ezebilo *et al.*, 2013). However, the multinomial model is often used for modelling unordered dependent variables, while the ordered choice model is more suitable for ordered dependent variables. As with other types of regression, ordinal regression can also use interactions between independent variables to predict the dependent variable (Fullerton, 2009).

Prior to running the data in ordinal logistic regression, two tests, that is, (i) a multicollinearity test and (ii) full likelihood ratio test to evaluate the proportional odds were run and the results of these tests confirmed suitability of the ordinal regression models. Multicollinearity in this study was acceptable as indicated by tolerance levels ranging from 0.39 to 0.88 as well as variance inflation factor values between 1 and 3 (see

Mertler and Vannatta (2002) and De Vaus (2002) for comparisons). The odds ratios were used to indicate the change in odds resulting from a unit change in the predictor (independent) variable (Field, 2009). Predictors greater than 1 indicate that as the predictor increases, the odds of a positive PA staff-community relationship occurring increases, and predictors less than 1 indicates that as the predictor increases, the odds of a positive PA staff-community relationship occurring decreases. All the independent variables were statistically significant at $p < 0.001$ suggesting that for our models, the proportional odds assumption appears to have held (Bruin, 2006). All analyses were conducted using the Statistical Package for the Social Sciences Version 21 (SPSS, Chicago, IL).

5.3 Results

5.3.1 Community and PA staff perceptions of their relationship

Approximately, 62.5% ($n = 586$) of the community respondents perceived the relationship they had with the PAs to be negative, 15.0% ($n = 141$) perceived a neutral relationship with the PA staff, while about 22.5% ($n = 211$) perceived a positive relationship with PA staff. As for the PA sample, about 48.9% ($n = 65$) of the PA staff rated their relationship with the communities positively, while 30.8% ($n = 41$) perceived a neutral relationship with the communities, whereas about 20% ($n = 27$) rated their relationship with the communities to be negative (Figure 5.2).

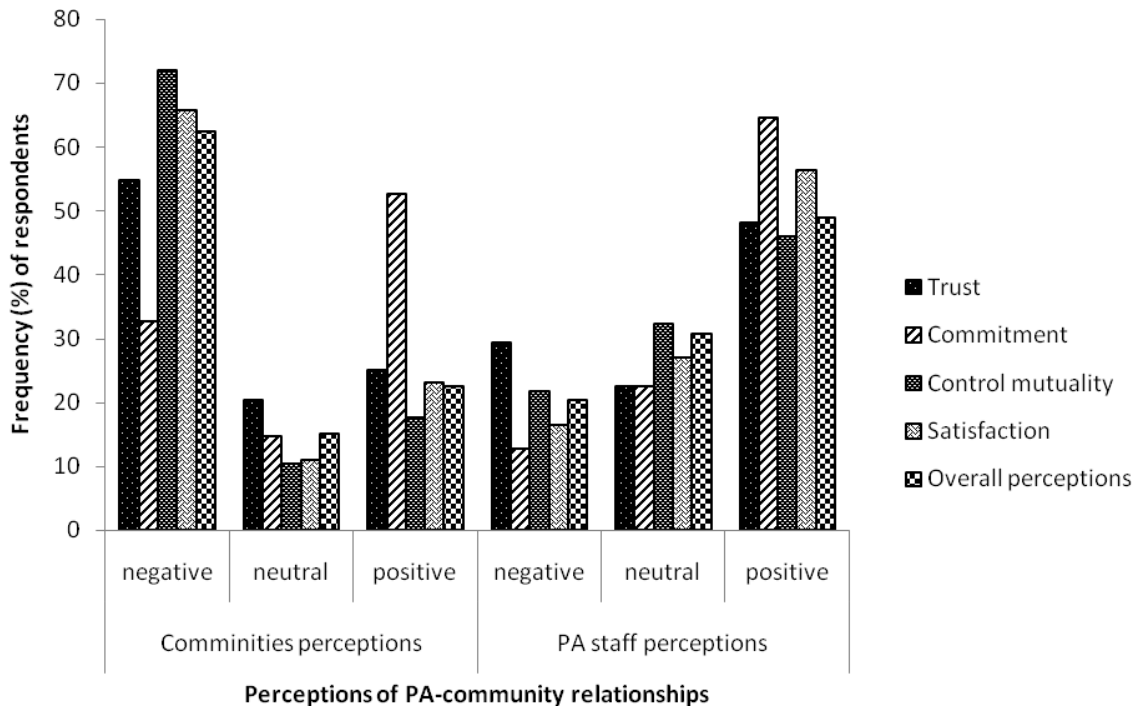


Figure 5.2: Community and PA staff perceptions of the relationship they have with each other.

About 54.7% ($n = 513$) of the community sample reported a very low level of trust in PA staff, 72.0% ($n = 675$) attested to the fact that PA staff and the communities did not agree on their power to influence, and 65.8% ($n = 617$) reported as not being satisfied with their current relationship with the PA staff. About 52.6% ($n = 428$) of the community respondents, however, indicated that they were committed to maintaining a good relationship with PA staff. As for the PA sample, about 56.4% ($n = 75$) reported as being satisfied with their current relationship with the communities and 64.6% ($n = 86$) indicated that they were committed to maintaining a good relationship with the communities. Moreover, 48.1% ($n = 64$) of the PA staff indicate to have some trust in the local community. The lowest relationship indicator was control mutuality with approximately 45.9% ($n = 61$) indicating that the PA staff and the communities agreed on their power to influence (Figure 5.2).

5.3.2 Factors influencing PA staff-community relationships

5.3.2.1 Community perspectives

The ordinal regression model from the community sample explained a significant amount of the original variability [$\chi^2(8) = 915.76$, $p < 0.001$; $R^2 = 0.77$]. Our results showed that an improvement in six of the eight tested factors was associated with an increase in the odds of having a positive PA staff–community relationship (Table 5.3). These are, communication with an odds ratio of 1.58 (95% CI, 1.41-1.77), Wald $\chi^2(1) = 61.97$, $p < 0.001$; community perceptions of tourism with an odds ratio of 1.7 (95% CI, 1.5-1.93), Wald $\chi^2(1) = 66.96$, $p < 0.001$; community perceptions of conservation with an odds ratio of 1.75 (95% CI, 1.58-1.94), Wald $\chi^2(1) = 117.49$, $p < 0.001$; community perceptions of PA staff with an odds ratio of 1.66 (95% CI, 1.45- 1.9), Wald $\chi^2(1) = 53.35$, $p < 0.001$; benefit-sharing with an odds ratio of 1.37 (95% CI, 1.18-1.58), Wald $\chi^2(1) = 17.68$, $p < 0.001$; and community involvement in conservation with an odds ratio of 1.28 (95% CI, 1.11-1.47), Wald $\chi^2(1) = 11.68$, $p < 0.001$. Contrastingly, an increase in the effects of the history of PA creation was associated with a decrease in the odds of having a positive PA staff-community relationship, with an odds ratio of 0.74 (95% CI, 0.67-0.82), Wald $\chi^2(1) = 32.75$, $p < 0.001$. Although problems caused by PA existence to adjacent communities had an odds ratio of 0.92 (95% CI, 0.83-1.02), whether the problems increased did not significantly affect PA staff–community relationship, Wald $\chi^2(1) = 2.8$, $p > 0.05$.

Table 5.3: Ordinal logistic regression results explaining the influence of eight factors on PA staff-community relationships from the community data sample.

Model	Coefficient estimate (Std. Error)	95% Confidence Intervals for Odds Ratios		
		Lower	Odds	Upper
PA-community relationships are influenced by:				
History of PA creation	-0.28 (0.05)*	0.67	0.74	0.82
Communication	0.46 (0.06)*	1.41	1.58	1.77
Perceptions of tourism	0.53 (0.07)*	1.50	1.70	1.93
Perceptions of conservation	0.56 (0.05)*	1.58	1.75	1.94
Perceptions of PA staff	0.51 (0.07)*	1.45	1.66	1.90
Problems caused by PA existence to adjacent communities	-0.08 (0.05) ^a	0.83	0.92	1.02
Benefit-sharing	0.31 (0.07)*	1.18	1.37	1.58
Community involvement	0.25 (0.07)*	1.11	1.28	1.47
R ² = 0.77				
Model $\chi^2(8) = 915.76^*$				

*p < 0.001, ^aNon-significant (ns, P > 0.05)

5.3.2.2 PA staff perspectives

The ordinal regression model from the PA staff sample explained a significant amount of the original variability [$\chi^2(6) = 55.32$, $p < 0.001$; $R^2 = 0.50$]. Our findings showed that an improvement in three of the six tested factors was associated with an increase in the odds of having a positive PA staff–community relationship (Table 5.4). These are, communication with an odds ratio of 1.81 (95% CI, 1.17-2.79), Wald $\chi^2(1) = 7.2$, $p < 0.01$; PA staff perceptions of communities with an odds ratio of 1.82 (95% CI, 1.15-2.88), Wald $\chi^2(1) = 6.59$, $p < 0.05$; and community involvement in conservation with an odds ratio of 2.02 (95% CI, 1.13-3.63), Wald $\chi^2(1) = 5.55$, $p < 0.05$. Contrastingly, as in the community sample, an increase in the effects of the history of PA creation was associated with a decrease in the odds of having a positive PA staff-community relationship, with an odds ratio of 0.65 (95% CI, 0.72-0.84), Wald $\chi^2(1) = 6.25$, $p < 0.05$. Although problems caused by communities to PAs had an odds ratio of 0.64 (95% CI, 0.73-1.78), whether the problems increased did not significantly affect PA staff–community relationship, Wald $\chi^2(1) = 0.18$, $p > 0.05$. Similarly, although benefit-sharing had an odds ratios of 1.89 (95% CI, 0.52-1.53), whether benefit-sharing was improved did not significantly affect PA staff-community relationship, Wald $\chi^2(1) = 0.35$, $p > 0.05$.

Table 5.4: Ordinal logistic regression results explaining the influence of six factors on PA staff-community relationships from the PA staff data sample.

Model	Coefficient estimate (Std. Error)	95% Confidence Intervals for Odds Ratios		
		Lower	Odds	Upper
PA-community relationships are influenced by:				
History of PA creation	-0.44 (0.17)***	0.72	0.65	0.84
Communication	0.59 (0.22)**	1.17	1.81	2.79
Perceptions of communities	0.60 (0.23)***	1.15	1.82	2.88
Problems caused by communities to PAs	-0.13 (0.23) ^a	0.73	0.64	1.78
Benefit-sharing	0.17 (0.28) ^a	0.52	1.89	1.53
Community involvement	0.70 (0.30)***	1.13	2.02	3.63

R² = 0.50

Model $\chi^2(6) = 55.32^*$

*p < 0.001, **p < 0.01, ***p < 0.05, ^aNon-significant (ns, P > 0.05)

5.4 Discussion

Our results showed differences in perceptions of PA staff and adjacent communities concerning their relationships. There were noticeable difference in their levels of trust for each other, their perceptions on the degree of power that they have to influence one another, their satisfaction levels with each other, and their levels of commitment to each other. These differences can be attributed to different values and understanding between PA staff and communities, especially on conservation issues and their importance. The local residents are often ignorant of many environmental issues (Fischhoff, 1985). Locke (1975) suggests that because of different levels of understanding among stakeholders, good arguments could sometimes lead to human misunderstandings.

History of PA creation was significant in influencing PA staff-community relationship from both the communities and PA staff perspectives. Consistent with earlier studies, the impacts of forced removal during the establishment of PAs, for example, prohibition of access to resources in the PAs such as bush meat, grazing areas, and firewood led to problems between PAs and the communities often leading to increased illegal resource harvesting, habitat encroachment, and destruction (Fischer *et al.*, 2011, Gandiwa *et al.*, 2011, Graham *et al.*, 2005). Since history cannot be changed, it would help if the communities benefited in a way that would not make them feel alienated. This could be done through compensating them either in monetary terms or through some land rights.

Alternatively, the benefit-sharing schemes could be improved, for example, improving the CAMPFIRE programme. Currently, the CAMPFIRE programme is striving mostly on migratory animals which mean if there are no healthy wild animal populations in PAs, there will be less revenue accruing to communities since hunting will be less viable in CAMPFIRE areas. However, this can be improved by promoting the establishment of community game ranches to ensure active management and presence of resident animals in CAMPFIRE areas. Moreover, the CAMPFIRE programme mostly focuses on hunting, which also limits the amount of revenue the communities get. Product diversification and value addition, for example, ecotourism and curio shops offer an opportunity to enhance community benefits. Additionally, governments need to engage stakeholders who include local communities, and make joint decisions about how PAs should be gazetted and managed. This will help governments take proper account of local community needs when setting up PAs so as to ensure positive PA staff-community relationships and produce long-lasting results for both conservation and local communities.

While the community perceived benefit-sharing to have a significant influence on their relationship with PA staff, benefit-sharing was unable to explain PA staff-community relationships from the PA staff perspectives, most likely due to the fact that communities adjacent to PAs assume they should have some rights to wildlife resources and therefore should benefit from them. Moreover, PA staff is mostly concerned with conservation, and some of them are not local residents, hence, the issue of community benefits might not be of interest to them. Our findings from community sample concur with other authors who reported that benefit-sharing has significant influence on PA staff-community relationships (Tessema *et al.*, 2010, Kideghesho *et al.*, 2007, Hutton *et al.*, 2005, Adams and Hulme, 2001). Benefits to the communities can further be improved through developing transparent systems for benefit-sharing, good governance systems, and improved community involvement. Most of the study communities in the present study are currently not directly benefiting from tourism in the PAs. This situation could be improved by allocating a certain percentage of revenue from tourism to the communities and/or allocating lease sites for photographic tourism within the PAs for community enterprises under public-private community partnership arrangements, hence, resulting in enhanced collective benefits to the community and infrastructural improvements within

communities. Capacity building of local communities is another action that could be taken to enhance skills of local people with future potential benefits such as improved employability in higher paying jobs, empowering local people to start small tourism ventures, and also enhanced skills to effectively manage natural resources within communities.

Communication between PA staff and communities, and community involvement in conservation were significant in influencing PA staff-community relationship from both the communities and PA staff perspectives. Currently, only Gonarezhou National Park has a community liaison officer. Increasing the number of community liaison officers can enhance communication and ultimately, the relationship between PA staff and communities. Where ineffective communication exists, trust between communities and PA staff is low. If communication between PA staff and communities is not improved, the relationship between the two can also be difficult to mend. Our results on communication between PA staff and communities corroborate those of Ormsby and Kaplin (2005) who reported that difficulty of communication between Masoala National Park authorities and adjacent communities in Madagascar could have led to conflicts and negative relationships. Communication between PA staff and communities could be improved through engagement of community liaison officers by the PAs who act as mediums between PA staff and communities. Moreover, enhanced community involvement in conservation could improve PA staff-community relationships (Ebua *et al.*, 2011, Liu *et al.*, 2010).

Community perceptions on tourism, conservation, and PA staff were all significant in influencing PA staff-community relationship. The negative perceptions signify communities' low levels of trust and satisfaction levels with PA staff, which indicates negative relationships between PA staff and local communities. Mutanga *et al.* (2015b) recorded negative perceptions of PAs by the communities attributed to limited financial benefits from tourism in Umfurudzi Park and Gonarezhou National Park. Allendorf (2010) suggested that community's perceptions are a major component of the PA staff-community relationship. PA management, therefore, need to address the negative perceptions in order to improve the relationship between PA staff and communities through extending more

benefits to the communities, for example, employing local people and enhancing access to natural resources such as thatching grass.

Similarly, our results showed that PA staff perceptions of communities had significant influence on their relationship with the communities. Where illegal activities, such as illegal hunting, livestock grazing in PA, uncontrolled fires, and encroachment into PAs are concerned, and where communities are always at loggerheads with PA staff, PA staff often have a negative perception of local communities, hence the negative PA staff-community relationships (Milgroom and Spierenburg, 2008, Holmes, 2013). As a result, PA staff tend to use force over local communities (Laudati, 2010) thereby fuelling negative relationships between PA staff and the local communities. Thus, enhancing local community participation in conservation, and increased interaction of PA staff and local community through conservation initiatives would help improve PA staff-community relationships.

Neither problems caused by PA existence to communities which include crop raiding and livestock depredation by wild animals, safety to human lives, and confrontations with PA staff, nor problems caused by communities such as poaching, habitat destruction, and encroachment had an influence on PA staff-community relationships. Cawston Ranch and some boundary section of the northern Gonarezhou National Park are fenced hence human-wildlife conflicts are minimal in these areas and/or sections. Similarly, as reported by Gandiwa *et al.* (2012), in some PAs in Zimbabwe, fences had to be erected between wildlife areas and villages as a way of minimising human-wildlife conflicts. Our findings are contrary to earlier studies that have recorded cases of human-wildlife conflict (Matema and Andersson, 2015, Muboko *et al.*, 2014a) and other conservation-induced costs that lead to communities' low satisfaction with PA staff (Snyman, 2012, Shibia, 2010). However, it may be that respondents, especially local community members, were not open in divulging sensitive information on illegal activities affecting PAs, hence, the less representation of the influence of these factors on PA staff-community relationships.

Our findings suggest that all the factors, but one (problems caused by PA existence to communities which include crop raiding and livestock depredation by wild animals, as

well as problems caused by communities such as poaching and habitat destruction), are important for conservation relationships. However, improving factors that have the potential of enhancing PA staff-community relationships which are communication, community perceptions of tourism, community perceptions of conservation, community perceptions of PA staff, benefit-sharing, community involvement in conservation, and PA staff perceptions of communities requires both financial and non-monetary resources such as time and skills. Determination from the involved parties is also essential for long-term natural resources conservation. The same goes for decreasing the effects of the history of PA creation, which, if allowed to increase can worsen PA staff-community relationships. By aiding the appreciation and understanding of some of the underlying factors that can contribute to either negative or positive relationships, these findings can have an important bearing on PA budgets and the general allocation of resources. Issues to consider in resource allocation planning include investing in the establishment of effective mechanisms for the transparent exchange of information and ironing out of grievances between PAs and local communities, for example, through employing community liaison officers. Also, of importance is capacity building mainly focused on provision of support to communities especially with training in entrepreneurship and livelihood activities like poultry projects to reduce dependency on wildlife resources. Investing in ongoing training for PA staff so that they understand how best to deal or interact with local communities is also important. These can help provide both economic and nonmonetary benefits to communities and most importantly can be instrumental in forming positive perceptions of tourism, conservation, and PA staff by the communities. Training for PA staff can help improve PA staff perceptions of communities.

Our findings are also important in the broad PA management as they help in addressing important issues on the complexity of interactions between nature and society. This underlines the importance of striking a balance between respecting community needs, expectations, and decision-making on one hand, and the commonly used methods of imposing terms and processes on communities to attain conservation goals, on the other hand (Krause *et al.*, 2013). The discussed factors thus can help in informing parameters within which the roles of PAs and communities in conservation relationships can be defined. Both conservation agencies and communities need to pay more attention to the

highlighted factors to nurture positive relationships. Conservation agencies can do this through compensating for community displacement during PA creation, providing opportunities for community involvement in tourism, and improving communication channels between PA staff and communities. Communities, on the other hand, can make efforts for community members to actively get involved in conservation so as to reduce illegal activities that negatively impact PAs such as veld fires and illegal hunting to improve PA staff perceptions of them. They can also find alternative sources of income, for example, through diversifying the CAMPFIRE programme and revenue options by offering tour guiding services and selling curios to tourists so as to reduce direct dependability on PA resources. This is necessary to gain and maintain both parties' support for positive PA staff-community relationships and ensure long-term sustainability of wildlife conservation.

5.5 Conclusion

We conclude that communities generally perceived the relationship they had with the PAs to be negative while PA staff generally perceived a positive relationship with the communities. From the community perspectives, it is evident that seven of the eight tested factors had an influence on PA staff-community relationships. Problems caused by PA existence to adjacent communities had no significant influence on PA staff-community relationships. From the PA staff perspective, four of the six tested factors had significant influence on PA Staff-community relationships while benefit-sharing and problems caused by communities to PAs had no significant influence on PA staff-community relationships. Communication, perceptions (both communities' and PA staff's), community involvement in conservation, history of PA creation, and problems caused by both PA existence to the communities or by communities to PAs had the same effect on PA staff-community relationship from both samples. Only benefit-sharing had a different effect on PA staff-community relationship from the two perspectives.

We recognise that besides the factors that were addressed in this present study, there could be other factors influencing PA staff-community relationship. Thus, there is need for multidisciplinary research on other factors that potentially influence PA staff-community relationships, since gaining an in-depth understanding of factors influencing

these relationships is increasingly becoming important in promoting harmonious PA staff-community relationship and biodiversity conservation in general.

5.6 Acknowledgements

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Appendix 5.1: Descriptive statistics for dependent and independent variables for the community data sample.

Item	Code	Mean	Standard Deviation	Skewness	Kurtosis
Dependent variable					
Protected Area (PA) staff-community relationship					
Trust					
I believe that Park Management / staff have good intention	TR 01	2.68	2.37	0.99	-0.75
I have faith /trust in the promises or statements of Park staff	TR 02	2.43	2.12	1.26	0.05
I believe the Park has a lot of experience and knows best with regards to wildlife conservation	TR 03	4.41	3.51	9.38	195.13
Fair principles seem to guide the Park's behaviour	TR 04	3.62	2.55	0.24	-1.66
Category mean	TR	3.29	1.88	1.80	16.02
Commitment					
I am proud to tell others that i support wildlife conservation	COMT 01	4.44	2.74	-0.32	-1.77
I really care about the fate of this Park	COMT 02	3.97	2.69	0.01	-1.83
I am willing to put in a great deal of effort in order to help wildlife conservation be successful	COMT 03	4.27	2.69	-0.21	-1.79
I feel that the Park is trying to maintain a long term commitment to our community	COMT 04	3.23	2.53	0.98	-0.74
Category mean	COMT	3.98	2.11	-0.10	-1.35
Control mutuality					
The Park really listens to what our community has to say	C/MUT 01	2.66	2.31	0.98	-0.74
The Park believes the opinions of our community are important	C/MUT 02	2.63	2.28	1.02	-0.63
The Park gives our community enough say in its decision-making process	C/MUT 03	2.28	2.05	1.42	0.49
Generally speaking, both the Park and ourselves are satisfied with the decision-making process	C/MUT 04	2.46	2.18	1.20	-0.17
Category mean	C/MUT	2.51	1.74	0.95	-0.24
Satisfaction					
I feel our community is important to the Park	SAT 01	3.40	2.59	0.42	-1.61
Both the Park and ourselves benefit from our relationship	SAT 02	2.50	2.20	1.16	-0.26
Our relationship with the Park is good	SAT 03	2.93	2.45	0.76	-1.18
In general I am satisfied with our relationship with the Park	SAT 04	2.78	2.38	0.89	-0.92
Category mean	SAT	2.90	1.85	0.71	-0.65
Overall relationship	REL	3.17	1.57	0.57	-0.47
Independent variables					

History of PA creation					
Forced relocation	HIS 01	5.26	2.49	-0.93	0.94
Fences and Fines approach	HIS 02	5.36	2.42	-1.00	-0.79
Restrictions on the use of natural resources	HIS 03	5.58	2.25	-1.24	-0.16
Wildlife attacks on crops, livestock and humans	HIS 04	5.93	2.10	-1.70	1.14
Decline in traditional practices as a result of restricted access	HIS 05	5.55	2.31	-1.20	-0.30
Category mean	HIS	5.54	1.64	-1.00	0.11
Communication					
Park owners / management communicate well with us	COMN 01	3.05	2.48	0.67	-1.30
Game ranchers communicate well with us	COMN 02	2.87	2.39	0.80	-1.06
There is a regular communication network	COMN 03	2.91	2.40	0.77	-1.10
The Park normally holds meetings with us	COMN 04	2.22	2.08	1.48	0.59
We are consulted in decision making	COMN 05	2.12	1.96	1.66	1.32
Category mean	COMN	2.63	1.62	0.81	-0.27
Community perceptions of tourism					
I would be happy to see more tourists here	T/PERC 01	4.25	2.76	-0.18	-1.85
I would be happy if my children worked in the tourism industry	T/PERC 02	5.31	2.44	-0.98	-0.83
Tourism benefits the whole community	T/PERC 03	3.30	2.62	0.49	-1.59
My family has more money because of tourism	T/PERC 04	2.07	1.94	1.68	1.36
Because visitors want to experience our culture, tourism strengthens our cultural tradition	T/PERC 05	3.07	2.53	0.65	-1.35
Tourists respect our culture and traditions	T/PERC 06	3.04	2.45	0.68	-1.25
Tourism offers financial opportunities for me that have adequately offset my losses from conservation	T/PERC 07	2.13	2.02	0.65	1.16
Category mean	T/PERC	3.31	1.50	0.27	-0.77
Community perceptions of conservation					
It is important to protect plants and trees in the Park	C/PERC 01	5.36	2.49	-1.05	-0.78
It is important to protect wild animal species in the Park	C/PERC 02	5.49	2.38	-1.18	-0.43
People who poach should be punished	C/PERC 03	4.91	2.61	-0.66	-1.41
It is good this land is protected	C/PERC 04	4.35	2.70	-0.27	-1.77
I think the Park was created for the betterment of the community	C/PERC 05	3.83	2.71	-0.11	-1.83
I am happy that my village borders the Park	C/PERC 06	3.67	2.70	0.22	-1.80
Category mean	C/PERC	4.60	1.70	-0.38	-0.82
Community perceptions of PA staff					
Park staff are generally helpful and understand our problems, needs and expectations	PS/PERC 01	2.27	2.13	1.43	0.39
The Park staff are friendly to us	PS/PERC 02	2.35	2.15	1.35	0.28
Park staff are open to our suggestions and concerns regarding development and conservation programs	PS/PERC 03	2.31	2.10	1.38	0.34

Park staff encourage us to participate in conservation programs	PS/PERC 04	3.01	2.47	0.69	-1.27
Park staff respect our input or appreciate our efforts	PS/PERC 05	2.34	2.08	1.33	0.26
Category mean	PS/PERC	2.46	1.65	1.09	0.30
Problems caused by PA existence to the community					
Damage caused by wild animals	PROB 01	5.30	2.49	-0.96	-0.94
Confrontations with conservation authorities	PROB 02	4.86	2.52	-0.58	-1.43
Threats to human safety	PROB 03	5.18	2.42	-0.84	-1.06
Restrictions on livestock grazing areas	PROB 04	4.99	2.50	-0.70	-1.28
Restrictions on firewood collection	PROB 05	4.66	2.59	-0.44	-1.61
Restrictions on animal hunting	PROB 06	4.69	2.62	-0.47	-1.59
Restrictions on fishing	PROB 07	4.80	2.57	-0.55	-1.50
Category mean	PROB	4.93	1.72	-0.47	-0.83
PA benefits to the community					
Provides building material	BEN 01	2.12	2.08	1.65	1.05
Conservation awareness	BEN 02	3.26	2.56	0.51	-1.52
Provides job opportunities	BEN 03	2.44	2.21	1.22	-0.17
Skills development programmes	BEN 04	2.09	1.95	1.69	1.37
Hunt animals or plants for food and medicine	BEN 05	1.77	1.67	2.29	3.96
Provides game meat from culled animals	BEN 06	2.11	2.03	1.66	1.14
I earn money from tourism	BEN 07	1.91	1.83	2.00	2.54
Category mean	BEN	2.25	1.28	1.27	1.57
Community involvement in conservation					
The Park values our input a lot	C/INV 01	2.29	2.16	1.39	0.27
Our local / traditional knowledge is important to the Park	C/INV 02	2.76	2.37	0.92	-0.87
Park management trusts us to make meaningful contributions to the management processes	C/INV 03	2.26	2.05	1.44	0.54
We participate and receive benefits from tourism	C/INV 04	2.07	1.96	1.75	1.52
Increased number of goods and services obtained from local businesses	C/INV 05	2.70	2.41	0.99	-0.80
Number of displays of traditional culture or customs within the PA by local communities	C/INV 06	1.84	1.75	2.15	3.31
Category mean	C/INV	2.32	1.38	1.11	0.71

Notes: The dependent variable PA-community relationship was coded REL and was assessed using trust (TR), commitment (COMMT), control mutuality (C/MUT), and satisfaction (SAT). The independent variables were coded HIS for history of creation of PAs, COMN for communication, T/PERC for community perceptions of tourism, C/PERC for community perceptions of conservation, PS/PERC for community perceptions

of PA staff, PROB for problems caused by PA existence, BEN for benefit-sharing, and C/INV for community involvement in PA management.

Appendix 5.2: Descriptive statistics of dependent and independent variables for the PA staff data sample.

Item	Code	Mean	Standard Deviation	Skewness	Kurtosis
Dependent variable					
Protected Area (PA) staff-community relationship					
Trust					
I believe that the community has good intention	TR 01	4.21	2.16	-0.14	-1.32
I feel a strong faith in the integrity of the community	TR 02	4.29	1.76	-0.19	-0.74
I believe the community has invaluable knowledge with regards to wildlife conservation	TR 03	4.61	2.08	-0.37	-1.26
Ethical principles seem to guide the community's behaviour	TR 04	4.58	1.93	-0.43	-0.78
Category mean	TR	4.44	1.38	0.17	-0.77
Commitment					
The PA values its relationship with the community	COMT 01	4.91	1.94	-0.62	-0.72
I really care about the fate of this community	COMT 02	4.92	1.87	-0.84	-0.36
There is much to be gained by supporting this community	COMT 03	4.71	1.81	-0.31	-0.95
I feel that the community is trying to maintain a long term commitment to our PA	COMT 04	3.92	1.94	0.02	-1.02
Category mean	COMT	4.61	1.24	-1.03	0.97
Control mutuality					
The community really listens to what the PA has to say	C/MUT 01	4.31	1.90	-0.16	-0.85
The community believes the opinions of the PA are important	C/MUT 02	4.15	1.91	-0.16	-0.97
The community gives the PA enough say in its decision-making process	C/MUT 03	4.66	2.0	-0.42	-0.93
Generally speaking, both the community and the PA are satisfied with the decision-making process	C/MUT 04	4.27	1.86	-0.2	-1.0
Category mean	C/MUT	4.35	1.48	-0.22	-0.31
Satisfaction					
I feel the PA is important to the community	SAT 01	5.02	2.20	-0.79	-0.86
Both the community and the PA benefit from our relationship	SAT 02	4.86	1.9	-0.75	-0.41
Our relationship with the community is good	SAT 03	4.27	1.98	-0.25	-1.06
In general I am satisfied with our relationship with the community	SAT 04	4.4	1.92	-0.26	-1.05
Category mean	SAT	4.6	1.23	-0.33	-0.34
Overall relationship	REL	4.5	1.0	-0.27	-0.01

Independent variables					
History of PA creation					
Forced relocation	HIS 01	4.30	2.19	-0.25	-1.42
Fences and Fines approach	HIS 02	4.60	1.86	-0.52	-0.70
Restrictions on the use of natural resources	HIS 03	4.83	1.83	-0.46	-0.90
Wildlife attacks on crops, livestock and humans	HIS 04	5.01	1.74	-0.62	-0.39
Decline in traditional practices as a result of restricted access	HIS 05	4.46	2.0	-0.25	-1.32
Category mean	HIS	4.64	1.30	-0.2	-0.91
Communication					
The PA communicates well with the community	COMN 01	5.44	1.76	-1.29	-0.97
The community communicates well with us	COMN 02	5.31	1.60	-0.52	-0.88
There is a regular communication network	COMN 03	4.20	1.92	-0.15	-0.98
The Park normally holds meetings with the community	COMN 04	4.57	1.98	-0.41	-1.05
The community is consulted in decision making	COMN 05	3.81	2.32	0.1	-1.56
Category mean	COMN	4.66	1.28	-0.27	-0.27
PA staff perceptions of the community					
The community is generally keen to learn about wildlife conservation	COM /PERC 01	4.67	2.01	-0.64	-0.85
Whenever we hold training programmes for the community, they are usually supportive and they come in their numbers	COM /PERC 02	4.10	1.79	-0.14	-0.84
The community understands the importance of wildlife conservation	COM /PERC 03	4.32	1.65	-0.24	-0.72
The community wants to participate in any tourism activities	COM/ PERC 04	4.08	1.9	-0.18	-1.09
The community is innovative and always come up with exciting programmes for the tourists	COM /PERC 05	3.14	1.78	0.62	-0.54
Category mean	COM /PERC	4.06	1.15	-0.24	-0.68
Conservation problems caused by the community					
Loss of wild animal species due to poaching	PROB 01	5.44	1.78	-0.84	-0.6
Reduction in wild animal habitat due to encroachment	PROB 02	4.96	1.85	-0.95	-0.07
Community collaboration with external commercial poachers	PROB 03	4.88	1.9	-0.57	-0.7
Over-reliance on natural resources	PROB 04	4.36	1.72	-0.41	-0.6
Resistance to taking up any income generating tourism activities	PROB 05	3.75	1.75	0.28	-0.49
Resistance to attending any training programmes in wildlife conservation	PROB 06	3.77	1.87	0.18	-0.85
Reluctant to upgrade their educational qualifications so that they can be employed in higher level positions within the park	PROB 07	4.78	1.91	0.4	-0.9

<i>Category mean</i>	PROB	4.56	1.01	-0.59	0.57
PA benefits to the community					
Building material	BEN 01	3.42	2.10	0.23	-1.34
Conservation awareness	BEN 02	4.66	1.83	-0.5	-0.59
Job opportunities	BEN 03	4.77	1.93	-0.43	-0.98
Skills development programmes	BEN 04	3.98	1.92	0.06	-1.12
Free hunting of animals or plants for food and medicine	BEN 05	3.24	2.21	0.48	-1.24
Game meat from culled animals	BEN 06	3.62	2.15	0.15	-1.41
Earning money from tourism	BEN 07	3.29	2.04	0.37	-1.18
<i>Category mean</i>	BEN	3.85	1.17	-0.05	-0.47
Community involvement in conservation					
The PA values community input a lot	C/INV 01	4.41	2.08	-0.33	-1.14
The community's local / traditional knowledge is important to the Park	C/INV 02	4.72	1.98	-0.52	-0.83
PA management trusts the community to make meaningful contributions to the management processes	C/INV 03	4.23	1.91	-0.03	-0.98
The community participates and receive benefits from tourism	C/INV 04	3.55	2.07	0.26	-1.26
Increased number of goods and services obtained from local businesses	C/INV 05	3.88	1.94	0.05	-1.01
Number of displays of traditional culture or customs within the PA by local communities	C/INV 06	3.11	1.91	0.52	-0.74
<i>Category mean</i>	C/INV	3.98	1.20	-0.35	0.07

Notes: The dependent variable PA-community relationship was coded REL and was assessed using trust (TR), commitment (COMMT), control mutuality (C/MUT), and satisfaction (SAT). The independent variables were coded HIS for history of creation of PAs, COMN for communication, COM/PERC for PA staff perceptions of the community, PROB for problems caused by the community, BEN for benefit-sharing, and C/INV for community involvement in PA management.

CHAPTER 6: Community perceptions of wildlife conservation and tourism: A case study of communities adjacent to four protected areas in Zimbabwe††

†† *This Chapter is published as:*

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Abstract

The objectives of this study were: (1) to determine community perceptions of wildlife conservation and tourism, and (2) to establish socio-demographic factors that influence community perceptions of wildlife conservation and tourism. Using closed-ended questionnaires, we collected data from July 2013 to February 2014 in four protected areas (PAs) and adjacent communities in Zimbabwe, i.e., Umfurudzi Park, Gonarezhou National Park, Matusadona National Park and Cawston Ranch. A total of 938 responded to the survey. The community in Gonarezhou had neutral perceptions of wildlife conservation, while those in Umfurudzi, Matusadona, and Cawston Ranch had positive perceptions of wildlife conservation. All four communities had negative perceptions of tourism. There were variable correlations between socio-demographic factors and community perceptions of wildlife conservation and tourism among the different study communities. We concluded that the PAs in question have not fully involved the communities in PA management and that benefits from natural resources are not fairly shared among stakeholders, as explained by the different perceptions communities had on wildlife conservation and tourism. We recommend that conservation agencies should: (i) nurture positive perceptions and address the possible determinants of negative perceptions by the communities, (ii) enhance community involvement and benefits from tourism, and (iii) consider community heterogeneity in conservation planning.

Keywords: conservation, community heterogeneity, perceptions, socio-demographic factors, tourism

6.1 Introduction

The International Union for Conservation of Nature (IUCN) defines a protected area (PA) as a geographical space that is clearly defined, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values (Day *et al.*, 2012). PAs are mostly viewed in biological or ecological terms, but they serve several purposes that are valuable to people and even important to human welfare (Tomicevic *et al.*, 2010). PAs are reserved for the conservation of biodiversity while allowing visitation by people for different important reasons. PAs are therefore valued assets for wildlife resources (Strickland-Munro, 2010), which promote other activities like wildlife tourism with spin-offs for the wider economy (Fischer *et al.*, 2011). Wildlife conservation refers to the practice of protecting wild plant and animal species and their habitats (Redford and Stearman, 1993, IUCN. and UNEP., 1991) whereas tourism refers to people visiting away from their normal places of work and residence, the activities undertaken during their visit, and the facilities created to cater to their needs (Mathieson and Wall, 1982). Wildlife tourism is often the most substantial part of the local economy, and therefore PAs can be catalysts of sustainable regional and rural development (Blackman, 2009). Any detrimental impacts on the environment can therefore deprive countries of possible wildlife tourism earnings and negatively affect a lot of people employed in the wildlife tourism sector (Booth, 2010).

The creation of many PAs, however, forced the relocation of local communities from their original areas of residency, depriving them of access to resources in the PAs such as meat, grazing areas, and firewood (Fischer *et al.*, 2011, Mombeshora and Le Bel, 2009). This deprivation seems to have disconnected local communities from the adjacent PAs (Strickland-Munro *et al.*, 2010). Such protectionist and coercive conservation policies, later known as ‘fortress conservation’ (Igoe, 2004, Brockington, 2002), have dominated much of African conservation (Büscher and Dietz, 2005). PAs that exclude local communities or their participation have often caused negative relationships between PAs and local communities, resulting in conflicts and problems such as increased illegal hunting, habitat encroachment and destruction, violence, and poverty among indigenous communities (Romañach *et al.*, 2011, Graham *et al.*, 2005, Choudhury, 2004, Nepal, 2002). This background continues to influence the communities’ perceptions of wildlife

conservation and tourism to date (Strickland-Munro *et al.*, 2010). Local people can be a direct threat to PAs when they refuse to cooperate with PA authorities or participate in PA agencies' conservation activities (Holmes, 2013, Holmes, 2007), to the detriment of wildlife conservation and tourism (Strickland-Munro and Moore, 2013).

New strategies such as 'community conservation' (McClanahan *et al.*, 2005, Infield and Namara, 2001) or participatory management' (Dimitrakopoulos *et al.*, 2010, Granek and Brown, 2005) have been developed in response to the general belief of many conservationists that PAs are likely to fail unless local communities are to some extent involved in conservation efforts (Yeo-Chang, 2009, Hulme and Murphree, 2001). Strategies to reconcile differences between local residents and PAs' needs encourage community participation in natural resource management while improving their economic comfort (Vodouhê *et al.*, 2010). More often than not, wildlife conservation in Africa is presented in terms of a win-win discourse involving community participation and benefits (Benjaminsen and Svarstad, 2010). However, Benjaminsen and Svarstad (2010) using two case studies from Tanzania and South Africa, demonstrate how the conservation practices observed in Africa do not fit the win-win discourse, but are more in line with the 'fortress conservation' that previously dominated both discourse and practice. Wildlife affects local communities through both the damage it causes to crops and the benefits associated with it (Emerton, 2001). Muchapondwa *et al.* (2009) are of the view that the benefits of wildlife potentially accrue at both global and local levels whereas the costs occur exclusively at the local level, but Cortes-Vazquez (2014) showed that there is need for more nuanced descriptions and models, given that some locals benefit, while others lose out on these conservation efforts. Benefits to communities may come through involvement and participating in tourism activities within and adjacent to the PA (Strickland-Munro *et al.*, 2010), while negative attitudes and perceptions of tourism can be provoked by unequal sharing of the benefits of tourism within a community (De Kadt, 1979). Assessing community perceptions of both conservation and tourism is therefore necessary.

Wildlife conservation's success depends on people's perceptions and attitudes towards conservation (Allendorf *et al.*, 2012), which shape PA-community relationships (Mutanga *et al.*, 2015, Allendorf, 2010, Suntikul *et al.*, 2010). Conservation agencies can

improve management through understanding people's perceptions of PAs (Tessema *et al.*, 2010), and peoples' perceptions of conservation are aspects of many wildlife conservation studies (e.g., Tessema *et al.*, 2010, West, 2006, Harper, 2002, Walpole and Goodwin, 2001, Neumann, 1998, Newmark *et al.*, 1993). Perceptions are affected by different socio-demographic factors such as household income levels, education, age (Snyman, 2012), size of livestock herd (Kideghesho *et al.*, 2007), length of residency, gender (Arjunan *et al.*, 2006), sources of income, and household size (Tessema *et al.*, 2010, Dickman, 2005).

Few studies of community perceptions of conservation and tourism have focused on multiple study areas, (e.g., Törn *et al.*, 2007, Marcus, 2001). Snyman (2012), noted that many perception studies have focused on one study area and did not compare community perceptions between different conservation areas. Furthermore, little is known about community perceptions of conservation and tourism in environments that have undergone political and economic disturbances. Tourists may shun a destination that is undergoing a period of instability, reducing tourism activity and economic returns for both the country (Karambakuwa *et al.*, 2011) and especially for the local people (Fischer *et al.*, 2011) who may then develop negative perceptions of conservation and tourism. For instance, Zimbabwe experienced political instability and economic decline between 2000 and 2008 (Gandiwa *et al.*, 2014a), which may have affected local people's perceptions of wildlife conservation and tourism in communities adjacent to PAs.

The present study compares community perceptions of conservation and tourism in four conservation areas: Umfurudzi Park, Gonarezhou National Park, Matusadona National Park and Cawston Ranch in Zimbabwe. Our objectives were: (1) to determine community perceptions of wildlife conservation and tourism, and (2) to establish socio-demographic factors that influence community perceptions of wildlife conservation and tourism.

6.2 Methods

6.2.1 Study Areas

Zimbabwe was chosen as a case study because of its documented history of wildlife conservation and its land reform programme, whose effects on wildlife conservation were globally reported through both the electronic and print media (Gandiwa *et al.*, 2014a). The four PAs were selected because of their spatial distribution as shown in Figure 6.1, and

also because they reveal community perceptions of conservation and tourism in conservation areas with different management regimes by comparing public and private PAs.

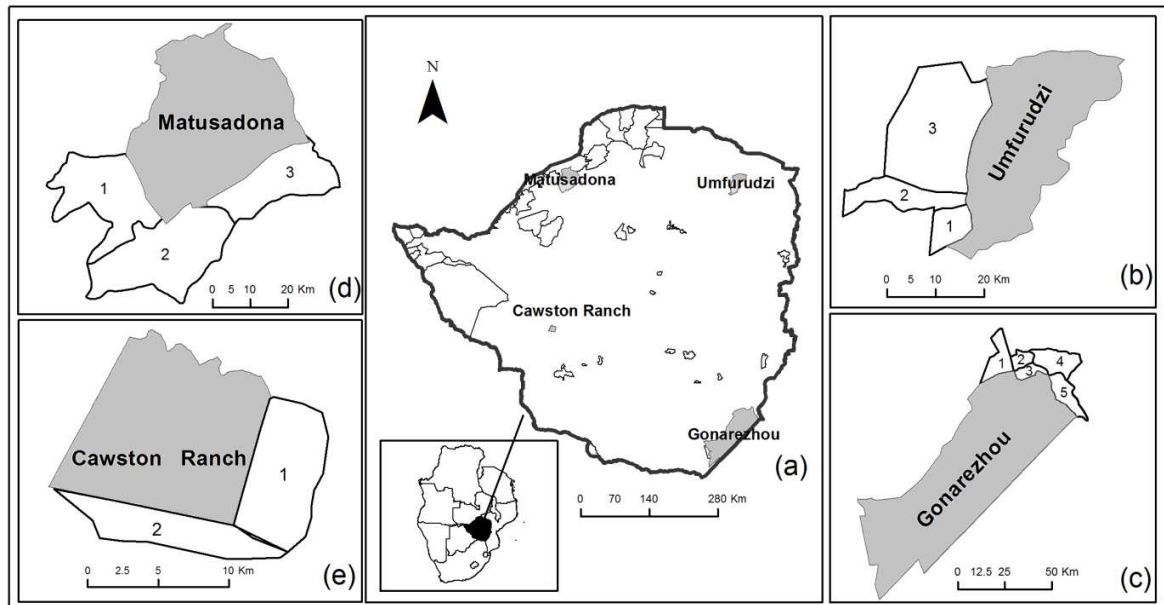


Figure 6.1: Location of the four study sites in Zimbabwe. (a) shows the PAs in Zimbabwe among which are the four study PAs; (b) shows Umfurudzi National Park and the Umfurudzi community comprising of three areas: 1- Sanye, 2-Mufurudzi 1, and 3-Mufurudzi 2; (c) shows Gonarezhou National Park and the Gonarezhou community comprising of five areas: 1-Chizvirizvi, 2-Mupinga, 3-Chitsa, 4-Mutandahwe, and 5-Mahenye; (d) shows Matusadona National Park and the Matusadona community comprising of three areas: 1-Nebiri, 2-Musambakaruma 2, and 3-Musambakaruma 1; and (e) shows Cawston Ranch and the Cawston Ranch community comprising of two areas: 1-Ward 10 and 2-Ward 9.

All the sampled villages surrounding a PA are referred to as a community in this study. A community is defined here as an entity socially bound by a common cultural identity, living within a defined geo-spatial boundary, and having a common economic interest in the resources of the area (Barrow and Murphree, 2001). Briefly, the four study areas include two safari areas and two national parks, and their adjacent communal areas (see Table 6.1).

Table 6.1: General characteristics and organisation of the four PAs and their surrounding communities. Source: Utete and Mwedzi (2012); Gandiwa *et al.* (2012); Muboko *et al.* (2014a); Muposhi *et al.* (2014).

Attributes	Study site			
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch
Status	Safari Area	National Park	National Park	Safari Area
Ownership	Government	Government	Government	Private
Management	-Public-private partnership -Top-down management practices	-Public-private partnership -Top-down management practices	-Public -Top-down management practices	-Private -Top-down management practices
Coordination with academia and researchers	Yes	Yes	Yes	Yes
Year established	1981	1930 as a Game reserve, upgraded to a National Park in 1975	1963 as a Game reserve, upgraded to a National Park in 1975	1988
Size (km ²)	760	5,000	1,400	128
CBNRM projects	None	CAMPFIRE	CAMPFIRE	None
Community involvement in decision-making	None	Limited involvement only in CAMPFIRE management	Limited involvement only in CAMPFIRE management	None
Tourism facilities	Campsites	Lodges, camp sites	Lodges, camp sites	Bush camps
Community benefits from PAs	No benefits	Mainly CAMPFIRE benefits	-Employment benefits -CAMPFIRE benefits	A number of material benefits e.g., game meat, employment
Human-wildlife conflict	Loss of crops and livestock	Loss of crops and livestock	Minimal crop and livestock destruction	Loss of crops
Compensation for losses from wildlife	No compensation	No compensation	No compensation	No compensation
Local languages	Shona	Shangani	Tonga, Shona	Ndebele

Note: CBNRM stands for Community-Based Natural Resource Management. Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) is a form of CBNRM project that uses wildlife and other natural resources for promoting devolution of rights to manage, use, dispose of, and benefit from natural resources to rural institutions and improved governance and livelihoods. CAMPFIRE is based on the principle that, if communities receive economic benefits from wildlife, they will change their attitudes and want to conserve and manage it.

6.2.2 Data collection

We used the quantitative research method using closed-ended questionnaires. Sampled households were in the range of ≤ 10 km from the PA boundary as these were believed to have much interaction with the PA (Gandiwa *et al.*, 2014b). We obtained permission to conduct the questionnaires from the Ministry of Local Government, Urban and Rural Development, the respective District Authorities, and the relevant traditional Chiefs prior to the start of the survey. On entering a village, we marked the first household and then we interviewed every third household to give us a good coverage of the community.

A questionnaire was given to the household head or in the absence of the household head, an adult family member of 18 or more years of age. We first obtained informed consent from all individuals who were interviewed. Each questionnaire took approximately 20 to 30 minutes to complete. Questionnaires were administered with the help of local interviewers who had secondary education and were trained on how to collect data. Data were collected from July 2013 to February 2014. A total of 1,000 questionnaires were issued to sampled households in the four communities, and 938 usable questionnaires were returned, a 93% response rate. The respondents' socio-demographic profiles are shown in Table 6.2.

Table 6.2: Socio-demographic profiles of respondents. Values are numbers of respondents, and percentages in parenthesis; N: sample size.

Demographics	Community				Overall N=938
	Umfurudzi N=74	Gonarezhou N=278	Matusadona N=281	Cawston Ranch N=305	
<i>Gender</i>					
Male	44(59.5)	181(65.1)	147(52.3)	169(55.4)	541(57.7)
Female	30(40.5)	97(34.9)	134(47.7)	136(44.6)	397(42.3)
<i>Age(years)</i>					
18-25	15(20.3)	44(15.8)	71(25.3)	47(15.4)	177(18.9)
26-35	20(27.0)	70(25.2)	95(38.8)	52(17.0)	237(25.3)
36-45	19(25.7)	52(18.7)	68(24.2)	62(20.3)	201(21.4)
46-55	6(8.1)	29(10.4)	15(5.3)	57(18.7)	107(11.4)
56-65	7(9.5)	54(19.4)	18(6.4)	52(17.0)	131(14.0)
66-75	6(8.1)	25(9.0)	12(4.3)	27(8.9)	70(7.5)
76+	1(1.4)	4(1.4)	2(0.7)	8(2.6)	15(1.6)
<i>Highest level of education</i>					
No formal education	8(10.8)	88(31.7)	28(10.0)	35(11.5)	159(17.0)
Primary education	22(29.7)	106(38.1)	164(58.4)	150(49.2)	442(47.1)
Secondary education	43(58.1)	74(26.6)	83(29.5)	108(35.4)	308(32.8)
Adult education	1(1.4)	6(2.2)	2(0.7)	4(1.3)	13(1.4)
College diploma	0(0.0)	4(1.4)	3(1.1)	4(1.3)	11(1.2)
University graduate	0(0.0)	0(0.0)	1(0.4)	4(1.3)	5(0.5)
<i>Number of years stayed in the village</i>					
<2	4(5.4)	0(0.0)	7(2.5)	28(9.2)	39(4.2)
3-10	14(18.9)	16(5.8)	31(11.0)	73(23.9)	134(14.3)
11-20	22(29.7)	69(24.9)	43(15.3)	196(64.3)	330(35.2)
21-30	9(12.2)	63(22.7)	79(28.1)	2(0.7)	153(16.3)
31-40	22(29.7)	47(17.0)	64(22.8)	4(1.3)	137(14.6)
41-50	2(2.7)	21(7.6)	28(10.0)	1(0.3)	52(5.5)
51+	1(1.4)	61(22.0)	29(10.3)	1(0.3)	92(9.8)
<i>Household size</i>					
<5	29(39.2)	97(34.9)	159(56.6)	119(39.0)	404(43.1)
6-10	36(48.6)	120(43.2)	94(33.5)	131(43.0)	381(40.6)
10+	9(12.2)	61(21.9)	28(10.0)	55(18.0)	153(16.3)
<i>Total number of livestock</i>					
< 5	20(27.0)	109(39.5)	194(69.0)	162(53.1)	485(51.7)
6-10	29(39.2)	83(30.1)	57(20.3)	69(22.6)	238(25.4)
11-15	13(17.6)	29(10.5)	12(4.3)	30(9.8)	84(9.0)
16-20	7(9.5)	19(6.9)	6(2.1)	18(5.9)	50(5.3)
21-25	1(1.4)	11(4.0)	2(0.7)	12(3.9)	26(2.8)
26-30	0(0.0)	10(153.6)	2(0.7)	8(2.6)	20(2.1)
30+	4(5.4)	15(5.4)	8(2.8)	6(2.0)	33(3.5)
<i>Level of income per year</i>					
< US\$1000	55(74.3)	228(82.0)	271(96.4)	270(88.5)	824(87.8)
US\$1000-\$2000	12(16.2)	28(10.1)	6(2.1)	22(7.2)	68(7.2)
US\$2001-\$3000	2(2.7)	12(4.3)	1(0.4)	3(1.0)	18(1.9)
US\$3001-\$4000	1(1.4)	1(0.4)	0(0.0)	5(1.6)	7(0.7)
US\$4001-\$5000	1(1.4)	4(1.4)	1(0.4)	0(0.0)	6(0.6)
US\$5001-\$6000	2(2.7)	2(0.7)	0(0.0)	1(0.3)	5(0.5)
US\$6000+	1(1.4)	3(1.1)	2(0.7)	4(1.3)	10(1.1)

Note: Adult education refers to activities that are intentionally designed for the purpose of bringing about learning among people whose age, social roles, or self-perception define them as adults (Merriam and Brockett, 1997).

Respondents were asked to indicate the extent they agreed with the given statements concerning their perceptions of tourism and conservation on a seven-point Likert scale ranging from “strongly disagree” to “strongly agree”. The seven-point Likert scale was used to prevent people from being too neutral in their responses (Colman *et al.*, 1997). Seven carefully thought out items (statements) rated community perceptions of tourism, and six items rated community perceptions of conservation (Table 6.3).

Table 6.3: Scale items for rating community perceptions on wildlife conservation and tourism.

Scale items for rating community perceptions on wildlife conservation		Scale items for rating community perceptions on tourism	
Item No	Statement	Item No	Statement
1	It is important to protect plants and trees in the Park	1	I would be happy to see more tourists here
2	It is important to protect wild animal species in the Park	2	I would be happy if my children worked in the tourism industry
3	People who poach should be punished	3	Tourism benefits the whole community
4	It is good this land is protected	4	My family has more money because of tourism
5	I think the Park was created for the betterment of the community	5	Because visitors want to experience our culture, tourism strengthens our cultural tradition
6	I am happy that my village borders the Park	6	Tourists respect our culture and traditions
		7	Tourism offers financial opportunities for me that have adequately offset my losses from conservation

6.2.3 Data Analysis

Data were summarised using descriptive statistics, and we used the mode to determine the scores that occurred most frequently in the data sets and the range to quantify the dispersion of scores in the data (Field, 2009), since the data were not normally distributed. We used the Kruskal-Wallis Analysis of Variance (ANOVA) to test whether there were significant differences in community perceptions of conservation and of tourism among the four communities. Where there were differences, post-hoc examination of the mean ranks was done to determine the differences (Pallant, 2001). Spearman’s correlation coefficient was used to establish socio-demographic factors that influence community perceptions of

wildlife conservation and tourism using the Statistical Package for the Social Sciences (SPSS) Version 20.0 (Oviedo-García *et al.*, 2014). To determine the scale’s internal consistency, the scales were tested for reliability using the Cronbach’s alpha coefficient (α). The scales’ reliability ranged from 0.60 to 0.79 in all the communities. These reliability results were all acceptable as the recommended value for α is 0.70, and 0.60 (Nunnally, 1978) for new measures.

6.3 Results

6.3.1 Community perceptions of conservation

Community views on conservation were neutral in Gonarezhou and positive in Umfurudzi, Matusadona and Cawston Ranch (Table 6.4).

Table 6.4: Differences and similarities in community perceptions of conservation in Umfurudzi Park, Gonarezhou NP, Matusadona NP and Cawston Ranch in Zimbabwe. Values are the mode and range in parenthesis. Rating scale: 1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neither disagree nor agree, 5=somewhat agree, 6=agree, 7=strongly agree. N: sample size; df: degrees of freedom. Values with different superscript letters within rows differ significantly (Kruskal-Wallis ANNOVA test specific comparisons; $P < 0.05$).

Conservation perception	Study site				N	df	Kruskal-Wallis	P value
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch				
It is important to protect plants and trees in the Park	7(6) ^b	7(6) ^a	7(6) ^b	7(6) ^a	938	3	42.67	<0.001
It is important to protect wild animal species in the Park	7(6) ^b	7(6) ^a	7(6) ^b	7(6) ^a	938	3	58.46	<0.001
People who poach should be punished	7(6)	7(6)	7(6)	7(6)	938	3	6.84	0.077
It is good this land is protected	7(6) ^b	1(6) ^a	7(6) ^c	7(6) ^c	938	3	103.69	<0.001
I think the Park was created for the betterment of the community	1(6) ^b	1(6) ^a	7(6) ^c	7(6) ^b	938	3	177.98	<0.001
I am happy that my village borders the Park	1(6) ^b	1(6) ^a	7(6) ^c	1(6) ^b	938	3	75.86	<0.001
Overall	7(1)	4(1)	7(0)	7(1)	-	-	-	-

Despite all the communities having the same mode and range for the first two scale items, i.e., 7 and 6 respectively, which indicated positive perceptions towards the protection of plants and wild animals, Kruskal-Wallis ANOVA test results indicated significant differences in the perceptions.

6.3.2 Community perceptions of tourism

Community perceptions of tourism were generally negative in all the four communities (Table 6.5).

Table 6.5: Differences and similarities in community perceptions of tourism in Umfurudzi Park, Gonarezhou NP, Matusadona NP and Cawston Ranch in Zimbabwe. Values are the mode and range in parenthesis. Rating scale: 1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neither disagree nor agree, 5=somewhat agree, 6=agree, 7=strongly agree. N: sample size; df: degrees of freedom. Values with different superscript letters within rows differ significantly (Kruskal-Wallis ANNOVA test specific comparisons; $P < 0.05$).

Tourism perception	Study site				N	df	Kruskal-Wallis	P value
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch				
I would be happy to see more tourists here	1(6) ^a	1(6) ^a	7(6) ^b	7(6) ^a	938	3	61.05	<0.001
I would be happy if my children worked in the tourism industry	7(6) ^b	7(6) ^c	7(6) ^c	7(6) ^a	938	3	115.54	<0.001
Tourism benefits the whole community	1(6) ^a	1(6) ^a	7(6) ^c	1(6) ^b	938	3	155.04	<0.001
My family has more money because of tourism	1(6) ^a	1(6) ^a	1(6) ^b	1(6) ^b	938	3	74.77	<0.001
Because visitors want to experience our culture, tourism strengthens our cultural tradition	1(6) ^a	1(6) ^b	1(6) ^c	1(6) ^b	938	3	47.76	<0.001
Tourists respect our culture and traditions	1(6) ^a	1(6) ^b	1(6) ^c	1(6) ^b	938	3	24.44	<0.001
Tourism offers financial opportunities for me that have adequately offset my losses from conservation	1(6) ^a	1(6) ^a	1(6) ^b	1(6) ^b	938	3	46.40	<0.001
Overall	1(1)	1(1)	1(1)	1(1)	-	-	-	-

Despite all the communities having the same mode and range for the second scale item, i.e., 7 and 6 respectively, which indicated positive perceptions of their children working in the tourism industry, Kruskal-Wallis ANOVA test results indicated significant differences in the perceptions. Scale items 4 to 7 were also found to be significantly different despite all communities strongly disagreeing with the statements.

6.3.3 Relationship between socio-demographic factors and wildlife conservation, and tourism perceptions

We recorded variable correlations between socio-demographic factors and community perceptions of wildlife conservation and tourism among the different study communities. There was a strong correlation between age and community perceptions of wildlife conservation for Umfurudzi community; a strong correlation between level of education and community perceptions of wildlife conservation for Cawston Ranch community; and a strong correlation between number of years stayed in the village and community perceptions of wildlife conservation for Gonarezhou community (Table 6.6).

A strong correlation was recorded between gender and community perceptions of tourism for Umfurudzi and Gonarezhou communities. Similarly, there was a strong correlation between age and community perceptions of tourism for Umfurudzi and Matusadona communities. A strong correlation was also recorded between number of years stayed in the village and community perceptions of tourism for Gonarezhou and Cawston Ranch communities. Lastly, a strong correlation was recorded between total number of livestock and community perceptions of tourism for Umfurudzi and Cawston Ranch communities (Table 6.6).

Table 6.6: Relationship between socio-demographic factors and wildlife conservation, and tourism perceptions. Values are Spearman’s rho correlation coefficient (r); n.s. = not significant ($p>0.05$).

Socio-demographic factors	Communities			
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch
Community perceptions of wildlife conservation				
Gender	$r = -0.14$ n.s.	$r = 0.11$ n.s.	$r = 0.10$ n.s.	$r = 0.07$ n.s.
Age	$r = 0.25$ $p < 0.05$	$r = 0.01$ n.s.	$r = 0.08$ n.s.	$r = -0.02$ n.s.
Level of education	$r = 0.11$ n.s.	$r = -0.01$ n.s.	$r = 0.03$ n.s.	$r = 0.22$ $p < 0.001$
Number of years in village	$r = 0.18$ n.s.	$r = 0.21$ $p < 0.001$	$r = 0.11$ n.s.	$r = -0.04$ n.s.
Household size	$r = -0.18$ n.s.	$r = 0.05$ n.s.	$r = -0.04$ n.s.	$r = 0.00$ n.s.
Number of livestock	$r = 0.17$ n.s.	$r = -0.07$ n.s.	$r = 0.04$ n.s.	$r = 0.05$ n.s.
Level of income	$r = 0.06$ n.s.	$r = -0.07$ n.s.	$r = -0.03$ n.s.	$r = 0.06$ n.s.
Community perceptions of tourism				
Gender	$r = -0.29$ $p < 0.05$	$r = -0.06$ $p < 0.01$	$r = 0.09$ n.s.	$r = 0.09$ n.s.
Age	$r = 0.24$ $p < 0.05$	$r = 0.02$ n.s.	$r = 0.12$ $p < 0.05$	$r = -0.02$ n.s.
Level of education	$r = 0.02$ n.s.	$r = -0.01$ n.s.	$r = -0.04$ n.s.	$r = 0.09$ n.s.
Number of years in village	$r = 0.17$ n.s.	$r = 0.33$ $p < 0.001$	$r = 0.06$ n.s.	$r = -0.18$ $p < 0.01$
Household size	$r = -0.08$ n.s.	$r = 0.01$ n.s.	$r = 0.04$ n.s.	$r = -0.04$ n.s.
Number of livestock	$r = 0.29$ $p < 0.05$	$r = -0.11$ n.s.	$r = 0.04$ n.s.	$r = 0.17$ $p < 0.01$
Level of income	$r = 0.18$ n.s.	$r = -0.07$ n.s.	$r = -0.02$ n.s.	$r = 0.03$ n.s.

6.4 Discussion

6.4.1 Perceptions of wildlife conservation and influence of socio-demographic factors

Our results show that communities had mixed perceptions of wildlife conservation and concur with those of Gandiwa *et al.* (2014b), who reported mixed perceptions of conservation in Gonarezhou. This may indicate that the communities generally understand the importance of wildlife conservation regardless of previously recorded cases of human-wildlife conflict (Matema and Andersson, 2015, Muboko *et al.*, 2014a, Gandiwa *et al.*, 2013b) and limited access to natural resources (Fischer *et al.*, 2011), which are believed to

trigger negative perceptions of conservation (Snyman, 2012, Gadd, 2005). By agreeing to most of the statements that measured their perception of conservation, the communities showed an appreciation of conservation. Similar findings were reported by Tessema *et al.* (2007) in their study of four PAs in Ethiopia, and Mehta and Heinen (2001) for communities around two PAs in Nepal, contrary to other communities who were found to be less positive towards conservation, e.g., in Lake Mburo National Park, Uganda (Infield and Namara, 2001) and Cross River National Park in Nigeria (Ite, 1996). While the Umfurudzi, Gonarezhou and Cawston Ranch communities may have been generally positive in their perceptions of conservation, they did not appreciate the fact that their villages bordered the PAs. This is likely due to the costs they incurred from living closer to PAs, e.g., loss of crops and livestock due to wildlife depredation (Gandiwa *et al.*, 2013a, Gadd, 2005). This concurs with Marcus (2001)'s study of the Madagasy community, Madagascar, which, while generally being happy that the park had been created, did not want it in their proximity.

We found that gender has no effect on community perceptions of conservation, as did Kideghesho *et al.* (2007) who reported that in Western Serengeti, Tanzania, gender had no effect on community perceptions of conservation. Perhaps because men and women enjoy the same benefits from wildlife resources and suffer the same costs from wildlife depredation, they tend to share the same views on conservation, although Kaltenborn *et al.* (1999), and Kaltenborn and Bjerke (2002) found that gender affects community perceptions on conservation. Concerning age and conservation perceptions, our results concur with Tessema *et al.* (2007) and Snyman (2012), who found a significant positive correlation between age and conservation perceptions, likely because as people get older, they become more understanding and tolerant. Younger people, who are more involved in poaching (Mutanga *et al.*, 2015) and, have constant battles with conservation authorities, therefore have negative perceptions of conservation. However, according to Shibia (2010), younger community members are more positive about conservation and tourism than older community members because they are usually more educated and understand conservation issues better. Similar to our study, Kaltenborn *et al.* (1999) and Kideghesho *et al.* (2007) report that community members with higher levels of education have more positive perceptions of PAs and conservation than those with lower levels of education.

Kideghesho *et al.* (2007) suggest that better educated residents have access to better employment, providing alternative livelihood strategies that reduce dependency on resources from PAs for survival.

Concerning the number of years stayed in the village, our results concur with Mehta and Heinen (2001) and Arjunan *et al.* (2006) who found that length of residency affects conservation perceptions, perhaps because the longer people stay in a village, the more accustomed they become to the place and to the environment. King (2007), however, found that in South Africa, many of the new residents in the Mzinti community were less dependent on the natural resources and therefore had more positive perceptions of conservation than older residents. Contrary to Tessema *et al.* (2007), who found that larger families value PAs more than smaller families, and Snyman (2012), who argues that household size has no significant effect on attitudes towards conservation, our results indicate that, overall, household size had a significant negative correlation with conservation perceptions. We suggest that larger families would require more resources from the PAs that are no longer allowed and therefore may develop negative perceptions towards conservation.

Our study indicates that the number of livestock has no significant correlation with conservation perceptions. However, according to Gadd (2005) and Romañach *et al.* (2011) villagers with large herds of livestock are more negative to PAs and are often less supportive of conservation than those with fewer livestock. Our findings are different likely because greater percentages in each of the four communities (ranging from 66% to 89%) had smaller numbers of livestock, i.e., 10 and below. Contrary to Allendorf *et al.* (2006), our study shows that level of income has no significant correlation with conservation perceptions, likely because in all the four communities, most community members were in the same income category, with the greatest percentage of villagers (ranging from 74% to 96%) earning less than US\$1,000 per annum.

6.4.2 Perceptions of tourism and the influence of socio-demographic factors

Community perceptions of tourism were generally negative in all study areas, likely because none of the communities appreciated the fact that they received no financial benefits from tourism. Elsewhere, in a study by Mutanga *et al.* (2013b) residents around

Mana Pools National Park, Zimbabwe, were found to have negative perceptions of tourism attributed to lack of financial benefits. Connelly-Kirch (1982) suggests that those communities that benefit from tourism usually have positive perceptions of tourism. We found that most respondents in Umfurudzi and Gonarezhou would not be happy to see more tourists in their areas, whereas those in Matusadona and Cawston Ranch would be happy to see more tourists, likely because of the benefits Matusadona and Cawston Ranch get from the PAs. Our results showed negative perceptions of tourism by all the communities, most likely influenced by the need to protect their local culture. In Nadi, Fiji, King *et al.* (1993) also attributed the negative perception by the community to the desire to protect their culture. However, some studies point in the direction of tourism being irrelevant as a factor of strong or weak local culture. For example, Bruner (2001) postulated that if local populations can "stage" their own cultures for tourist consumption and benefit materially from it, they do not really worry too much about the encounters with tourists. Of more importance are issues of ownership of the tourist activities.

Contrary to Snyman (2012), our results showed no significant correlations between community perceptions of tourism and levels of education, household sizes, or levels of income in all four communities. Regardless of their level of education, household size, and level of income, all the community members resented the lack of financial benefits from tourism. Also contrary to Snyman (2012), our results showed a significant correlation between gender and tourism, likely because the employment opportunities created through tourism development mostly tend to favor women (Nyaupane *et al.*, 2006). Concerning age, our results concur with He *et al.* (2008) in their case study of Wolong nature reserve for giant pandas in China, where perceptions of tourism are affected by age. Mutanga *et al.* (2013b) suggest that older people's perceptions could stem from deep-rooted memories of the losses they incurred as the park evolved, including loss of land and detachment from traditional ceremonies and sacred places. In Gonarezhou, our results showed a positive correlation between number of years stayed in the village and tourism perceptions. As with the conservation perceptions, this could also be because the longer people stay in a village, the more accustomed they become to the place and the better they adapt to the environment.

We found that perceptions of conservation were generally positive while perceptions of tourism were generally negative in all four communities. Our study, in line with the general suggestions for Biosphere Reserves (UNESCO, 1996), concludes that the PAs in question have not adequately assessed the interests of the various stakeholders and therefore have not fully involved them in planning and decision-making for the management and use of the PAs. Moreover, although PAs play an important role in the conservation and sustainable utilisation of the natural resources (Figure 6.2), some communities adjacent to these PAs enjoy few benefits. We conclude that the benefits from the sustainable utilisation of natural resources have not been fairly shared among stakeholders in some communities.

Because our study was conducted soon after the economic decline in Zimbabwe, community perceptions of wildlife conservation and tourism may differ from other, more stable countries, which limits generalising our results. However, we provide important insights of perceptions following disasters. Our study looked only at national parks and safari areas and adjacent areas. We suggest that future studies should consider other PA categories such as recreational parks, sanctuaries, and botanical reserves, as these may have different impacts on community perceptions due to the non-availability of large carnivores and herbivores.



a



b



c

Figure 6.2: Typical tourism adventure, attractions and wildlife conservation in southeast Zimbabwe; (a) Tourism safari, (b) Chilojo Cliffs in Gonarezhou National Park, and (c) A tower (herd) of giraffe (*Giraffa camelopardalis*) in Malilangwe Wildlife Reserve adjacent to Gonarezhou National Park. Photo credits: Gonarezhou Conservation Project and Patience Gandiwa.

6.5 Implications for conservation

Our findings point to the fact that it will be beneficial for PAs to provide incentives to communities that encourage the conservation and sustainable use of natural resources as well as develop alternative means of livelihood for local populations, especially from tourism. Furthermore, since perceptions are regarded as attitude-forming processes (Allendorf *et al.*, 2012), it is important that conservation agencies direct more effort to changing negative perceptions (Simelane *et al.*, 2006) that easily become negative attitudes. Based on our findings, we recommend the following: (1) conservation agencies should nurture positive perceptions and address the possible determinants of negative perceptions in order to improve community appreciation of conservation; (2) conservation agencies need to enhance community involvement and benefits from tourism by establishing links between community support and conservation for more successful

planning; and (3) conservation agencies need to consider community heterogeneity in their conservation planning and community relationship management initiatives.

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CHAPTER 7: Travel motivation and tourist satisfaction with wildlife tourism experiences in Gonarezhou and Matusadona National Parks, Zimbabwe‡‡

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Abstract

We investigated tourist motivation for visiting two African state protected areas, tourists' wildlife tourism experiences, predictors of wildlife tourism experiences and overall satisfaction with entire holiday or trip experience. Data were collected in Gonarezhou and Matusadona National Parks, Zimbabwe, in December 2015 using 128 questionnaire surveys. Tourists' push factors for visiting national parks were 'recreation and knowledge seeking', 'appreciating wildlife' and 'feeling close to nature'. Pull factors for the two parks were largely similar with common factors being abundance of wildlife in the park, availability of different animal species, availability of different plant species, wilderness, beautiful landscape and peaceful/quiet environment. We established that different motivation factors had different influences on wildlife tourism experiences. Satisfaction with wildlife tourism experiences was predicted by experiences with wildlife interaction and satisfaction with prices charged in the parks, while overall satisfaction with the entire holiday/trip experiences was predicted by satisfaction with wildlife tourism experiences, enhanced by interpretation and interaction with wild animals. The study highlights that while understanding tourist motivations is important, it is also beneficial for park planning and management to understand the predictors of good wildlife tourism experiences. We recommend that marketing for the two parks need to consider the tourist heterogeneity and demographic-based needs in the development of different travel products and promotional programs.

Key words: experiences, interpretation, interaction, motivation, national park, satisfaction, wildlife tourism

7.1 Introduction

Tourism is widely considered one of the world's largest and rapidly growing industries (Jarvis *et al.*, 2016, Murphy, 2013). Nature-based tourism directly depends on natural resources in a relatively undeveloped state, including scenery, water features, vegetation, and wildlife (Job and Paesler, 2013). Wildlife tourism is a form of nature-based tourism dependent on encounters with non-domesticated animals and includes both non-consumptive activities such as viewing, photography and feeding the animals (Reynolds and Braithwaite, 2001), and consumptive activities such as sport hunting, capturing and fishing (Lovelock, 2008). Thus, in wildlife tourism, wild animals are important for the experience (Ballantyne *et al.*, 2011). Such experiences are increasingly becoming part of organised tourism that contributes substantially to the economies of many countries.

In economic terms, many countries in sub-Saharan Africa have benefitted from strong growth in their tourism sector in recent years (UNWTO, 2015). Nature-based tourism and visitation of protected areas can generate positive impacts to the local, regional, and national economies (Job and Paesler, 2013). Wildlife tourism, which takes place mainly in protected areas (Reynolds and Braithwaite, 2001), secures sustainable economic benefits while supporting wildlife conservation and local communities (Naidoo *et al.*, 2016, Manfredo, 2002). Although information on how often people visit protected areas is generally limited, a study by Balmford *et al.* (2015) revealed that tourist visit rates are estimated to be lowest in Africa and Latin America and greatest in North America. Some of the factors that influence tourist visitation of protected areas are remoteness and natural attractiveness (Balmford *et al.*, 2015). Protected areas are believed to be powerful attractions for tourists, major foreign currency earners, and constitute an important part of the tourism industry, especially in Africa (Chikuta, 2015, Job and Paesler, 2013). Bateman (2011) argue that enjoyment of nature especially in protected areas is recognised as the most important cultural ecosystem service. Ethno-tourism is a value added attraction to tourists who visit protected areas most of whom are interested in witnessing or learning about a culture different from their own (Vidal, 2012). Ethno-tourism is therefore an important component of tourist experiences (Armenski *et al.*, 2011).

The framework for this study is based on the tourism system model which was first developed by Leiper in 1979 and later updated in 1990 (Leiper, 1990, Leiper, 1979). The system has three elements: (i) the human element (tourist), (ii) the geographical element comprising the generating region, the destination region and the transit, and (iii) the industrial

element. The tourist or human element consists of people travelling away from home in search for satisfying leisure related activities. The tourist generating region is the location of the basic market of the tourist industry and the source of potential tourism demand. The transit routes are paths that link tourist generating regions with tourist destination regions along with tourist travel. Tourist destination regions are locations which attract tourists to stay temporarily and consist of many parts of the tourist business like accommodation establishments, services, entertainment and recreational facilities. Finally, the industrial element refers to firms, organisations and facilities intended to serve the specific needs and wants of tourists and includes marketing, transport, accommodation and attractions.

7.2 Literature review

7.2.1 Tourist motivation for visiting protected areas

Motivation is defined by many researchers as referring to the psychological needs and wants, that provoke, direct, and integrate a person's behaviour and activity (Pearce, 2013, Uysal and Hagan, 1993). Tourism motivation refers to the set of needs which influence a person to partake in a tourism activity (Meng *et al.*, 2008). Tourism motivation can be classified into push and pull factors (Park and Yoon, 2009, Yoon and Uysal, 2005). Push factors influence tourists to travel, whereas pull factors attract them to a given destination once the decision to travel has been made (Mehmetoglu, 2012). Push motivations are thus related to the tourists' desire, while pull motivations are associated with the attributes of the destination (Hsu *et al.*, 2009). Dann (1977) argues that the tourist generating region has the basic geographical setting, together with the necessary behavioural factors pertaining to motivation called the push factors. Push factors thus encourage individuals to move away from their home settings through tourism, for example, the need to escape, self discovery, relaxation, prestige, challenge, income and adventure. Contrastingly, the destination region, which is the attraction, can be regarded as the anticipation by the tourists of some qualitative characteristics lacking in the tourist generating region, which the tourist wishes to experience personally known as the pull factors. Examples of pull factors include scenic beauty, climate, history, culture and sports. Leiper (1979) defines tourist attractions as sights, events and facilities orientated to experiential opportunities for tourists. A tourist attraction is a system that comprises three elements: a tourist or human element, a nucleus or central element and a marker or informative element (Leiper, 1990).

Eagles (2001) point out that the name national park is closely associated with nature-based tourism and has a stronger effect on tourists than other protected area labels (Reinius

and Fredman, 2007). Area protection status has been found to matter to tourists, and it affects the decision to visit the area. While different protected area labels function as touristic markers, the name national park has a stronger effect on tourists than other protected area labels (Reinius and Fredman, 2007). A number of authors argue that the name national park has a significant brand identity and thus is more attractive than less-known names like conservation area (e.g., Nolte, 2004, Eagles, 2001). This study takes national parks as the nucleus or central elements that tourists consider visiting or actually visit and where tourist experiences are created, experienced and consumed (Leiper, 1990).

As countries and destinations strive to increase their share of the international and national tourism market, it becomes important to understand why people travel and why they choose a specific destination (Kamri and Radam, 2013). Motivation functions as a trigger for travel behaviour and determines the reasons for travelling, specific tourism destinations, as well as tourists' overall satisfaction with the trip (Scholtz *et al.*, 2013). In order to adequately provide a tourism experience for visitors, it is important to identify their motivations for travel (Beh and Bruyere, 2007). Tourists have different motives for visiting different attractions and/or destinations, e.g., nature and activities (Chikuta *et al.*, 2017), culture (Goeldner and Ritchie, 2006a), relaxation (Yoon and Uysal, 2005), nostalgia (Van Der Merwe and Saayman, 2008), novelty (Mehmetoglu, 2012), escape from routine (Kim and Ritchie, 2012), education (Bansal and Eiselt, 2004), and family togetherness (Yoon and Uysal, 2005). A person can be motivated to travel by more than one motive at a time (Yuill, 2004).

Motivations that are met or fulfilled tend to lead to good wildlife tourism experiences while those that are not met usually lead to bad wildlife tourism experiences. Examples of motivations that lead to good experiences includes being in a natural environment or beautiful scenery, seeing animals closely, seeing a variety of animals, and learning more about wildlife. Contrastingly, motivations that are not fulfilled, for example, seeing no or few animals, and not learning or learning few new things, often lead to bad or worst experiences (Fredline and Faulkner, 2001). Good wildlife tourism experiences are memorable experiences which will shape the tourist's subsequent attitudinal evaluations of the destination in a positive manner, e.g., recommendation to others who are potential tourists, whereas bad wildlife tourism experiences are disappointing tourist experiences which will shape the tourist's subsequent attitudinal evaluations of the destination in a negative manner, e.g., discouragement to others who are potential tourists.

7.2.2 Wildlife tourism experience

Wildlife experience is considered an extremely important reason to visit the national parks (Scholtz *et al.*, 2013, Kruger and Saayman, 2010, Saayman and Saayman, 2009) and is mainly enhanced through activities like wildlife interpretation and interaction with wild animals in their natural habitats (Oh and Hammitt, 2010). National parks, which are synonymous with wildlife, supply an important part of wildlife tourism experience through learning about and interacting with different kinds of animals which may include charismatic species like the big five in Africa (Kamri and Radam, 2013). Visitors are also attracted to visit national parks because of the natural surrounding and the environmental benefits that they can offer. The most common recreation facilities provided in parks range from easy strolls to hiking in parks on trails. Natural or built up trails provide an opportunity for visitors to explore the natural areas hence improving their tourism experiences (Oh and Hammitt, 2010).

7.2.2.1 Wildlife interpretation

Tourists, who have become more sophisticated in their demands are now more concerned about having a meaningful experience which includes learning and understanding about flora and fauna, ecosystems and nature in general, as well as its conservation (Eagles *et al.*, 2002). This means more emphasis on interpretation as an integral part of visitor experience at various tourists sites including national parks is increasingly becoming important (Boemah, 2011, Moscardo, 1999). Interpretation facilitates the process by which meanings move from being taken for granted to being actively engaged (Goldman *et al.*, 2001). This active engagement may result in more memorable experiences as visitors find new meanings in the resources they enjoy. Moscardo (1998), point out that interpretation is important for three reasons, i.e., it expands the tourist's experience and understanding of wildlife; it stimulates interest, promotes learning, guides visitors in appropriate behaviour for sustainable tourism and encourages enjoyment and satisfaction; and finally quality interpretation can enhance visitor satisfaction, and through this can contribute to the commercial viability of tourist operations. Effective interpretation programs have the potential to assist people to better see and identify wildlife and natural wildlife behaviour, which are also factors associated with satisfaction (Moscardo *et al.*, 2001). Boemah (2011) also purports that interpretation plays a significant role in tourism in that it can help to enrich visitors' experience and their cultural and environmental knowledge for the benefit of conservation.

7.2.2.2 Interaction with wildlife

The encounter between the visitor and the wild animals comprises the core of a wildlife tourism experience. There are two main types of wildlife experience, interactions with captive animals (Fernandez *et al.*, 2009) and interactions with free-ranging animals in natural settings (Orams, 1996). Some encounters are passive, basically involving viewing of the animals from some distance, taking photos of wildlife and walking/hiking in the parks while others involve physical contact in the form of feeding, touching or even holding the animals (Fredline and Faulkner, 2001). Active interactions with free animals are often difficult, and in some cases dangerous, therefore such encounters tend to be passive although there are a few exceptions, where wild animals tolerate close human contact, such as swimming with wild dolphins and other marine animals (Fredline and Faulkner, 2001). There has been an increase in demand and opportunities to view wildlife in natural settings or settings that more closely approximate nature (Chalip and Fairley, 2001, Ryan, 1998, Pearce and Wilson, 1995). Getting an opportunity to get closer to the animals is one factor that contributes to tourists enjoyment and satisfaction with the wildlife tourism experience (Davis *et al.*, 1997). According to Reynolds and Braithwaite (2001), quality factors relating to wildlife tourism experiences include authenticity, excitement generated by an experience, uniqueness, duration, species popularity, and whether species are on rare and endangered (species status). The immediate outcomes of experiences are argued to be related to the overall evaluation of the trip, which can be judged through satisfaction or dissatisfaction (Ryan, 2002).

7.2.3 Tourist satisfaction

Satisfaction is defined as a pleasurable feeling of fulfillment resulting from the customer's comparison of product performance to some pre-purchase standard (Oviedo-García *et al.*, 2014). Baker and Crompton (2000) define tourist satisfaction as an individual emotional state after experiencing the trip. Understanding tourist satisfaction is of utmost importance for the tourism industry, especially because of its effect on their future economy (Sadeh *et al.*, 2012, Petrick, 2003). Gursoy *et al.* (2007) also acknowledge the value of tourist satisfaction in determining the success and continued existence of tourism business. This is mainly because tourist satisfaction is a clear measure of how well an organisational product is performing in relation to a set of customer requirements (Hill and Alexander, 2006). Hill and Alexander (2006) further point out that tourist satisfaction can be best achieved if destinations strive to fulfill or even exceed their clients' expectations. Tourist satisfaction is important in marketing a destination as it is used to promote repeat visits to a tourism destination

(Tsiotsou and Vasioti, 2006). The higher the level of satisfaction with the tourism product consumed, the greater the likelihood that tourists will visit that destination again and/or recommend the destination to someone else (Kim *et al.*, 2014). Foster (1999) notes that measuring destination satisfaction involves more than simply measuring the level of satisfaction with the services delivered by individual tourism enterprises. Thus there is need for a much broader, more encompassing means of measuring satisfaction since it is derived from the services and experiences the tourists receive from the various tourism destinations (Yilmaz and Bititci, 2006).

7.2.4 Pricing

A number of authors have reported that perceived price fairness has a significant influence on customer satisfaction (Asadi *et al.*, 2014, Herrmann *et al.*, 2007). Although all price fairness assessments are comparative, Xia *et al.* (2004) note that price comparisons can be explicit or implicit. In explicit comparisons, people compare one price with another price or with a range of prices whereas in implicit scenarios, the comparison may not necessarily be explicitly stated but judgment is rather based on a single price compared to an unspecified but expected lower price (Xia *et al.*, 2004). Customer satisfaction occurs when customers receive equivalent or more value than what they spend (Oliver and Swan, 1989). However, some scholars argue that the influence of price on customer satisfaction is complex mainly because price is an indicator of quality for the customer (Wang *et al.*, 2009, Fornell, 1992). The evaluation of price as an indicator of quality varies from one individual to another as a function of their range or threshold of price acceptance (Campo and Yague, 2009).

7.3 Goal of the study

Tourism performance in Zimbabwe's national parks continues to decline. For Zimbabwean national parks, the importance of area protection as touristic markers seem overshadowed by other pressures beyond the national parks themselves like the political and economic problems in the country (Scoones *et al.*, 2011). This environment makes marketing of the country's national parks more complicated hence understanding the reasons why people travel and choose a specific destination becomes more critical. However, despite this fit, not much effort has been made towards understanding why people visit national parks in Zimbabwe. Much has been documented on travel motives to protected areas in other countries like South Africa (e.g., Du Plessis and Saayman, 2015, Kamri and Radam, 2013, Scholtz *et al.*, 2013). Moreover, a small number of studies have investigated satisfaction with

wildlife tourism opportunities (e.g., Fredline and Faulkner, 2001) with few analysing the relationship between tourist motivation and satisfaction with wildlife tourism experiences (e.g., Pan and Ryan, 2007). Very little is therefore documented about the motives, experiences and satisfaction of wildlife tourists in general, and particularly in Zimbabwe, hence the need for detailed information on tourist motives and experiences with wildlife (Moscardo and Saltzer, 2005).

The objectives of this study were to: (i) establish tourist motivation for visiting national parks and the relationship between socio-demographic variables and travel motivation, (ii) assess wildlife tourists' experiences in national parks and the relationship between socio-demographic variables and wildlife tourists' experiences, (iii) investigate the relationships between tourist motivation and wildlife tourism experiences, and (iv) to determine how experiences with interpretation and interaction with wildlife affect satisfaction with wildlife tourism experiences. The findings of this study will shed some light on how to identify travel motivations that help enhance wildlife tourism experiences and satisfaction. Findings are also intended to compliment the positive associations of the protected area labels.

7.4 The proposed hypothetical model

Fig. 7.1 depicts the hypothetical model where components of the model were selected on the basis of the literature review. Motivations vary and individual attributes such as age, gender, cultural orientation, occupation and level of education influence what motivates tourists' desires and the resulting choices (Jensen, 2015, Jönsson and Devonish, 2008). Understanding the relationship between demographic attributes and motivation is important for marketing purposes and should be considered in predicting variation in tourist motivation to travel (Jönsson and Devonish, 2008). As such, we hypothesise that the relative importance of push motivational forces vary as a function of tourists' socio-demographic characteristics (H_{1a-e}). As in the case of push factors, the relative importance of pull factors also differ as a function of tourists' socio-demographic characteristics (H_{2a-e}).

Uzzell (1984) holds the view that tourists are not motivated by specific qualities of a destination but they match a destination's attributes to their psychological needs. The motivation of the visitors seeking a specific nature experience determine their perception of specific protected areas (Becken and Job, 2014). Travel motivations might influence destination choice, travel modes, travel activities and information sources (Kong and Chang,

2016). As such, with regards to wildlife tourism, travel motivations could also influence wildlife tourism experiences (Fredline and Faulkner, 2001). Interpretation is one of the specific factors that had been identified as major factors influencing the quality of visitor experience (Griffin and Vacaflores, 2004). We therefore hypothesise that there is a positive relationship between push motivation factors and experiences with wildlife interpretation (H₃) as well as a positive relationship between pull motivation factors and experiences with wildlife interpretation (H₅). Similarly, Ham (1992) argues that the most powerful experiences come from direct interaction with the wildlife itself. Based on this argument, we hypothesise that there is a positive relationship between push motivation and experiences with wildlife interaction (H₄) as well as a positive relationship between pull motivation and experiences with wildlife interaction (H₆).

A study by Fredline and Faulkner (2001) revealed that tourism experiences were related to certain socio-demographic factors where tourists who had good experiences with wildlife tended to be older, were mostly from Europe and were on return visits. We therefore hypothesise that experiences with wildlife interpretation vary as a function of tourists' socio-demographic characteristics (H_{7a-e}) and that experiences with wildlife interaction also vary as a function of tourists' socio-demographic characteristics (H_{8a-e}).

Tourist satisfaction with wildlife experience is influenced by a number of factors that include wildlife interpretation which facilitates learning more about wildlife, as well as interaction with wildlife which involves exciting memorable wildlife encounters, natural memorable wildlife encounters, wildlife encounters in natural environments, wildlife encounters with knowledgeable guides, touching wildlife, and seeing an animal for the first time in real life (Moscardo and Saltzer, 2005). Ham (2002) asserts that interpretation is central to any visitors' experience, and has a determining effect on their degree of satisfaction. Based on these arguments we hypothesise that tourists' experiences with interpretation influence their satisfaction with wildlife tourism experiences (H₉). Similarly, we hypothesise that tourists' experiences with wildlife interaction influences their satisfaction with wildlife tourism experiences (H₁₀). Furthermore, the influence of price on customer satisfaction has been widely reported (Asadi *et al.*, 2014, Herrmann *et al.*, 2007, Oliver and Swan, 1989). We thus hypothesise that there is a positive relationship between prices charged in the parks and tourist satisfaction with wildlife tourism experiences (H₁₁). Finally, we hypothesise that there is a positive relationship between satisfaction with wildlife tourism experiences and overall satisfaction with the entire holiday experience (H₁₂).

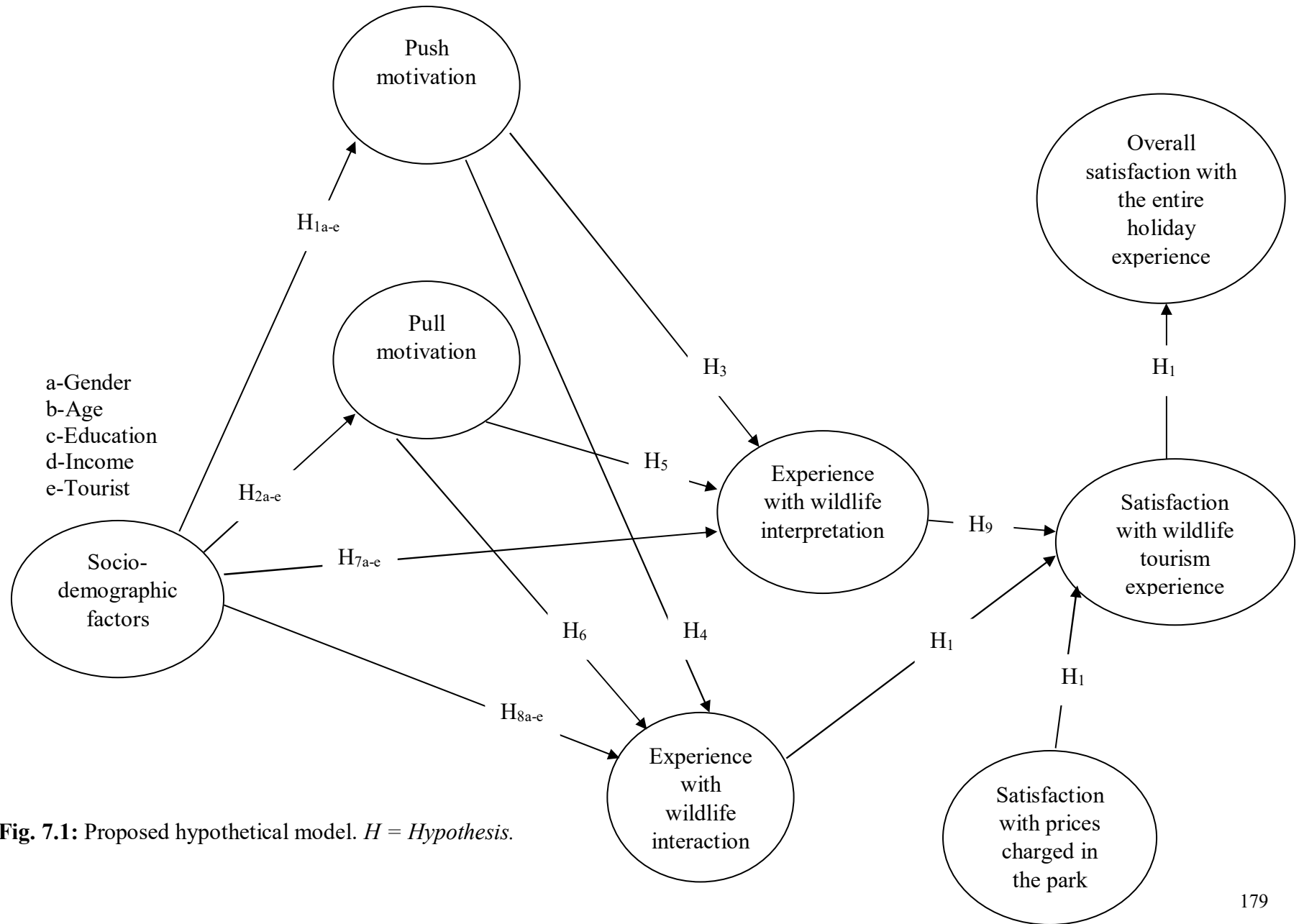


Fig. 7.1: Proposed hypothetical model. *H* = Hypothesis.

7.5 Materials and methods

7.5.1 Study area and study sites

The study was carried out in Zimbabwe at Gonarezhou National Park (GNP) located between 21° 00'–22° 15' S and 30° 15'–32° 30' E (Gandiwa, 2011) and Matusadona National Park (MNP) located between 28° 23'–28° 51' E and 16° 41'–17° 13' S (Muboko, 2015) (Figure 7.2, Table 7.1). The two parks were chosen because GNP is the second largest park in Zimbabwe after Hwange National Park, and MNP is an Intensive Protection Zone (IPZ) and home to several relocated rhinoceros. Moreover, the two parks are wilderness parks critical for biodiversity and as such have diverse wildlife species, abundant wild animals and unique wilderness. The two parks are also part of the recent Transfrontier Conservation Areas (TFCAs) initiatives, i.e. the GNP is part of the Great Limpopo Transfrontier Conservation Area, while MNP is part of the Kavango-Zambezi Transfrontier Conservation Area. TFCAs add value to tourism and biodiversity conservation in Southern Africa as they are an additional important tourist pull factor in remote wilderness areas (Fredline and Faulkner, 2001). The two parks offer a wilderness experience which provides solitude and tranquility compared to commonly visited parks in Zimbabwe, like Hwange National Park, to which tourists are mainly drawn by the Victoria Falls, a World Heritage site. For GNP, the study focused on the northern section, Chipinda Pools.

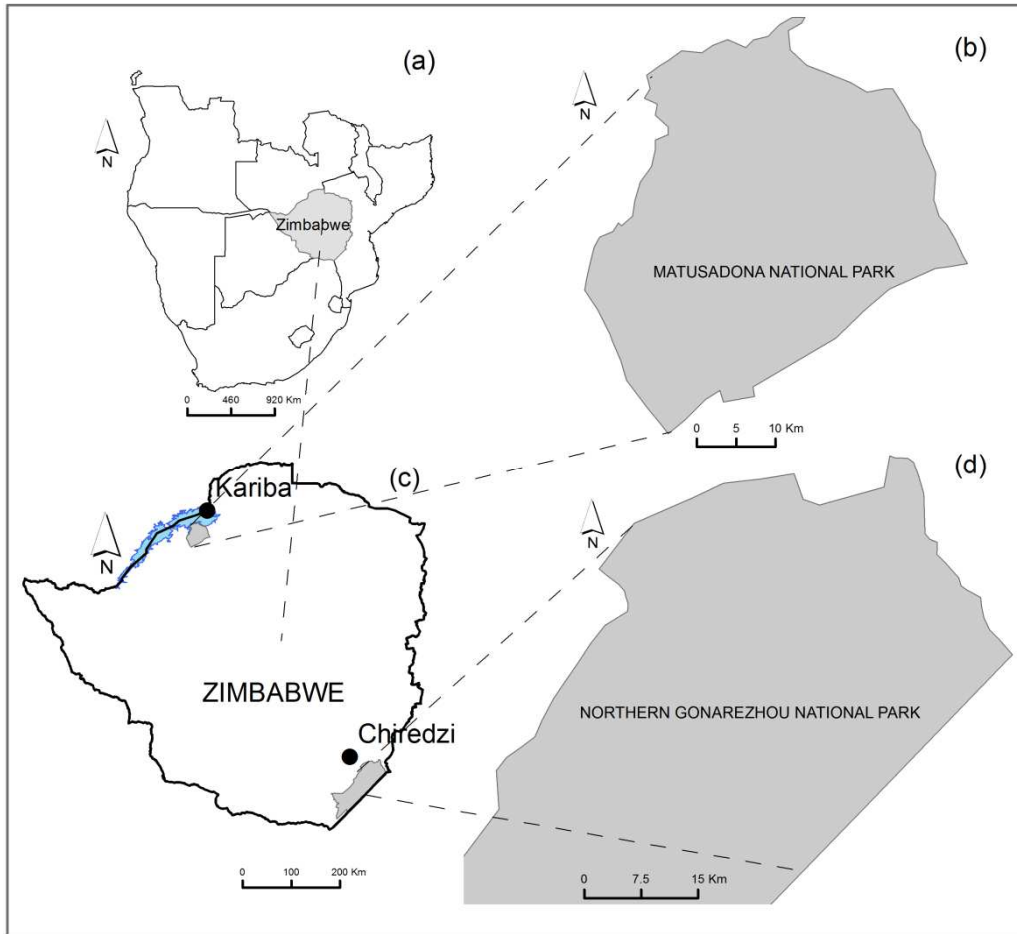


Fig.7.2: Location of the study sites in Zimbabwe. Notes: (a) location of Zimbabwe in southern Africa; (b-d) location and extent of MNP and Northern GNP in Zimbabwe.

Table 7.1: General characteristics of the study protected areas in Zimbabwe

Attributes	Study site	
	Gonarezhou	Matusadona
Status	National Park	National Park
Ownership	Government	Government
Management	Public-private partnership	Public
Year established	1930 as a Game reserve, upgraded to a National Park in 1975	1963 as a Game reserve, upgraded to a National Park in 1975
Size (km ²)	3,000 (for Chipinda Pools only)	1,400
Animal species	Wide variety of both large carnivores and herbivores	Wide range of carnivores and herbivores
Tourism facilities / Accommodation	4 tented camps, 14 ordinary camps & 14 exclusive camps	2 lodges, 20 camp sites
Bed capacity	268	136
Other infrastructure	Roads, view platforms, picnic sites	Roads, view platforms, picnic sites
Average visitor numbers per year (2008 – 2015)	3,914	1,982
Tourist attractions and activities	Waterfalls, cliffs and natural water pans, game viewing, sport fishing, bird watching	Hiking and escarpment climbing, game viewing, sport fishing, bird watching, boating and canoeing safaris
Zoning	Wilderness zone, wild land zone, recreational zone	Wilderness zone, wild land zone, recreational zone
Accessibility	By air through Buffalo Range Airport or by road	By air through Kariba airport, by boat from Kariba or by road

Source: Mutanga *et al.* (2016b)

7.5.2 Data collection

This study employed a quantitative research design using a questionnaire survey. All the measurement instrument variables were developed on the basis of a review of the related literature and were modified to apply to the study objectives and target population. The questionnaire used to collect data consisted of four sections. Section 1 focused on travel motivational factors, where fourteen items (see Appendix 7.1) were measured on a five-point Likert scale ranging from 1 = not important to 5 = very important. The items used to measure motivation were derived from literature (e.g., Kruger and Saayman, 2010, Van Der Merwe and Saayman, 2008) and slightly modified to suit the study. Section 2 measured wildlife tourists' experiences using two constructs: wildlife interpretation and interaction with wildlife which were both assessed using four items each on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Section 3 measured satisfaction with wildlife tourism experiences and overall satisfaction with the entire holiday experience. These were all measured with one item each on a five-point Likert scale ranging from 1 = very dissatisfied to 5 = very satisfied. Although multiple items are commonly used to assess the same construct, facet, or dimension, some researchers have advocated that measures that comprise one item can be almost as effective especially when they are used to represent global

constructs, like satisfaction (Wanous *et al.*, 1997). Finally, section 4 focused on demographic details.

The target population for this study consisted of local and foreign tourists to GNP and MNP during the period of data collection. Based on the average number of tourist numbers to GNP and MNP in the months of December from 2010 to 2014, about 279 ± 53 (mean \pm standard error) tourists were expected to visit GNP, whereas about 117 ± 19 were expected to visit MNP. From the target population, a total of 119 questionnaires were distributed in GNP with 67 valid questionnaires finally being collected (response rate = 56%; sampling intensity = 24%) and 72 were distributed in MNP with 61 valid questionnaires finally being collected (response rate = 85%; sampling intensity = 52%) (Table 2). Following Baruch (1999)'s recommendation that the norm for response rate for surveys maybe about $\pm 60\%$; we considered that our response rates were within acceptable limits. Simple random sampling method was used to allow all tourists who came past the survey points to have an equal chance to be asked for their willingness to take part in the survey (Kamri & Radam 2013). Data were collected in December 2015 and questionnaires were administered with the help of park staff at the park entrances who had received instructions about the objectives of the study, the details of the questionnaires and how to select the respondents and gather the data. Questionnaires written in the English language were given to adults above 18 years of age. As they entered the park, all tourists that formed part of the surveys received a questionnaire at the park entrance or reception that they completed in their own time and had to drop it off at the reception on their way out. The first part of the questionnaire (Section A) was to be completed on or soon after arrival into the park and the second and third parts (Sections B and C) were to be completed just before leaving the park. This was done so to ensure that the constructs motivation, wildlife tourism experiences and satisfaction with wildlife tourism experiences did not influence each other. All the respondents were assured of anonymity and formal consent was obtained from every respondent that participated in the survey.

For the purpose of this study, a 'tourist' is used to refer to both temporary visitors staying at least twenty-four hours as well as visitors staying less than twenty-four hours in the parks since a number of tourists who stay in other establishments within the country often visit the parks as day visitors, and these form a substantial part of total visitors to parks. Tourists were categorised into local, regional and international tourists. Local tourists are those tourists who travel from their normal places of residence but within the same country, regional tourists are those who visit within a defined geographic region, for example the

Southern African Development Community (SADC), and international tourists are those who travel outside their countries of residence usually to another continent (Tureac and Turtureanu, 2010).

Table 7.2: Respondents' demographic profiles. Values are numbers of respondents, and percentages in parenthesis; n: sample size.

Category	GNP n = 67	MNP n = 61
Gender		
<i>Male</i>	28 (42)	31 (51)
<i>Female</i>	39 (58)	30 (49)
Age		
18-25	9 (13)	7 (12)
26-35	15 (22)	17 (28)
36-45	12 (18)	12 (20)
46-55	10 (15)	10 (16)
56 and above	21 (31)	15 (25)
Origin of tourists		
<i>Local</i>	29 (43)	25 (41)
<i>Regional</i>	22 (33)	16 (26)
<i>International</i>	16 (24)	20 (33)
Education		
<i>Primary school</i>	2 (3)	2 (3)
<i>Secondary school</i>	8 (12)	9 (15)
<i>College diploma</i>	18 (27)	22 (36)
<i>University degree or above</i>	39 (58)	28 (46)
Personal income		
>US\$10,000	9 (13)	6 (10)
US\$10,000-US\$20,000	36 (54)	24 (39)
US\$21,000-US\$30,000	15 (22)	26 (43)
<US\$30,000	7 (10)	5 (8)
Number of visits to the park in the last five years		
<i>Once</i>	46 (69)	35 (57)
<i>Twice</i>	13 (19)	14 (23)
<i>Three times</i>	3 (5)	7 (12)
<i>Four times</i>	2 (3)	1 (2)
<i>More than four times</i>	3 (5)	4 (7)

7.5.3 Data analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS) Version 21.0 (SPSS, Inc, Chicago, IL, USA). To determine the push motivation factors, we combined data from the two parks to form one data set. Exploratory factor analysis (EFA) was then employed for the whole data set to determine the underlying dimensions of travel motivations by analysing the patterns of correlations among attributes. Factor analysis has been used successfully to measure travel motivations for example, Kong and Chang (2016), Van deMerwe and Saayman (2008), Scholtz, Kruger and Saayman (2013), and Lee (2009). The variables were subjected to principal components analysis (PCA) using Oblimin with Kaiser

Normalisation rotation (Hair *et al.*, 2010). Oblique rotation was used as there was overlap in variance among factors indicated by correlations above 0.32 (Tabachnick and Fidell, 2007). Prior to performing the PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of 0.40 and above. Most of the factor loadings were greater than 0.60, indicating a good correlation between the items and the factor grouping they belong to (Kozak, 2002). The Kaiser-Meyer-Olkin (KMO) value exceeded the recommended value of 0.60 (Kaiser, 1970) and the Bartlett's Test of Sphericity (Bartlett, 1954) reached statistical significance ($p = 0.000$), indicating the adequacy of the sample and supporting the factorability of the correlation matrix (Tabachnick and Fidell, 2007). To determine the pull motivation factors for each of the two parks, i.e., GNP and MNP, we used the scale values for each of the fourteen destination/park attributes where mean rankings were used to assess the level of importance of the pull motivation factors. We then used Mann-Whitney U tests to determine the differences in mean rankings for the pull motivation factors between the two parks. To establish the relationship between socio-demographic factors and, push and pull motivation factors we used Mann-Whitney U and Kruskal-Wallis H tests.

To determine wildlife tourists' experiences, frequencies were tabulated on a 5-point Likert scale. The mean was used to determine the average value of a set of responses (Field, 2009). Responses 1 to 2 represented bad wildlife tourism experiences; 3 represented neutral wildlife tourism experiences; and 4 to 5 represented good wildlife tourism experiences. We used Mann-Whitney U tests to determine overall differences in tourists' wildlife tourism experiences between GNP and MNP. We also used Mann-Whitney U and Kruskal-Wallis H tests to establish the relationship between socio-demographic factors and wildlife tourists' experiences in both parks.

The ordinal logistic regression was used to investigate: (i) the influence of push motivation factors on tourists' experiences with wildlife interpretation, (ii) the influence of push motivation factors on tourists' experiences with interaction with wildlife, (iii) the influence of pull motivation factors on tourists' experiences with wildlife interpretation for GNP and MNP, (iv) the influence of pull motivation factors on tourists' experiences with interaction with wildlife for GNP and MNP, (v) whether experiences with wildlife interpretation, experiences with interaction with wildlife, and satisfaction with prices charged in the park predicted satisfaction with wildlife tourism experiences, and (vi) whether

satisfaction with wildlife tourism experiences predicted overall satisfaction with the entire holiday/trip experience. For each model, the response variable was an ordinal response measured on a 5-point Likert scale hence the use for ordinal logistic regression. All the ordinal logistic regression models explained a significant amount of the original variability. Pearson and deviance statistics were not significant ($p > 0.05$) for all the ordinal logistic regressions indicating that the models were good fit to the data.

Statistical significance of explanatory variables in the logistic regression models were assessed by likelihood ratio tests (LRTs), which have approximately a chi-square distribution on one degree of freedom for each variable (Fa *et al.*, 2002). Multicollinearity tests were also run to confirm the suitability of the ordinal regression models. Multicollinearity usually results in biased parameter estimates (O'brien, 2007). The degree of multicollinearity was examined using the variance inflation factor (VIF) and the VIF of all included variables ranged between 1.102 and 1.317, which indicates that multicollinearity was not a problem in the estimated models. A VIF value >5 (De Vaus, 2002) or >10 (Neter *et al.*, 1996) is often taken as an indication that multicollinearity may be improperly influencing independent variables.

To ascertain the scale's internal consistency, the scales were tested for reliability using the Cronbach's alpha coefficient (α). Scales for the three push motivation factors were: 0.82 for factor 1 (Recreation and knowledge seeking), 0.78 for factor 2 (Appreciating wildlife) and 0.48 for factor 3 (Feeling close to nature) (see Table 3). For GNP, scales for wildlife interpretation and interaction with wildlife were 0.72 and 0.69, while for MNP they were 0.76 and 0.66 respectively. Although the most commonly-accepted minimum limit for Cronbach Alpha coefficients is 0.70 (Hair *et al.*, 2010), DeVellis (1991) argues that a value of 0.65 or higher indicates a reliable scale, hence, since most of our scales were above 0.65 we concluded that there were internal consistencies among items measured (Kruger and Saayman, 2010) with the exception of factor 3 of the push motivation factors that had a loading of <0.65 . This Alpha values should be interpreted with caution due to the limited number of items that loaded successfully onto the factor and more items should be included in future surveys to address the low value.

7.6 Results

7.6.1 Tourists' motivation for visiting GNP and MNP

7.6.1.1 Push motivation factors

Fourteen items were loaded into three factors, that is, 'recreation and knowledge seeking', 'appreciating wildlife' and 'feeling close to nature'. The most important push motivation factor was 'feeling close to nature', followed by, 'appreciating wildlife' and finally 'recreation and knowledge seeking' (Table 7.3).

Table 7.3: Pattern matrix for tourists' push motivation factors. Rating scale: 1 = not important, 2 = slightly important, 3 = moderately important, 4 = important, 5 = very important.

Factors / items	Factor load	Variance explained	Mean value	Rating in terms of importance	Reliability alpha
Recreation and knowledge seeking		31.03	2.92	3	0.783
Harmonious local community-park relationships	0.81				
Culture, arts and tradition	0.79				
Friendliness of the local people	0.78				
Variety of recreational activities in the park	0.63				
Special events / festivals	0.63				
Convenience of the location	0.53				
Good opportunities to learn more about nature	0.52				
Appreciating wildlife		15.15	4.21	2	0.815
Availability of different animal species in the Park	0.83				
Availability of different plant species in the Park	0.75				
Knowledge of the park	0.74				
Abundance of wildlife in the park	0.69				
Feeling close to nature		9.63	4.73	1	0.482
Wilderness	0.75				
Beautiful landscape	0.68				
Kaiser-Meyer-Okin (KMO)	0.71				
Bartlett's test of Sphericity	658.08(p = 0.000) d.f. = 91				
Cumulative variance explained	55.81%				

7.6.1.2 Pull motivation factors

All the fourteen measured park attributes were important for pulling tourists to both GNP and MNP except for special events which was not an important pull factor for both GNP and MNP, as well as culture, arts and tradition which was also not an important pull factor for MNP (Table 7.4). Significant differences in the importance of attributes as pull factors were recorded for culture, arts and tradition which was a moderately important pull factor to GNP but not important to MNP (Mann-Whitney *U* Test, = 1560.5, $p < 0.05$), and harmonious local community-park relationships which was a highly important pull factor to GNP but moderately important to MNP (Mann-Whitney *U* Test, = 1546.5, $p < 0.05$).

Table 7.4: Mean scores of pull motivation factors in GNP and MNP. Rating scale: 1 = not important, 2 = slightly important, 3 = moderately important, 4 = important, 5 = very important. N = sample size; Mann-Whitney U Test specific comparisons, * $p < 0.05$; ‘a’ indicates high importance, ‘b’ indicates moderate importance, and ‘c’ indicates low importance.

Pull factors	Code	GNP (n = 67)	MNP (n = 61)	N	U value	Z-value
		Mean (Ranking in terms of importance)	Mean (Ranking in terms of importance)			
Abundance of wildlife in the park	A1	4.43 (4) ^a	4.34 (5) ^a	128	1963.0	-0.44
Availability of different animal species in the park	A2	4.31 (5) ^a	4.49 (3) ^a	128	1769.5	-1.47
Availability of different plant species in the park	A3	3.67 (7) ^a	4.02 (6) ^a	128	1719.5	-1.62
Wilderness	A4	4.52 (3) ^a	4.51 (2) ^a	128	2027.0	-0.09
Beautiful landscape	A5	4.75 (1) ^a	4.61 (1) ^a	128	1897.0	-0.91
Knowledge of the park	A6	3.58 (8) ^a	3.64 (8) ^a	128	1937.5	-0.53
Peaceful/quiet environment	A7	4.55 (2) ^a	4.49 (3) ^a	128	2023.0	-0.91
Convenience of the location	A8	3.34 (11) ^b	2.98 (10) ^b	128	1743.5	-1.43
Variety of recreational activities in the park	A9	2.81 (13) ^b	2.66 (12) ^b	128	1907.5	-0.66
Good opportunities to learn more about nature	A10	3.72 (6) ^a	3.70 (7) ^a	128	2034.0	-0.05
Culture, arts and tradition	A11	2.82 (12) ^b	2.23 (13) ^c	128	1560.5	-2.37*
Friendliness of the local people	A12	3.46 (10) ^b	3.00 (9) ^b	128	1721.0	-1.58
Special events / festivals	A13	1.66 (14) ^c	1.49 (14) ^c	128	1817.0	-1.23
Harmonious local community-park relationships	A14	3.57(9) ^a	2.84 (11) ^b	128	1546.5	-2.45*

7.6.1.3 Relationship between socio-demographic factors and push motivation factors

No significant differences were found between different gender groups, educational level groups, income groups and origin groups for all the three push motivation factors. Only age was found to be positively related to two of the push motivation factors, i.e., recreation and knowledge seeking, and appreciating wildlife. An inspection of the mean ranks for the group suggests that the age group of 26-35 years were more pushed by the need for recreation and knowledge seeking, followed by the age group of 36-45 years, with the remaining age groups being least pushed by the need for recreation and knowledge seeking (Table 7.5).

Table 7.5: Relationship between socio-demographic factors and push motivation factors. Z = Mann-Whitney U's Z-value; Chi-Square = Kruskal-Wallis H test Chi-Square (χ^2); other values are the mean ranks for the corresponding groups. Rating scale for motivation factors: 1 = not important, 2 = slightly important, 3 = moderately important, 4 = important, 5 = very important. Values with different superscript letters differ significantly (Kruskal-Wallis H test specific comparisons; * $P < 0.05$, ** $P < 0.01$).

Socio-demographic factors	Recreation and knowledge seeking	Appreciating wildlife	Feeling close to nature
<i>Gender</i>	Z = -0.27	Z = -0.22	Z = -1.23
Male	65.41	63.78	61.33
Female	63.72	65.12	67.21
<i>Age</i>	$\chi^2 = 13.38^*$	$\chi^2 = 17.32^{**}$	$\chi^2 = 3.53$
18-25	55.66 ^c	52.59 ^c	67.47
26-35	80.00 ^a	61.86 ^b	56.98
36-45	73.48 ^b	90.27 ^a	68.17
46-55	55.95 ^c	57.43 ^b	68.25
<55	53.42 ^c	58.89 ^b	65.33
<i>Education</i>	$\chi^2 = 4.89$	$\chi^2 = 2.92$	$\chi^2 = 2.01$
Primary school	37.38	66.50	79.00
Secondary / high school	57.71	68.88	68.15
College diploma	61.10	56.81	61.33
University degree or above	69.87	67.86	64.60
<i>Personal income</i>	$\chi^2 = 1.65$	$\chi^2 = 1.71$	$\chi^2 = 3.19$
>\$10,000	71.03	55.27	62.60
\$10,000–\$20,000	62.76	63.65	65.21
\$21,000–\$30,000	62.00	67.68	67.76
<\$30,000	73.58	69.42	52.21
<i>Tourist origin</i>	$\chi^2 = 5.92$	$\chi^2 = 3.99$	$\chi^2 = 5.14$
Local	67.84	71.51	59.69
Regional	71.09	58.01	72.53
International	52.53	60.83	63.24

7.6.1.4 Relationship between socio-demographic factors and pull motivation factors in GNP

We recorded no significant differences between different gender groups for all the fourteen pull motivation factors. Age was found to be positively related to six of the fourteen pull motivation factors, where the age group of 36-45 years, followed by age groups of 46-55 and 26-35 years were more pulled to GNP by the availability of different plant species in the park (A3), knowledge of the park (A6), convenience of the location (A8), variety of recreational activities in the park (A9), good opportunities to learn more about nature (A10), and harmonious local community-park relationships (A14) than the age groups of 18-25 years and those above 55 years of age (Table 7.6).

Education was found to be positively related to one of the fourteen pull motivation factors, where university degree and college diploma holders were more pulled to GNP by the availability of different animal species in the Park (A2) than their less educated counterparts. Similarly, tourists who earned between US\$21,000 and US\$30,000 as well as

those with an income level above US\$30,000 were more pulled to GNP by the availability of different animal species in the Park (A2) than those who earned less than US\$21,000 (Table 7.6).

Tourists' origin was found to be positively related to six of the fourteen pull motivation factors, i.e., abundance of wildlife in the park (A1), availability of different animal species in the Park (A2), beautiful landscape (A5), good opportunities to learn more about nature (A10), friendliness of the local people (A12), harmonious local community-park relationships (A14). The local tourists were more pulled to GNP by abundance of wildlife in the park especially the availability of different animal species and good opportunities to learn more about nature, as compared to the regional and international tourists. On the other hand, the regional tourists, followed by the international tourists were more pulled to GNP by the beautiful landscape in the park, friendliness of the local people as well as harmonious local community-park relationships (A14) than the local tourists (Table 7.6).

Table 7.6. Relationship between socio-demographic factors and pull motivation factors in GNP. Z = Mann-Whitney U's Z- value; Chi-Square = Kruskal-Wallis H test Chi-Square (χ^2); other values are the mean ranks for the corresponding groups. Rating scale for motivation factors: 1 = not important, 2 = slightly important, 3 = moderately important, 4 = important, 5 = very important. Values with different superscript letters within rows differ significantly (Kruskal-Wallis H test specific comparisons; *** $P < 0.001$, ** $P < 0.01$, * $P < 0.05$).

Socio-demographic factors	Pull factor													
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
<i>Gender</i>	Z = -0.73	Z = -0.44	Z = -0.17	Z = -0.81	Z = -0.26	Z = -0.22	Z = -0.58	Z = -0.94	Z = -0.03	Z = -0.27	Z = -0.01	Z = -0.57	Z = -0.45	Z = -0.34
Male	32.23	32.88	33.54	32.11	36.46	33.41	32.61	36.57	34.07	34.73	34.04	32.52	32.86	34.93
Female	35.27	34.81	34.33	35.36	34.38	34.42	35.00	32.15	33.95	33.47	33.97	35.06	34.82	33.33
<i>Age</i>	$\chi^2 = 7.19$	$\chi^2 = 3.09$	$\chi^2 = 10.22^*$	$\chi^2 = 5.99$	$\chi^2 = 1.73$	$\chi^2 = 10.67^*$	$\chi^2 = 4.14$	$\chi^2 = 18.99^{***}$	$\chi^2 = 9.65^*$	$\chi^2 = 18.99^{***}$	$\chi^2 = 8.96$	$\chi^2 = 8.95$	$\chi^2 = 8.12$	$\chi^2 = 9.50^*$
18-25	35.72	27.67	20.06 ^d	32.83	34.67	22.44 ^c	31.61	28.89 ^c	27.61 ^c	21.89 ^d	31.83	29.11	31.06	29.17 ^c
26-35	27.93	30.60	35.93 ^b	26.03	32.67	34.83 ^b	32.33	37.90 ^b	36.93 ^b	33.23 ^b	39.23	41.63	39.97	40.40 ^a
36-45	44.13	37.88	45.67 ^a	39.25	31.00	47.88 ^a	28.54	44.13 ^a	44.88 ^a	53.17 ^a	43.21	39.21	42.17	43.25 ^a
46-55	35.65	39.10	35.20 ^b	39.30	38.70	33.55 ^b	33.10	47.30 ^a	39.05 ^b	36.75 ^b	36.15	38.70	32.75	35.20 ^b
<55	31.02	34.50	31.36 ^c	34.67	34.14	30.64 ^b	39.76	21.29 ^d	26.02 ^c	27.48 ^c	24.90	25.43	26.93	25.64 ^c
<i>Education</i>	$\chi^2 = 9.76^*$	$\chi^2 = 7.39$	$\chi^2 = 4.20$	$\chi^2 = 1.50$	$\chi^2 = 1.59$	$\chi^2 = 2.14$	$\chi^2 = 0.98$	$\chi^2 = 0.40$	$\chi^2 = 4.99$	$\chi^2 = 2.31$	$\chi^2 = 2.96$	$\chi^2 = 2.13$	$\chi^2 = 2.09$	$\chi^2 = 3.60$
Primary school	26.50 ^b	37.00	47.00	45.60	42.00	31.25	31.25	42.00	30.25	18.50	16.50	15.50	17.50	20.50
Secondary / high school	24.06 ^b	37.00	33.50	32.56	33.75	36.44	39.38	34.25	40.13	32.13	34.88	36.88	32.75	43.19
College diploma	35.81 ^a	24.25	27.06	31.72	31.00	28.64	33.06	33.08	25.83	31.22	30.36	34.61	36.11	35.83
University degree or above	36.60 ^a	37.73	36.04	34.76	35.03	36.12	33.47	33.96	36.71	36.41	36.36	34.05	34.13	31.96
<i>Personal income</i>	$\chi^2 = 1.18$	$\chi^2 = 8.31^*$	$\chi^2 = 3.49$	$\chi^2 = 2.84$	$\chi^2 = 2.26$	$\chi^2 = 3.20$	$\chi^2 = 1.89$	$\chi^2 = 2.33$	$\chi^2 = 0.64$	$\chi^2 = 2.96$	$\chi^2 = 1.52$	$\chi^2 = 6.03$	$\chi^2 = 1.99$	$\chi^2 = 4.55$
>\$10,000	35.22	30.00 ^b	24.72	27.11	34.67	29.17	35.22	41.94	38.00	35.94	40.83	42.39	39.89	38.11
\$10,000-\$20,000	32.39	29.58 ^b	33.76	33.65	33.53	33.26	32.15	31.40	33.76	30.57	32.32	30.36	34.00	30.22
\$21,000-\$30,000	37.77	44.00 ^a	39.37	38.60	37.60	40.97	38.83	35.40	33.80	40.10	34.73	40.87	29.70	41.70
<\$30,000	32.64	40.43 ^a	35.64	34.79	27.86	29.07	31.57	34.14	30.50	36.07	32.29	27.21	35.64	31.64
<i>Tourist origin</i>	$\chi^2 = 11.6^{**}$	$\chi^2 = 7.48^*$	$\chi^2 = 4.79$	$\chi^2 = 1.75$	$\chi^2 = 7.68^*$	$\chi^2 = 4.26$	$\chi^2 = 0.48$	$\chi^2 = 2.33$	$\chi^2 = 2.32$	$\chi^2 = 6.54^*$	$\chi^2 = 2.06$	$\chi^2 = 6.16^*$	$\chi^2 = 5.64$	$\chi^2 = 6.35^*$

Local	41.19 ^a	40.41 ^a	36.43	36.50	29.21 ^c	38.84	35.17	37.86	37.98	40.33 ^a	37.26	28.48 ^c	33.90	24.63 ^c
Regional	25.02 ^c	26.84 ^c	37.30	33.75	40.50 ^a	32.70	34.20	29.82	31.75	31.41 ^b	33.50	41.68 ^a	39.82	40.07 ^a
International	33.31 ^b	32.22 ^b	25.06	29.81	33.75 ^b	27.00	31.59	32.75	29.88	26.09 ^c	28.78	33.44 ^b	26.19	34.57 ^b

See Table 4 for attributes represented by codes A1 – A14.

7.6.1.5 Relationship between socio-demographic factors and pull motivation factors in MNP

There were no significant differences between different gender groups and educational level groups for all the fourteen pull motivation factors. Age was found to be positively related to four of the fourteen pull motivation factors, i.e., availability of different animal species in the Park (A2), availability of different plant species in the Park (A3), knowledge of the park (A6) and harmonious local community-park relationships (A14). The age group of 36-45 years was more pulled to MNP by the availability of different animal species in the park, the availability of different plant species in the park, and their knowledge of the park, followed by the age group of 46-55 years as well as those above 55 years with the least motivated being the younger age groups. Contrastingly, the age groups of more than 55 years and 46-55 years were more pulled to MNP by harmonious local community-park relationships than their younger counterparts (Table 7.7).

Level of income was found to be positively related to one of the fourteen pull motivation factors, where tourists who earned more than US\$30,000 were more pulled to MNP by the availability of different animal species in the Park followed by the income groups of US\$21,000 - US\$30,000 as well as US\$10,000 - US\$20,000 (Table 7.7). Similarly, tourists' origin was found to be positively related to one of the fourteen pull motivation factors where regional and international tourists were more pulled to MNP by friendliness of the local people (A12) as compared to the local tourists (Table 7.7).

Table 7.7: Relationship between socio-demographic factors and pull motivation factors in MNP. Z = Mann-Whitney U 's Z -value; Chi-Square = Kruskal-Wallis H test Chi-Square (χ^2); other values are the mean ranks for the corresponding groups. Rating scale for motivation factors: 1 = not important, 2 = slightly important, 3 = moderately important, 4 = important, 5 = very important. Values with different superscript letters within rows differ significantly (Kruskal-Wallis H test specific comparisons; $*P < 0.05$).

Socio-demographic factors	Pull factor													
	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
<i>Gender</i>	Z= -0.10	Z= -0.78	Z= -0.02	Z= -0.10	Z= -0.68	Z= -0.63	Z= -0.80	Z= -0.64	Z= -0.32	Z= -1.80	Z= -0.94	Z= -0.04	Z= -0.16	Z= -0.29
Male	31.19	32.48	31.05	29.13	29.79	32.35	29.48	32.40	31.69	34.87	28.98	30.90	30.69	30.37
Female	30.80	29.47	30.95	32.93	32.25	29.60	32.57	29.55	30.28	27.00	33.08	31.10	31.32	31.65
<i>Age</i>	$\chi^2= 5.91$	$\chi^2= 0.12^*$	$\chi^2=9.94^*$	$\chi^2= 3.93$	$\chi^2= 1.00$	$\chi^2=11.17^*$	$\chi^2= 3.44$	$\chi^2= 8.23$	$\chi^2= 3.95$	$\chi^2= 0.94$	$\chi^2= 5.71$	$\chi^2= 8.25$	$\chi^2= 6.09$	$\chi^2=12.25^*$
18-25	34.64	20.45 ^d	21.71 ^c	36.21	32.00	21.29 ^c	24.36	25.93	31.29	32.21	32.43	25.86	33.07	17.05 ^c
26-35	29.35	25.36 ^c	24.35 ^c	26.18	30.76	21.70 ^c	29.09	39.18	35.06	32.79	37.88	37.29	35.76	26.71 ^b
36-45	38.33	39.79 ^a	42.75 ^a	34.63	27.63	42.58 ^a	35.38	34.13	29.13	33.00	27.83	31.38	27.42	27.75 ^b
46-55	22.85	32.03 ^b	32.12 ^b	33.85	32.45	33.41 ^b	28.95	21.30	22.30	28.85	22.60	18.90	22.30	38.50 ^a
<55	30.73	32.47 ^b	29.10 ^b	29.23	32.53	29.73 ^b	34.13	28.07	33.57	28.23	30.67	34.03	33.30	36.40 ^a
<i>Education</i>	$\chi^2= 1.20$	$\chi^2= 1.33$	$\chi^2= 2.62$	$\chi^2= 3.97$	$\chi^2= 5.32$	$\chi^2= 2.04$	$\chi^2= 3.32$	$\chi^2= 2.57$	$\chi^2= 3.36$	$\chi^2= 4.09$	$\chi^2= 3.65$	$\chi^2= 5.48$	$\chi^2= 2.19$	$\chi^2= 5.76$
Primary school	25.25	23.50	30.25	41.50	40.00	21.25	22.50	37.75	17.00	12.75	12.50	24.00	19.50	22.50
Secondary / high school	27.89	34.94	38.44	38.44	33.78	31.17	36.17	27.00	25.22	34.39	27.94	20.06	26.94	19.33
College diploma	33.45	29.55	31.61	28.84	25.61	34.55	33.43	27.77	30.45	34.39	30.02	30.95	31.45	34.23
University degree or above	30.48	31.41	28.18	29.55	33.70	28.86	28.04	34.34	34.29	28.55	34.07	35.05	32.77	32.82
<i>Personal income</i>	$\chi^2=4.27$	$\chi^2=2.32^*$	$\chi^2= 0.35$	$\chi^2= 4.64$	$\chi^2= 1.38$	$\chi^2= 1.60$	$\chi^2= 4.08$	$\chi^2=0.46$	$\chi^2=4.65$	$\chi^2= 4.32$	$\chi^2= 2.94$	$\chi^2= 3.33$	$\chi^2= 0.21$	$\chi^2= 7.41$
>\$10, 000	24.67	25.25 ^c	28.42	32.33	35.33	29.17	37.75	29.17	29.25	17.67	24.67	36.00	30.67	39.50
\$10,000–\$20,000	31.04	29.21 ^b	31.67	31.15	31.48	32.17	31.98	32.31	32.50	32.96	29.46	29.85	31.63	27.63
\$21,000–\$30,000	30.02	32.88 ^b	30.44	33.13	30.63	28.87	30.71	29.71	27.35	31.44	31.90	28.67	30.13	28.98
<\$30,000	43.50	36.70 ^a	33.80	17.60	25.40	38.70	19.70	33.60	44.90	35.30	41.30	42.60	32.90	47.50
<i>Tourist origin</i>	$\chi^2= 3.80$	$\chi^2= 0.91$	$\chi^2= 0.44$	$\chi^2=1.94$	$\chi^2=3.50$	$\chi^2= 0.49$	$\chi^2=1.39$	$\chi^2= 0.87$	$\chi^2= 1.92$	$\chi^2=2.14$	$\chi^2=0.35$	$\chi^2=6.92^*$	$\chi^2= 2.99$	$\chi^2= 5.02$
Local	33.64	33.16	29.64	28.02	27.00	32.74	33.38	33.24	33.38	33.94	29.46	25.26 ^c	28.76	29.92
Regional	24.47	30.09	33.19	31.72	34.75	30.50	31.00	28.13	32.75	31.94	32.16	39.81 ^a	36.63	38.78
International	32.93	29.03	30.95	34.15	33.00	29.23	28.03	30.50	26.63	26.58	32.00	31.13 ^b	29.30	26.13

See Table 4 for attributes represented by codes A1 – A14.

7.6.2 Wildlife tourists' experiences in GNP and MNP

While all the sampled tourists mainly engaged in general scenic views from picnic sites, lodges and campsites, in GNP, about 57% of the visitors ($n = 38\%$) drove themselves in the park viewing animals, 43% ($n = 29$) had tour guided game drives, about 27% ($n = 18$) participated in guided walks and 39% ($n = 26$) took part in recreational fishing. Similarly, in MNP, about 41% ($n = 25$) drove themselves around the park, 59% ($n = 36$) participated in tour guided game drives, about 39% ($n = 24$) took part in guided walks, 54% ($n = 33$) participated in boat cruises whereas about 39% ($n = 24$) engaged in recreational fishing. All the respondents indicated that they required some interpretation to enjoy the activities. Experiences with interpretation ranged from a mean of 3.3 to 4.4 in GNP and 3.2 to 3.6 in MNP which indicated neutral to good experiences. With regards to experiences with interaction with wildlife, mean values ranged from 3.8 to 4.8 in GNP and 3.9 to 4.7 in MNP indicating good experiences. Respondents had almost similar wildlife tourism experiences in GNP and MNP. While there were no significant differences in respondents' experiences with interaction with wildlife, a significant difference in respondents' experiences with wildlife interpretation (Mann-Whitney U Test, = 322.0, $p < 0.05$) was recorded where experiences with wildlife interpretation were good in GNP and neutral in MNP.

7.6.2.1 Socio-demographic factors and wildlife tourists' experiences

In GNP, no significant differences were recorded between any of the tested socio-demographic factors, i.e., gender, age, level of education, tourists' income and tourists' origin, and wildlife tourism experiences. In MNP, significant differences were only found between gender and tourists' origin groups. Female tourists were found to have better experiences with both wildlife interpretation and interaction with wildlife than male respondents (Table 8). Regional tourists were also found to have good experiences with wildlife interpretation followed by international tourists and finally local tourists (Table 7.8).

Table 7.8: Relationship between socio-demographic factors and wildlife tourists' experiences in GNP and MNP.

Socio-demographic variables	Wildlife tourism experiences			
	GNP		MNP	
	Wildlife interpretation	Interaction with wildlife	Wildlife interpretation	Interaction with wildlife
<i>Gender</i>	$U = -0.04$	$U = -1.10$	$U = -2.64^{**}$	$U = -2.02^*$
Male	33.89	30.96	25.19	26.60
Female	34.08	536.18	37.00	35.55
<i>Age (years)</i>	$\chi^2 = 7.34$	$\chi^2 = 2.05$	$\chi^2 = 3.84$	$\chi^2 = 3.25$
18-25	44.39	27.83	36.57	36.57
26-35	36.10	30.73	31.38	27.71
36-45	25.13	36.46	23.21	33.04
46-55	40.45	36.45	30.15	25.10
<55	30.05	36.40	34.77	34.43
<i>Education</i>	$\chi^2 = 2.35$	$\chi^2 = 2.23$	$\chi^2 = 2.30$	$\chi^2 = 1.56$
Primary school	20.00	49.00	22.00	26.75
Secondary / high school	37.19	37.38	24.28	35.11
College diploma	38.19	30.08	32.16	33.02
University degree or above	32.13	34.35	32.89	28.39
<i>Personal income per year (USD)</i>	$\chi^2 = 4.11$	$\chi^2 = 5.56$	$\chi^2 = 6.56$	$\chi^2 = 1.24$
>\$10,000	41.83	27.44	43.75	33.17
\$10,000–\$20,000	30.21	33.15	29.31	33.58
\$21,000–\$30,000	39.33	43.27	32.21	28.67
<\$30,000	32.00	26.93	17.50	28.10
<i>Tourist origin</i>	$\chi^2 = 4.02$	$\chi^2 = 4.56$	$\chi^2 = 5.59^{***}$	$\chi^2 = 5.62$
Local	37.28	23.83	21.24 ^c	29.26
Regional	26.89	29.00	43.75 ^a	39.56
International	35.10	38.10	33.00 ^b	26.33

Notes: Z = Mann-Whitney U 's Z-value; Chi-Square = Kruskal-Wallis H test Chi-Square (χ^2); other values are the mean ranks for the corresponding groups. Rating scale: 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree; where 1-2 represents bad experiences, 3 represents neutral experiences, and 4-5 represents good experiences. Values with different superscript letters differ significantly (Kruskal-Wallis H test and Mann-Whitney U test specific comparisons; $***P < 0.001$, $**P < 0.01$, $*P < 0.05$).

7.6.3 Predictors of wildlife tourists' experiences and satisfaction

7.6.3.1 Push motivation factors and tourists' experiences

The ordinal regression model for push motivation factors and tourists' experiences with wildlife interpretation explained a significant amount of the original variability [$\chi^2(3) = 26.26$, $p < 0.01$; $R^2 = 0.56$] while the ordinal regression model for push motivation factors and tourists' experiences with interaction with wildlife explained a significant amount of

the original variability [$\chi^2(3) = 30.16, p < 0.001; R^2 = 0.25$; Table 7.9]. Two of the three push factors, i.e., recreation and knowledge seeking, and appreciating wildlife were able to predict tourists' experiences with wildlife interpretation. Similarly, two push factors, i.e., appreciating wildlife and feeling close to nature were able to predict tourists' experiences with interaction with wildlife (Table 7.9).

Table 7.9. Ordinal logistic regression results for push motivation factors and tourists' experiences. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ^aNon-significant. CI = Confidence Intervals

Model	Coefficient estimate (Std.error)	95% CI for odds ratios		
		Lower	Odds	Upper
<i>Experiences wildlife interpretation are predicted by:</i>		$R^2 = 0.56$; Model: $\chi^2(3) = 26.26^{**}$		
Recreation and knowledge seeking	0.26(0.21)**	-0.14	1.30	0.67
Appreciating wildlife	-0.51(0.25)*	-1.00	0.60	-0.03
Feeling close to nature	0.52(0.32) ^a	-0.11	1.69	1.15
<i>Experiences with interaction with wildlife are predicted by:</i>		$R^2 = 0.25$; Model: $\chi^2(3) = 30.16^{***}$		
Recreation and knowledge seeking	0.13(0.21) ^a	-0.29	1.14	0.55
Appreciating wildlife	1.04(0.26)***	0.53	2.82	1.55
Feeling close to nature	0.57(0.33)**	-0.08	1.77	1.22

7.6.3.2 Pull motivation factors and tourists' experiences in GNP

The ordinal regression model for pull motivation factors and tourists' experiences with wildlife interpretation in GNP explained a significant amount of the original variability [$\chi^2(14) = 43.72, p < 0.01; R^2 = 0.40$] while the ordinal regression model for pull motivation factors and tourists' experiences with interaction with wildlife explained a significant amount of the original variability [$\chi^2(14) = 56.84, p < 0.001; R^2 = 0.51$; Table 7.10]. Seven of the fourteen tested pull factors, i.e., availability of different animal species in the park, availability of different plant species in the park, knowledge of the park, peaceful/quiet environment, convenience of the location, good opportunities to learn more about nature, and friendliness of the local people were able to predict tourists' experiences with wildlife interpretation (Table 7.10).

Table 7.10. Ordinal logistic regression results for pull motivation factors and tourists' experiences in GNP. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ^aNon-significant. CI = Confidence Intervals

Pull factors	Experiences with wildlife interpretation 95% CI for odds ratios				Experiences with interaction with wildlife 95% CI for odds ratios			
	Coefficient estimate (Std.error)	Lower	Odds	Upper	Coefficient estimate (Std.error)	Lower	Odds	Upper
Abundance of wildlife in the park	-0.09(0.35) ^a	0.77	0.92	0.59	-0.79(0.51)**	1.79	0.45	0.21
Availability of different animal species in the Park	0.14(0.46)***	0.75	1.15	1.03	0.67(0.54)***	0.39	1.95	1.73
Availability of different plant species in the Park	-0.05(0.36)**	0.75	0.95	0.65	0.50(0.37)**	0.23	1.65	1.23
Wilderness	0.79(0.30) ^a	0.21	2.21	1.37	0.52(0.29)**	0.05	1.68	1.08
Beautiful landscape	1.91(0.58) ^a	0.78	6.72	3.04	0.82(0.54) ^a	0.24	2.27	1.88
Knowledge of the park	-0.86(0.41)**	1.67	0.42	0.05	0.49(0.43)*	0.36	1.63	1.33
Peaceful/quiet environment	0.79(0.40)**	0.02	2.20	1.58	0.61(0.40)*	0.18	1.85	1.41
Convenience of the location	0.45(0.22)*	0.02	1.57	0.89	-0.52(0.24) ^a	0.98	0.60	0.05
Variety of recreational activities in the park	-0.43(0.2) ^a	0.94	0.65	0.07	0.74(0.27)**	0.21	2.10	1.27
Good opportunities to learn more about nature	0.08(0.31)***	0.53	1.09	0.70	-0.05(0.34) ^a	0.70	0.95	0.61
Culture, arts and tradition	0.47(0.27) ^a	0.06	1.60	0.99	-0.16(0.28) ^a	0.72	0.85	0.40
Friendliness of the local people	-0.29(0.23)*	0.74	0.75	0.16	0.01(0.25) ^a	0.48	1.00	0.49
Special events / festivals	0.27(0.31) ^a	0.33	1.31	0.87	-0.14(0.34) ^a	0.79	0.87	0.52
Harmonious local community-park relationships	0.33(0.25) ^a	0.15	1.40	0.82	0.30(0.26)*	0.21	1.35	0.80
	R ² = 0.40; Model: $\chi^2(14) = 43.72^{**}$				R ² = 0.51; Model: $\chi^2(14) = 56.84^{***}$			

Eight of the fourteen tested pull factors, i.e., abundance of wildlife in the park, availability of different animal species in the park, availability of different plant species in the park, wilderness, knowledge of the park, peaceful/quiet environment, variety of recreational activities in the park, and harmonious local community-park relationships were able to predict tourists' experiences with interaction with wildlife (Table 7.10).

7.6.3.3 Pull motivation factors and tourists' experiences in MNP

The ordinal regression model for pull motivation factors and tourists' experiences with wildlife interpretation in MNP explained a significant amount of the original variability [$\chi^2(14) = 46.76$, $p < 0.01$; $R^2 = 0.43$] while the ordinal regression model for pull motivation factors and tourists' experiences with interaction with wildlife explained a significant amount of the original variability [$\chi^2(14) = 55.27$, $p < 0.001$; $R^2 = 0.55$; Table 7.11].

Table 7.11: Ordinal logistic regression results for pull motivation factors and tourists' experiences in MNP. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ^aNon-significant. CI = Confidence Intervals

Pull factors	Experiences with wildlife interpretation				Experiences with interaction with wildlife			
	Coefficient estimate (Std.error)	95% CI for odds ratios			Coefficient estimate (Std.error)	95% CI for odds ratios		
		Lower	Odds	Upper		Lower	Odds	Upper
Abundance of wildlife in the park	-0.39(0.31)*	1.01	0.68	0.23	-0.05(0.31)***	0.66	0.96	0.56
Availability of different animal species in the park	-0.36(0.50)***	1.35	0.69	0.62	-0.55(0.51)***	1.55	0.58	0.44
Availability of different plant species in the park	1.06(0.40)**	0.27	2.87	1.84	0.61(0.39)***	0.15	1.85	1.37
Wilderness	-0.05(0.34) ^a	0.72	0.96	0.63	0.54(0.35)**	0.15	1.71	1.22
Beautiful landscape	1.24(0.44) ^a	0.38	3.44	2.09	0.54(0.42)*	0.29	1.72	1.37
Knowledge of the park	-0.37(0.34)*	1.03	0.69	0.30	0.08(0.34)**	0.59	1.08	0.75
Peaceful/quiet environment	-0.14(0.33)*	0.79	0.87	0.52	0.54(0.34)*	0.13	1.71	1.20
Convenience of the location	-0.54(0.23) ^a	1.00	0.58	0.08	0.08(0.24) ^a	0.38	1.08	0.54
Variety of recreational activities in the park	-0.17(0.23) ^a	0.61	0.85	0.27	0.30(0.24)**	0.16	1.36	0.77
Good opportunities to learn more about nature	-0.65(0.23)***	1.10	0.52	0.20	-0.10(0.23) ^a	0.55	0.91	0.35
Culture, arts and tradition	-0.38(0.29) ^a	0.17	1.47	0.94	-0.01(0.30) ^a	0.59	0.99	0.57
Friendliness of the local people	-0.31(0.26)*	0.81	0.74	0.20	-0.11(0.28) ^a	0.65	0.90	0.43
Special events / festivals	-0.18(0.36) ^a	0.90	0.84	0.53	0.46(0.39) ^a	0.31	1.59	1.23
Harmonious local community-park relationships	0.60(0.25)*	0.11	1.82	1.09	-0.12(0.26) ^a	0.63	0.89	0.39
		R ² = 0.43; Model: $\chi^2(14) = 46.76^{**}$				R ² = 0.55; Model: $\chi^2(14) = 55.27^{***}$		

Eight of the fourteen tested pull factors, i.e., abundance of wildlife in the park, availability of different animal species in the park, availability of different plant species in the park, knowledge of the park, peaceful/quiet environment, good opportunities to learn more about nature, friendliness of the local people, and harmonious local community-park relationships were able to predict tourists' experiences with wildlife interpretation (Table 7.11). Similarly, eight of the fourteen tested pull factors, i.e., abundance of wildlife in the park, availability of different animal species in the park, availability of different plant species in the park, wilderness, beautiful landscape, knowledge of the park, peaceful/quiet environment, and variety of recreational activities in the park were able to predict tourists' experiences with interaction with wildlife (Table 7.11).

7.6.3.4 Wildlife tourism experiences and tourists' satisfaction

In GNP, experiences with wildlife interaction and satisfaction with prices charged in the park explained tourists' satisfaction with wildlife tourism experiences. An improvement in tourists' experiences with interaction with wildlife and satisfaction with prices charged in the park was therefore associated with an increase in the odds of having enhanced tourists' satisfaction with wildlife tourism experiences. Tourists' experiences with wildlife interpretation had no significant influence on their satisfaction with wildlife tourism experiences. Tourists' satisfaction with wildlife tourism experiences had a significant influence on their overall satisfaction with the entire holiday/trip experience where an improvement in the level of tourists' satisfaction with wildlife tourism experiences was significantly associated with an increase in the odds of having enhanced tourists' overall satisfaction with the entire holiday/trip experience (Table 7.12).

Likewise, in MNP, experiences with wildlife interaction and satisfaction with prices charged in the park could explain tourists' satisfaction with wildlife tourism experiences while tourists' experiences with wildlife interpretation had no significant influence on their satisfaction with wildlife tourism experiences. Finally, tourists' satisfaction with wildlife tourism experiences had a significant influence on their overall satisfaction with the entire holiday/trip (Table 7.12).

Table 7.12: Ordinal logistic regression results for wildlife tourism experiences and tourist satisfaction. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, ^aNon-significant. CI = Confidence Intervals

Model	Coefficient estimate (Std.error)	GNP 95% CI for odds ratios			MNP 95% CI for odds ratios			
		Lower	Odds	Upper	Lower	Odds	Upper	
<i>Satisfaction with wildlife tourism experiences is predicted by:</i>		R ² = 0.54; Model: $\chi^2(3) = 41.29^{***}$			R ² = 0.56; Model: $\chi^2(3) = 46.13^{**}$			
Experiences with wildlife interpretation	0.79 (0.54) ^a	0.76	2.20	6.36	0.22 (0.53) ^a	0.44	1.25	3.53
Experiences with interaction with wildlife	2.73 (0.57) ^{***}	5.00	15.37	47.29	1.26 (0.42) ^{**}	1.55	3.52	7.96
Satisfaction with prices charged in the park	1.22 (0.25) [*]	1.76	2.25	4.06	0.73 (0.23) ^{**}	1.37	2.08	3.28
<i>Overall satisfaction with the entire holiday/trip experience is predicted by:</i>		R ² = 0.59; Model: $\chi^2(1) = 49.15^{***}$			R ² = 0.58; Model: $\chi^2(1) = 44.79^{***}$			
Satisfaction with wildlife tourism experiences	2.84 (0.50) ^{***}	6.39	17.08	45.64	2.33 (0.43) ^{***}	4.40	10.26	23.96

7.7 Discussion

7.7.1 Tourist motivation for visiting national parks and the influence of socio-demographic factors

The study sought to establish tourist motivation for visiting national parks. In order to be able to satisfy tourists' internal and emotional desires, our study indicates that park managers should give attention to park attributes that can make tourists feel close to nature, appreciate wildlife and finally participate in recreational activities and acquire knowledge. Similar motives were also recorded in other studies, for example, nature (Van Der Merwe and Saayman, 2008) and knowledge seeking (Kruger and Saayman, 2010). Even though these findings result from a single empirical investigation which may require further studies, the results emphasise the fact that national park tourists almost share the same push motivations.

Our results show that the two parks differ a little bit in their pull factors. The important pull motivations of tourists in making a decision to select GNP and MNP as their destination choices were almost similar with the exception of the attribute 'culture, arts and tradition' which was an important pull factor in GNP, and not in MNP. Similarities in ratings of these pull attributes could be explained by similar attractions found within the parks, e.g., types of animals and recreational activities, characteristics of the local people as well as similarities in the profiles of the tourists who participated in the study. Friendliness of the local residents, which is a valuable quality in ethno-tourism, has been found to influence the attractiveness of a destination (Vengesayi *et al.*, 2009). Moreover, the quality of interaction between tourists and residents has been increasingly acknowledged as contributing to both tourists experience and perception of the visited destination (Armenski *et al.*, 2011).

Considering the number of tourists that visit GNP and MNP, these parks can be considered less popular as compared to major parks with high visitation like Kruger National Park in South Africa (Kruger and Saayman, 2010). As such, there are some pull factors associated with more popular parks, for example, activities such as conferences and events (Van Der Merwe and Saayman, 2008) which were not important in GNP and

MNP. This could be attributed to the fact that the associated kind of activities is not well developed in GNP and MNP.

Our hypotheses that there is a relationship between gender and push motivation (H_{1a}), and gender and pull motivation (H_{2a}) for GNP and MNP were both not supported. This could be attributed to the fact that most tourists who visit national parks, regardless of their gender, seek to enjoy direct interaction with the wildlife and enrich their wildlife experiences (Jensen, 2015, Saayman and Saayman, 2009). Our results on gender and motivation concur with those of Jönsson and Devonish (2008) who found out no correlation between gender and motivation. Contrastingly, our hypotheses that there is a relationship between age and push motivation (H_{1b}), and age and pull motivation (H_{2b}) for GNP and MNP were both supported. This could be attributed to the fact that the age groups of 26-35 and 36-45 are more energetic and inquisitive hence are pushed by the need for recreation and knowledge seeking. In order to quench these internal desires, they are pulled to GNP and MNP by attributes like good opportunities to learn more about nature, availability of plant species and variety of recreational activities. Elsewhere, age was also found to be positively correlated with motivation among Danish travellers (Jensen, 2015).

While the hypotheses that there is a relationship between level of education and push motivation (H_{1c}), income level and push motivation (H_{1d}), and tourist origin and push motivation (H_{1e}) were not supported, the hypotheses that there is a correlation between level of education and pull motivation (H_{2c}) income level and push motivation (H_{2d}), tourist origin and push motivation (H_{2e}) were supported. In Berchtesgaden National Park, Germany, tourists who wanted to experience nature mainly through the wilderness and walking safaris showed different correlations with socio-demographic variables (Butzmann and Job, 2016). The correlation between origin of tourists and pull motivation could explain preferences related to the tourist origin, e.g. Andriotis *et al.* (2007) concluded that the major determinant of tourists' preferences and behaviours was origin of tourists where East Europeans preferred guided excursions/tours while non-Europeans preferred water based activities.

7.7.2 Wildlife tourists' experiences and the influence of socio-demographic factors

Respondents had almost similar wildlife tourism experiences in GNP and MNP and this could be explained by the diversity of both large carnivores and herbivores in both parks (Muboko *et al.*, 2014a, Gandiwa, 2012). Significant differences were recorded only in tourists' experiences with wildlife interpretation where their experiences with wildlife interpretation were good in GNP and neutral in MNP. Unlike MNP, GNP had recently renovated its infrastructure including signage useful for trail users and which presented information that was easy to understand. Reisinger and Steiner (2006) and Moscardo *et al.* (2004) point out that interpretation through informative trails, information packs, brochures, signs and other materials about the local environment and nature provides quality information on the natural environment for tourists which help enhance their tourism experiences.

Our hypotheses that there is a correlation between gender and experiences with wildlife interpretation (H_{7a}), and gender and interaction with wildlife (H_{8a}) were both not supported in GNP but supported in MNP. Similarly, the hypotheses that there is a correlation between tourist origin and experiences with wildlife interpretation (H_{7e}), and tourist origin and interaction with wildlife (H_{8e}) were both not supported in GNP. However, supported in MNP was the hypothesis that there is a correlation between tourist origin and experiences with wildlife interpretation (H_{7e}). The hypotheses that age, level of education and personal income are correlated with experiences with wildlife interpretation and interaction with wildlife (H_{7b-d} and H_{8b-d}) were all not supported in both parks. Our results on gender and origin concur with previous research on tourists' perceptions of their wildlife tourism experiences, which showed that the level of tourists' satisfaction with wildlife tourism experiences differed according to their demographic characteristics, such as gender and nationality (Ham and Weiler, 2007). Males who are generally more risk-taking in nature (Zuckerman and Kuhlman, 2000), may have higher expectations about their interaction with wildlife than their female counterparts, for example, getting closer to the animals, hence are more likely to be less satisfied if that does not happen.

7.7.3 Tourist motivation, wildlife tourism experiences and satisfaction

Two of the three push factors were able to predict tourists' experiences with wildlife interpretation, i.e., recreation and knowledge seeking, and appreciating wildlife, while two push factors were able to predict tourists' experiences with wildlife interaction, i.e., appreciating wildlife and feeling close to nature. Our hypotheses that there is a positive relationship between push motivation factors and experiences with wildlife interpretation (H₃) as well as a positive relationship between push motivation and experiences with wildlife interaction (H₄) were therefore partly supported. Moreover, different pull factors were able to predict tourists' experiences with wildlife interpretation and interaction with wildlife in both parks. Our hypotheses that there is a positive relationship between pull motivation factors and experiences with wildlife interpretation (H₅), and that there is a positive relationship between pull motivation and experiences with wildlife interaction (H₆) were also partly supported. These findings imply that tourists maybe motivated to visit a park by one factor, while another factor enhances their tourism experiences. This indicates that understanding tourists' motivations alone is not enough, but the understanding of what really enhances good wildlife tourism experiences for improved park planning and management is also important.

Tourists' experiences with wildlife interpretation had no influence on their satisfaction with wildlife tourism experiences. Our hypothesis that tourists' experiences with interpretation influence their satisfaction with wildlife tourism experiences (H₉) was therefore not supported. Contrastingly, tourists' interaction with wildlife was found to influence satisfaction with wildlife tourism experiences. Thus our hypothesis that tourists' experiences with wildlife interaction influences their satisfaction with wildlife tourism experiences (H₁₀) was supported. Elsewhere, in other African countries like Kenya, Democratic Republic of Congo, Ghana, South Africa, and Uganda tourists were found to enjoy interacting with wildlife through observing and photograph wild animals in their natural habitats mainly from four-wheel drive vehicles (also called 'safaris' in Africa), safari camps or lodges, or even during trekking, kayaking or camel safaris (UNWTO, 2014, Udoto, 2012).

A number of authors have put forward that tourist satisfaction with wildlife experience is mainly influenced by interpretation and interaction with wildlife (e.g., Moscardo and Saltzer, 2005, Reynolds and Braithwaite, 2001). Goldman *et al.* (2001) and Moscardo *et al.* (2001) argue that interpretation results in more memorable experiences and therefore enhances visitor enjoyment and satisfaction as visitors understand more about wildlife. Our finding that wildlife interpretation has no influence is thus surprising. This could be attributed to the fact that the interpretation techniques used in these parks are limited to mostly guided tours, walking trails, trail side signs and occasionally maps. According to Moscardo (1999), interpretation should incorporate differences into interpretative experiences, provide personal connections for visitors, practise participation, create clear content, and allow for alternative audiences. None of this is currently being practised in GNP and MNP. However, in Western Australia, an assessment of the impact of interpretive signs on visitor knowledge at the Valley of the Giants Tree Top Walk found significant increases in visitor knowledge and satisfaction as a result of reading trail-side signs (Hughes and Morrison-Saunders, 2002).

Tourists' satisfaction with prices charged in the parks was found to influence satisfaction with wildlife tourism experiences thus the hypothesis that there is a positive relationship between prices charged in the parks and tourist satisfaction with wildlife tourism experiences (H₁₁) was supported. This indicates that tourists perhaps perceive the pricing system used by the Zimbabwe Parks and Wildlife Management Authority as fair and satisfactory. Our findings corroborate those of Asadi *et al.* (2014) who reported that perceived price fairness has a significant influence on customer satisfaction. Finally, our hypothesis that there is a positive relationship between satisfaction with wildlife tourism experiences and overall satisfaction with the entire holiday experience (H₁₂) was supported. Understanding predictors of satisfaction is therefore useful for destinations to incorporate the needs and wants of tourists in order to offer better services and products.

We recognise that this present study was carried out in a short period of time which limits generalising our results. However, the study provides important insights of motivation and satisfaction with wildlife tourism experiences especially for many of the developing countries where little research has been carried out in this area.

7.8 Conclusion

We conclude that wildlife tourists' push motives include recreation and knowledge seeking, appreciating wildlife and feeling close to nature. GNP and MNP differ a little bit in their pull factors. Common important pull factors between the two parks were abundance of wildlife in the park, availability of different animal species, availability of different plant species, wilderness, beautiful landscape and peaceful/quiet environment. Our findings point to the fact that marketing for the two parks need to harness on these push factors vis-à-vis the pull factors in order to enhance tourists' satisfaction with national park services and products. We further conclude that tourists' experiences with interaction with wildlife were good in both GNP and MNP but tourists' experiences with wildlife interpretation were good in GNP and neutral in MNP.

The following correlations between different socio-demographic factors and motivation as well as wildlife tourists' experiences were supported in the study, i.e., age and push motivation, age and pull motivation, level of education and pull motivation, income level and push motivation, tourist origin and push motivation, and tourist origin and experiences with wildlife interpretation (in MNP). The study concludes that tourists are heterogeneous hence their demographic profiles should be considered in the development of different travel products and promotional programs. Furthermore, the following correlations between motivation and wildlife tourists' experiences were partly supported in this study, i.e., push motivation factors and experiences with wildlife interpretation, push motivation and experiences with wildlife interaction, pull motivation factors and experiences with wildlife interpretation, and pull motivation and experiences with wildlife interaction. Based on these hypotheses, we conclude that different motivation factors influence experiences with wildlife interpretation and experiences with interaction with wildlife differently. We therefore recommend that park planning should consider the predictors of good wildlife tourism experiences such as undisturbed nature and good opportunities to learn more about nature especially through quality interpretation.

Finally, the following hypotheses on tourists' satisfaction were supported: (i) experiences with wildlife interaction influences satisfaction with wildlife tourism experiences, (ii) there is a positive relationship between prices charged in the parks and

satisfaction with wildlife tourism experiences, and (iii) there is a positive relationship between satisfaction with wildlife tourism experiences and overall satisfaction with the entire holiday experience. Based on these hypotheses we conclude that improving tourists' experiences with wildlife interaction and their satisfaction with the pricing of park services and products is key in providing satisfactory wildlife tourism experiences as well as overall holiday experiences of nature based tourists. This is important in achieving destination competitive differentiation and gaining tourist loyalty.

7.9 Acknowledgements

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Appendix 7.1: Instrument variables and the descriptive statistics for tourist motivation, wildlife tourism experiences and satisfaction for Gonarezhou and Matusadona National Park samples

Variable	Gonarezhou National Park				Matusadona National Park			
	Mean	Standard deviation	Skewness	Kurtosis	Mean	Standard deviation	Skewness	Kurtosis
Motivation for visiting the park								
Abundance of wildlife in the park	4.43	0.87	-1.68	2.89	4.34	0.98	-1.74	3.01
Availability of different animal species in the park	4.31	0.78	-0.62	-1.09	4.49	0.77	-1.35	0.94
Availability of different plant species in the park	3.67	1.22	-0.62	-0.43	4.02	1.09	-0.92	0.21
Wilderness	4.52	0.84	-2.51	7.71	4.51	0.83	-2.11	5.23
Beautiful landscape	4.75	0.47	-1.60	1.61	4.61	0.69	-1.82	2.99
Knowledge of the park	3.58	1.08	-0.37	-0.55	3.64	1.18	-0.69	-0.32
Peaceful/quiet environment	4.55	0.61	-1.44	3.11	4.49	0.83	-2.24	5.98
Convenience of the location	3.34	1.38	-0.40	-1.02	2.98	1.41	0.03	-1.25
Variety of recreational activities in the park	2.81	1.36	0.14	-1.20	2.66	1.43	0.39	-1.23
Good opportunities to learn more about nature	3.72	1.18	-0.57	-0.59	3.70	1.23	-0.74	-0.43
Culture, arts and tradition	2.82	1.42	0.10	-1.34	2.23	1.31	-0.80	-0.51
Friendliness of the local people	3.46	1.51	-0.51	-1.20	3.00	1.60	0.03	-1.62
Special events / festivals	1.66	0.88	1.98	5.07	1.49	0.77	2.10	6.22
Harmonious local community-park relationships	3.57	1.49	-0.61	-1.03	2.84	1.65	0.21	-1.59
Tourists' wildlife tourism experiences								
<i>Wildlife interpretation</i>								
Provided me with sufficient information in nature-based tourism	3.99	0.76	-0.97	-0.58	3.46	0.81	-0.74	-0.71
Provided me with quality information on the natural environment	3.30	0.52	-0.87	-0.51	3.43	0.51	-1.05	-0.06
Informed me about the significance or meanings of what we were experiencing	4.07	0.56	0.07	-0.65	3.66	0.55	0.10	-0.86
Encouraged greater knowledge and awareness of conservation issues and ethics	4.42	0.47	0.50	1.01	3.20	0.52	0.16	0.66
<i>Interaction with wildlife</i>								
I got an opportunity to view wildlife in natural	4.76	0.46	-1.71	2.07	4.72	0.55	-1.89	2.73

areas								
I got an opportunity to see wildlife behave naturally	4.61	0.63	-1.39	0.85	4.51	0.83	-1.62	1.61
I got an opportunity to learn more about wildlife	4.01	1.07	-0.96	0.35	4.25	0.97	-1.28	1.15
I got an opportunity to see rare, unique and unusual wildlife	3.79	1.20	-0.56	-0.86	3.89	1.33	-0.88	-0.55
Satisfaction								
Satisfaction with wildlife tourism experiences in the park	4.39	0.76	-0.79	-0.81	4.10	0.90	-0.97	1.01
Overall satisfaction with the entire holiday experience	4.30	0.78	-0.78	-0.24	4.13	0.85	-0.79	0.05
Satisfaction with the prices or fees charged in the park	3.66	1.15	-0.71	-0.19	3.43	1.23	-0.43	-0.58

CHAPTER 8: Sustainability of wildlife tourism: tourist perceptions on threats to wildlife tourism in two state protected areas in Zimbabwe*†

**† A revised version of this Chapter is under review as:*

Mutanga, C. N., Chikuta, O., Muboko, N, Vengesayi, S. and Gandiwa, E. Sustainability of wildlife tourism: tourist perceptions on threats to wildlife tourism in two state protected areas in Zimbabwe.

Abstract

With the continued realisation that wildlife species are increasingly becoming threatened by illegal hunting and other environmental detriments, it is worrying that this may negatively impact on wildlife tourism, which largely strives on the sustainability of wildlife resources. This study sought to determine tourist perceptions on the threats to the sustainability of wildlife tourism using a case study of two state protected areas in Zimbabwe. Using close-ended questionnaires, we collected data from 128 tourists in December 2015. Results show that local, regional and international respondents generally had similar views on threats to the sustainability of wildlife tourism. Significant differences were recorded for perception of lack of involvement of local people in protected area tourism in Gonarezhou National Park, and the perception of negative attitudes towards tourism by local residents for Matusadona National Park. We conclude that the most perceived serious threats were illegal hunting, destruction of wildlife habitats and human-wildlife conflict. To ensure sustainability of wildlife tourism in protected areas and adjacent communities, it is necessary for park management to promote local people participation in ecotourism, local community and protected area relationships, and innovative law enforcement measures.

Keywords: attitude, ecotourism, human-wildlife conflict, illegal hunting, local community, relationship

8.1 Introduction

Nature-based tourism is among the fastest growing elements of tourism (Suta *et al.*, 2017). Nature-based tourism include wildlife tourism, a niche for the tourism business that encompasses non-consumptive interactions with wildlife, such as observing and photographing animals in their natural habitats (Newsome *et al.*, 2005) and consumptive activities which involve selective removal or capturing animals, particularly through sport hunting and fishing (Lovelock, 2008). The value of tourism can be direct, indirect and induced through tourism expenditures, creation of employment, revenues from taxes and other public charges, foreign exchange earnings and the related multiplier effects (Freyer, 2011). Many African countries have economically benefitted from strong growth in tourism in recent years (Ilban and Yildirim, 2017, UNWTO, 2014). Although the economic importance of tourism in Africa and the continent's share of the worldwide tourism market are relatively small (5% of global international arrivals and 3% of global international receipts), international tourist arrivals have been increasing steadily over the past few years (UNWTO, 2016). During the period between 2005 and 2015, arrivals have grown from 35 million in 2005 to 53 million in 2015. The total international tourism receipts for Africa in 2015 reached US\$ 33 billion (UNWTO, 2016). In Zimbabwe, tourism receipts increased from US\$634 million in 2010 to US\$886 million in 2015 (ZTA, 2015).

However, the availability of national tourism statistics for African countries is generally limited (UNWTO, 2014). Where data are available at national level, they mostly refer to the whole tourism sector and not different segments of tourism such as nature tourism, cultural tourism or wildlife-related tourism (Higginbottom, 2004). Higginbottom (2004) points out that data on the tourism expenditure of wildlife tourism at the destination level are not collected systematically. Despite this setback, wildlife tourism unarguably has various ecological, social, economic, scientific, educational, cultural and recreational values and immensely contributes to sustainable development and human well-being (UNWTO, 2014). In many African countries and in Zimbabwe in particular, tourism is dependent on wildlife resources and related activities among others (Morupisi and Mokgalo, 2017, Zimbabwe Tourism Authority, 2011, Manwa, 2007).

Liu (2003) points out that sustainable tourism requires both the sustainable growth of tourism's involvement to the economy and society, and the sustainable use of resources and environment. On the other hand, sustainable tourism development is the management of all resources that fulfils economic, social and aesthetic needs at the same time maintaining cultural integrity, essential ecological processes, biological diversity and life support systems (Fennell and Dowling, 2003). The sustainability of wildlife tourism is affected by a number of factors that include political and economic instability, natural disasters (Saha and Yap, 2015), management of tourist numbers in the protected areas and support for wildlife conservation and tourism from the local communities living adjacent to the protected areas (Ap and Crompton, 1998). Most worrying is the fact that the wildlife species that are important for wildlife tourism, for example, the 'Big Five' in Africa, i.e., the African elephant (*Loxodonta africana*), black and white rhinoceros (*Diceros bicornis* and *Ceratotherium simum* respectively), lion (*Panthera leo*), Cape buffalo (*Syncerus caffer*), and leopard (*Panthera pardus*), usually are the same that are often threatened by illegal hunting and trade, and other environmental or conservation pressures (UNWTO, 2014). Illegal hunting and trade in wildlife products has become the most immediate and direct threat to wildlife species in Africa, making its upward trend a cause of serious concern (Muboko *et al.*, 2016a, Brashares *et al.*, 2004, Broad *et al.*, 2003). Furthermore, wildlife species are also threatened by the increasing loss of habitat and loss of range, among other pressures (Milliken and Shaw, 2012). Consequently, the loss of wildlife is likely to negatively impact on wildlife tourism development and sustainability in Africa, as well as the tourism sector worldwide (UNWTO, 2014, Newsome *et al.*, 2005).

Wildlife conservation inflicts significant costs on local communities through crop damage, livestock predation and human deaths, and restriction of access to natural resources (Muruthi, 2005, Hulme and Murphree, 2001). This situation compromises local people's livelihoods and reduces their willingness to support protected areas and associated wildlife conservation efforts considering that most of these people are generally poor and depend on natural resources for their livelihoods (Mulholland and Eagles, 2002). According to Timothy (2002), the community approach to tourism has been identified as a means to empower communities. Kiss (2004) noted that community based ecotourism is a way to benefit local communities. Community based ecotourism projects motivate

communities to reduce their exploitation of wild plants and animal species, and to help control illegal hunting (Kiss, 2004). Ecotourism has thus been linked to sustainable development initiatives, community development strategies, and protected area conservation efforts which is critical for wildlife tourism in protected areas (Stronza and Gordillo, 2008, Weaver and Lawton, 2007). Many conservationists are against the direct, consumptive use of wildlife, but generally accept the non-consumptive use of wildlife in ecotourism where tourists appreciate and learn about wildlife in their natural habitats (Sinha, 2001). While it is widely acknowledged that the development of ecotourism involves a number of stakeholders, local community participation in the decision-making process of tourism development has generally been lacking (Garrod, 2003). Gasteyer *et al.* (2016) point out that local communities play an important role in natural resource management and sustainability.

Harmonious conservation relationships between protected areas and adjacent communities are therefore important for the sustainability of wildlife tourism (Mutanga *et al.*, 2015) given that local communities interact with wildlife tourists and wildlife resources in varying ways (Muganda *et al.*, 2013, Burns and Sofield, 2001). This interaction can have implications for the sustainability and long-term viability of wildlife tourism (Burns and Sofield, 2001). Hence, when local people do not support wildlife conservation and tourism, they may not cooperate with protected area authorities or participate in wildlife conservation related programmes (Holmes, 2013), thereby threatening the sustainability of wildlife tourism (Strickland-Munro and Moore, 2013). Disgruntled communities tend to engage in unsustainable activities such as illegal hunting, habitat encroachment and destruction (for example, through encroachment into protected areas and uncontrolled fires), and violence (Romañach *et al.*, 2011, Graham *et al.*, 2005, Choudhury, 2004, Nepal, 2002) all of which negatively impact on wildlife conservation and tourism. As such, wildlife outside protected areas is in constant danger of host threats, for example, illegal hunting, snare for the bush meat trade or harassment (Okello *et al.*, 2011).

Although many positive factors such as income, employment and overall economic development can be gained from tourism, many destinations have experienced significant

degradation and there is need to move towards more sustainable tourism in destinations (Dodds, 2012). However, responding to the ecological, social and economic challenges and making transformation toward sustainability requires innovation (Carlsen *et al.*, 2008). Schaper and Volery (2007) posit that true innovation in tourism destinations is unformulated and often inspired by external forces such as changing customer preferences, demographics, technology, government policy, environmental conditions or social imperatives. According to Zeitlin (2011), nature or wildlife tourists are often concerned about the quality of the environment and the sustainability of the resource itself hence their perceptions are important in inspiring innovation for sustainable tourism. Of importance to sustainable development of wildlife tourism in a community is the inclusion of stakeholders, thus an understanding of the perceptions, attitudes and interests of stakeholders is an antecedent to the planning and management of sustainable wildlife tourism (Byrd *et al.*, 2009). According to Cater (1993), the main objectives for sustainable wildlife tourism include meeting the needs of the host population in respect of improving living standards, satisfying the demands of a growing number of tourists; and safeguarding the natural environment. Creating awareness about the threats to the sustainability of wildlife tourism may influence response actions that reduce the negative consequences that may accompany the exigent need to tackle various environmental or conservation pressures such as uncontrolled fires and illegal hunting (Ityavyar and Thomas, 2013).

According to Ballantyne *et al.* (2009), management practices that involve tourists are likely to be successful in meeting both tourist and wildlife interests, hence it is important to investigate tourists' perceptions about threats to wildlife conservation. Limited research has been conducted on the factors that influence the sustainability of wildlife tourism and the perceptions of tourists on threats to wildlife tourism (e.g., Muboko *et al.*, 2016a, Hillery *et al.*, 2001). The objective of this study was, therefore, to determine and rate tourist perceptions on the threats to wildlife tourism and its sustainability. Results from this study could be valuable in informing future decisions on planning, monitoring, marketing and evaluating programmes and activities related to wildlife conservation and tourism initiatives. Results could also help inform policy makers of the contemporary issues in the field of sustainable development, with the objective of broadening the knowledge base of policy decision-makers in responding to those challenges.

8.2 Methods

8.2.1 Study sites

Gonarezhou and Matusadona National Parks (Figure 8.1; Table 8.1) were chosen due to their diverse wildlife species, abundant wild animals and unique wilderness characteristics. Moreover, we chose these large state protected areas as they give some long history of conservation and tourism and have some external support for conservation. The two parks are also part of the Transfrontier Conservation Areas (TFCAs) initiatives that seek to facilitate and promote regional peace, tourism, cooperation and socio-economic development of southern Africa. Gonarezhou National Park is part of the Great Limpopo Transfrontier Conservation Area, while Matusadona National Park is part of the Kavango-Zambezi Transfrontier Conservation Area. Considering similarities in environmental factors such as wilderness and remoteness, and presence of local communities adjacent to park boundaries, the assumptions were that the two parks have similar threats and are visited by tourists with similar preferences. For Gonarezhou National Park, this study focused on the northern section known as Chipinda Pools.

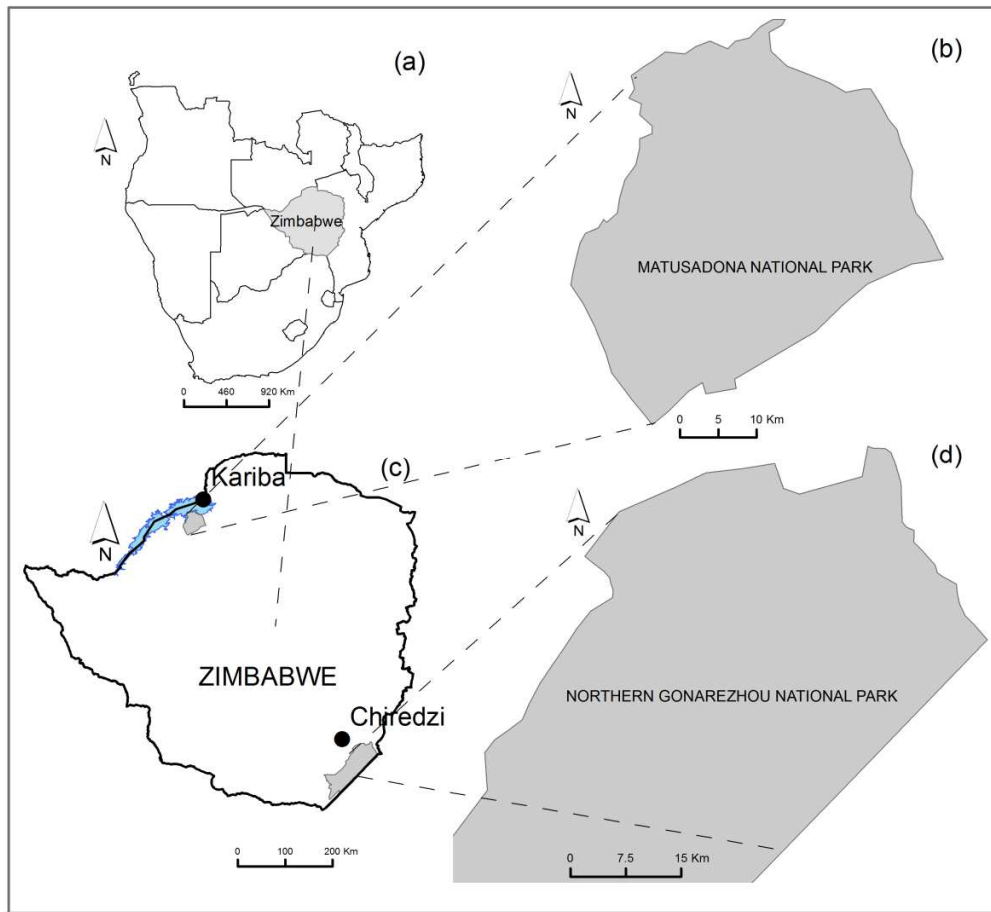


Figure 8.1: (a) Location of Zimbabwe in Southern Africa; (b) Geographical location of Matusadona National Park and Northern Gonarezhou National Park in Zimbabwe; (c) Matusadona National Park; and (d) Northern Gonarezhou National Park.

Table 8.1: General characteristics of Gonarezhou and Matusadona National Parks, Zimbabwe.

Attributes	Study site	
	Gonarezhou	Matusadona
Status	National Park	National Park
Location	Between 21° 00'–22° 15' S and 30° 15'–32° 30' E	Between 28° 23'–28° 51' E and 16° 41'–17° 13' S
Ownership	Government	Government
Management	Public-private partnership (since 2008)	Public
Year established	1930 as a Game reserve, upgraded to a National Park in 1975	1963 as a Game reserve, upgraded to a National Park in 1975
Size (km ²)	3,000 (Chipinda Pools)	1,400
Animal species	Diverse species of large carnivores and herbivores	Diverse species large carnivores and herbivores
Tourism facilities	Tented camps, camp sites	Lodges, camp sites
Bed capacity	268	136
Other infrastructure	Roads, view platfoams, picnic sites	Roads, view platfoams, picnic sites
Average visitor numbers per year (2008 – 2015)	3,914	1,982
Tourist attractions and activities	Waterfalls, cliffs and natural water pans, game viewing, sport fishing, bird watching	Hiking and escarpment climbing, game viewing, sport fishing, bird watching, boating and canoeing safaris
Accessibility	By air through Buffalo Range Aiport or by road	By air through Kariba airport, by boat from Kariba or by road
Adjacent communities	Include: Chizvirizvi (ward 22), Mupinga (ward 4), Chitsa (ward 5), Mutandahwe (ward 29), and 5-Mahenye (ward 30)	Include: Nebiri (wards 7 and 8) , Musambakaruma (wards 9 and 10)
Estimated number of households	6,749	2,395
Local languages	Shangani	Tonga, Shona
Sources of community livelihoods	-Small-scale substance and cash crop farming -Small scale livestock production	-Small scale subsistence and cash crop farming -Very little livestock production due to tsetse fly prevalence
Ecotourism projects	CAMPFIRE	CAMPFIRE
Potential conflicts between PAs and communities		
<i>Community benefits from PAs</i>	Mainly CAMPFIRE benefits	-Employment benefits -CAMPFIRE benefits
<i>Human-wildlife conflict</i>	Loss of crops and livestock	Minimal crop and livestock destruction
<i>Compensation for losses from wildlife</i>	No compensation	No compensation
<i>Community involvement in decision-making</i>	Limited involvement only in CAMPFIRE management	Limited involvement only in CAMPFIRE management

Source: Extracted from Mutanga *et al.* (2016b). *Notes:* CAMPFIRE is a form of Community-Based Natural Resource Management (CBNRM) project implemented in Zimbabwe. Due to NGOs and the private sector pulling out of many of the CAMPFIRE projects, the economic benefits to communities have declined significantly, and the

projects have degenerated as model examples of ecotourism projects (Chiutsi *et al.*, 2011). Six or seven villages make up a ward (Gandiwa *et al.*, 2013a).

8.2.2 Data collection

This study is part of a broader study on tourism and wildlife management in Zimbabwe whose main objective is to generate information that would contribute towards the understanding of the interactions between PA-community relationships and nature-based tourism which is generally aimed at improving both wildlife conservation and tourism in developing countries such as Zimbabwe. A close-ended questionnaire was used to determine tourist perceptions on the threats to the sustainability of wildlife tourism following Muboko *et al.* (2016a). Seven items derived from literature review, i.e., illegal hunting, destruction of wildlife habitats, human-wildlife conflict, lack of involvement of local people in national park tourism, lack of benefits from the national park to local communities, negative attitudes towards tourism by local residents, and poor local community and national park relationships, were measured using a 5-point Likert scale where respondents were asked to indicate the extent to which they agreed or disagreed that each of the items was a threat to the sustainability of wildlife tourism on the scale (1 = strongly disagree; 2 = disagree; 3 = undecided; 4 = agree and 5 = strongly agree). We used this scale to determine the seriousness of the threats where 'strongly disagree' represented the least serious threats while 'strongly agree' represented the most serious threats.

Data were collected in December 2015 with the target population for this study consisting of local and foreign tourists (day and overnight) who visited both Gonarezhou and Matusadona National Parks during this period. Convenience sampling was used to select respondents, where we targeted every tourist into the parks who was willing to take part in the study. Park staff at the park entrances who had received instructions about the objectives of the study and the details of the questionnaires administered the questionnaires to tourists above 18 years of age (commonly regarded the maturity age) as they entered the park. Where tourists were travelling in a group, all those who were above the age of 18 were invited to participate in the survey. Respondents completed the questionnaires at their own time and dropped them off at the reception as they checked out. Formal consent was obtained from every respondent that participated in the survey. Based on the tourist

visitation statistics for the month of December between 2010 and 2014, about 279 ± 53 (mean \pm standard error) tourists visited Gonarezhou National Park and about 117 ± 19 tourists visited Matusadona National Park. Thus, a total of 119 questionnaires were distributed in Gonarezhou with 67 valid questionnaires returned (response rate = 56%; sampling intensity = 24%) whereas 72 questionnaires were distributed in Matusadona with 61 valid questionnaires returned (response rate = 85%; sampling intensity = 52%). According to Baruch (1999), acceptable response rate for surveys maybe about $\pm 60\%$. As such these response rates and sampling intensities were considered sufficient. A total of 46% ($n = 59$) males and 54% ($n = 69$) females responded to the questionnaires. About 28% ($n = 36$) were above 55 years of age, and 25% ($n = 32$) were aged between 26 and 35. Most of the respondents had university education ($n = 67$, 52%). There were 42% ($n = 54$) local respondents, 30% ($n = 38$) regional respondents, and 28% ($n = 36$) international tourists. Local tourists are tourists who travel from their normal places of residence but within the same country, regional tourists are those who visit within a defined geographic region, for example, the Southern African Development Community (SADC), and international visitors are those who travel outside their countries of residence usually to another continent or any other defined geographical regions (Tureac and Turtureanu, 2010).

8.2.3 Data analysis

We summarised the data using descriptive statistics (see Appendix 8.1) and used the mode to determine the scores that occurred most frequently in the data sets and the range to quantify the dispersion of scores in the data (Field, 2009). The mode was used to determine the perceptions of the majority of tourists per each identified threat. Kruskal-Wallis Analysis of Variance (ANOVA) tests were used to determine differences in tourist perceptions of the threats to the sustainability of wildlife tourism among local, regional and international tourists. Where there were differences, post-hoc examination of the mean ranks was done to determine the differences. Mann-Whitney *U* tests were used to ascertain overall differences in tourist perceptions on the threats of wildlife tourism sustainability between Gonarezhou and Matusadona National Parks using the Statistical Package for the Social Sciences (SPSS) Version 20.0 (SPSS, Inc, Chicago, IL, USA).

8.3 Results

All respondents among the three categories (local, regional and international) generally had similar views on the seven tested factors and their influence as threats to wildlife tourism (Table 8.2). For Gonarezhou National Park, a significant difference was only recorded for perception of lack of involvement of local people in protected area tourism with the majority of the regional (86%, $n = 19$) and international respondents (69%, $n = 11$) indicating that lack of involvement of local people in national park tourism was a threat to the sustainability of wildlife tourism while majority of the local respondents (59%, $n = 17$) were undecided. Similarly, in Matusadona National Park, a significant difference was only recorded in the perception of negative attitudes towards tourism where the majority of the local respondents (52%, $n = 13$) and regional respondents (50%, $n = 8$) showed that negative attitudes towards tourism by local residents was a threat to the sustainability of wildlife tourism, while the majority of the international respondents (60%, $n = 12$) were undecided.

Table 8.2: Differences in tourists' perceptions of the threats to the sustainability of wildlife tourism in Gonarezhou and Matusadona National Parks, Zimbabwe. Values are the mode and range in parenthesis. Rating scale: 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree. N: sample size; df: degrees of freedom. Values with different superscript letters within rows differ significantly (Kruskal-Wallis ANOVA test specific comparisons; $P < 0.05$).

Threat	Tourist category			N	df	Kruskal-Wallis	P value
	Local	Regional	International				
<i>Gonarezhou NP respondents</i>	(n = 29)	(n = 22)	(n = 16)				
Illegal hunting	5(1)	5(0)	5(1)	67	2	1.45	0.484
Destruction of wildlife habitats	5(1)	5(1)	5(1)	67	2	0.39	0.822
Human-wildlife conflict	5(4)	5(2)	5(3)	67	2	1.11	0.573
Lack of involvement of local people in national park tourism	3(4) ^a	4(3) ^b	5(3) ^b	67	2	5.15	0.014*
Lack of benefits from national park to local communities	4(3)	5(4)	5(3)	67	2	5.56	0.062
Negative attitudes towards tourism by local residents	4(3)	4(4)	5(3)	67	2	1.54	0.462
Poor local community and national park relationships	4(3)	5(3)	5(3)	67	2	2.95	0.229
Overall	4(2)	5(2)	5(2)	-	-	-	-
<i>Matusadona NP respondents</i>	(n = 25)	(n = 16)	(n = 20)				
Illegal hunting	5(1)	5(0)	5(1)	61	2	2.62	0.270
Destruction of wildlife habitats	5(3)	5(0)	5(1)	61	2	4.17	0.125
Human-wildlife conflict	5(4)	5(3)	5(3)	61	2	0.82	0.665
Lack of involvement of local people in national park tourism	5(4)	5(3)	5(3)	61	2	1.43	0.489
Lack of benefits from national park to local communities	5(4)	5(4)	5(3)	61	2	0.28	0.869
Negative attitudes towards tourism by local residents	5(4) ^a	5(4) ^a	3(3) ^b	61	2	1.80	0.047*
Poor local community and national park relationships	5(4)	5(3)	4(3)	61	2	3.87	0.144
Overall	5(3)	5(2)	5(2)	-	-	-	-

While all threats were indicated as serious by respondents from both Gonarezhou and Matusadona National Parks, illegal hunting was ranked the most severe, followed by destruction of wildlife habitats, and human-wildlife conflict. Overall, no significant differences were recorded in tourists' perceptions of the threats to the sustainability of wildlife tourism between Gonarezhou and Matusadona National Parks (Table 8.3).

Table 8.3: Comparison of tourists' perceptions on the threats of wildlife tourism sustainability between Gonarezhou and Matusadona National Parks, Zimbabwe. Notes: Rating scale: 1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree. N: sample size; Mann-Whitney *U* Test specific comparisons, $P < 0.05$.

Threat	Study site		N	U value	Z-value	P value
	Gonarezhou (n = 77) Mean (Ranking in terms of severity)	Matusadona (n = 61) Mean (Ranking in terms of severity)				
Illegal hunting	4.97 (1)	4.92 (1)	128	2239.50	(-1.13)	0.259
Destruction of wildlife habitats	4.96 (2)	4.80 (2)	128	2075.00	(-2.75)	0.078
Human-wildlife conflict	4.43 (3)	4.18 (3)	128	2049.50	(-1.87)	0.061
Lack of involvement of local people in national park tourism	3.90 (7)	3.97 (4)	128	2168.50	(-0.36)	0.721
Lack of benefits from national park to local communities	3.93 (6)	3.87 (6)	128	2226.00	(-0.87)	0.387
Negative attitudes towards tourism by local residents	4.06 (4)	3.77 (7)	128	2058.00	(-2.55)	0.157
Poor local community and national park relationships	3.94 (5)	3.89 (5)	128	2067.00	(-1.93)	0.053

8.4 Discussion

We determined and rated tourist perceptions on the threats to the sustainability of wildlife tourism in two large Zimbabwean state protected areas. Respondents from Gonarezhou and Matusadona National Parks largely had similar views on the seven rated items where each of the items was rated a threat to the sustainability of wildlife tourism. However, differences in perception of lack of involvement of local people in national park tourism were recorded among tourist categories in Gonarezhou National Park. This difference emanated from regional and international tourists who ranked this item as a serious threat taking the global perspective that if locals are not involved in tourism, they may not have sufficient sources of income and may therefore resort to illegal harvesting of wildlife (Tessema *et al.*, 2010, Allendorf *et al.*, 2006). Moreover, tourist views on threats, wildlife tourism and conservation are shaped by framing in the media and hence perceptions can vary between local, regional and international tourists due to variations in sources of media used to gather wildlife related information (Gandiwa *et al.*, 2014a).

Local tourists perceived lack of involvement of local people in national park tourism activities to have moderate impact on the sustainability of wildlife tourism. Local tourists may identify with local communities who live adjacent to the parks. These local communities who may be benefiting from national park tourism (for example through employment in lodges or as tour guides, or through revenue earned from the sale of curios and artifacts to tourists), and from Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) whose benefits include game meat from hunted game and infrastructural developments (Gandiwa *et al.*, 2013a) may have no motive to threaten wildlife tourism as it is may be an important source of income for them. Elsewhere, in Volcanoes National Park, Rwanda, Sabuhoro *et al.* (2017) attributed the threats in mountain gorilla tourism opportunities to limited access to tourism benefits as well as lack of community involvement and participation in the park management and decision-making process.

Differences in negative attitudes towards tourism by local tourists were recorded among tourist categories in Matusadona National Park. According to Sekhar (2003), local people see tourism as a way to satisfy their economic needs or desires, or to associate themselves with the privileged lifestyles displayed by tourists, hence if they are involved in tourism, they support it. However, where there is lack of direct economic benefits, restricted access to natural resources, inequitable distribution of tourism benefits, ineffective problem animal control and lack of compensation against wildlife-induced losses, local communities usually develop negative attitudes towards protected area tourism (Chiutsi and Saarinen, 2017). Where local communities have negative attitudes towards tourism, they engage in activities that are detrimental to conservation, for example, illegal hunting or collaboration with external poachers (Ebua *et al.*, 2011). International tourists perceived negative attitudes towards tourism by local residents to have moderate impact on the sustainability of wildlife tourism. This corroborates with some studies that have shown that local attitudes have little influence on the success of wildlife conservation which can be attributed to the fact that some protected areas have more resources which they can use against communities during disagreements (Young *et al.*, 2013, Brockington, 2004).

All threats were indicated as serious by respondents from both Gonarezhou and Matusadona National Parks with the most severe being illegal hunting, destruction of wildlife habitats, and human-wildlife conflict. Generally, there were no significant differences in tourists' perceptions of the threats to the sustainability of wildlife tourism between Gonarezhou and Matusadona National Parks. This implies that tourists' views on threats in the two parks are similar. Illegal hunting was ranked the most serious threat to the sustainability of wildlife tourism. In view of that, Milliken and Shaw (2012) and Gandiwa *et al.* (2013b) suggested that the sustainability of wildlife conservation is mostly compromised by high prevalence of illegal hunting. Similarly, it has been reported that tourists are also concerned about illegal hunting and its impact on wildlife conservation and tourism (Muboko *et al.*, 2016a). Accordingly, the UNWTO (2014) reported that illegal hunting have a deteriorating effect on the tourism experience due to reduced wildlife populations and poor tourist-wild animal encounter rate or sightings. Destruction of wildlife habitats and human-wildlife conflict were also ranked as serious threats to the sustainability of wildlife tourism by tourists from both Gonarezhou and Matusadona National Parks. Habitat loss and destruction due to human encroachment and wildfires has remained the leading threats to biodiversity and are probably the most common causes for the extinction of species (Mamo and Bekele, 2011, Bagchi *et al.*, 2004, Floyd *et al.*, 2003).

Furthermore, conflict between people and wildlife today undoubtedly ranks among the main threats to conservation in Africa (Treves and Karanth, 2003, Conover, 2002). For instance, the killing of wild animals in retaliation for incidents of human-wildlife conflict is a common phenomenon, and several species of large carnivores such as lions (*Panthera leo*) or spotted hyenas (*Crocuta crocuta*) have been eliminated in some areas in response to human-wildlife conflict (Chardonnet, 2002). Earlier studies have highlighted that in some areas human-wildlife conflict negatively affects protected area-local community relationships which in turn leads to unsustainable behaviours by communities such as illegal hunting and habitat destruction which threaten the continued existence of wild animal species (Mutanga *et al.*, 2016a, Mutanga *et al.*, 2015). Given that wild animals feature as a significant part of the experience in wildlife tourism (Ballantyne *et al.*, 2011),

it is likely that the depletion of wild animal species and populations greatly threatens the sustainability of wildlife tourism.

The strength of wildlife and biodiversity represent assets of significant value for African tourism. However, if not designed and managed in an innovative and sustainable way, tourism development does not benefit all. Tourism may even disrupt the livelihoods upon which communities rely, for example, by restricting access to protected areas where they had traditionally gathered products needed for their daily lives. However, there is potential in Zimbabwe's rich natural resources for sustainable tourism while providing a much needed local drive to support the conservation of wildlife and natural areas. Our results illustrate that wildlife resources are threatened and point to the fact that sustainable tourism could be locally managed. This indicate to the need for innovative approaches to enhancing livelihoods through tourism especially through developing local economic activities considering that these communities currently have few opportunities for villagers to earn income. This could be done by coming up with innovative ways of establishing and stimulating community collaboration to produce local tourism products which could help conserve wildlife, educate communities, as well as maintain biodiversity. For example, improving or establishing ecolodges within communities or community tourism products like village walks, provision of display places for selling handcrafts, and entertainment of tourists which can provide economical alternatives to destructive practices such illegal harvesting of wildlife. Community based tourism development can thus lead to the empowerment of local people that ultimately results in sustainable livelihoods. Through employment with community-based ecotourism projects, communities are able to earn much-needed tourism-generated revenues that replace income earned through destructive practices such as illegal game hunting, logging for fuel and over-fishing for food supplies. Community-based ecotourism projects can therefore enable the communities to link an important source of income with the conservation of wildlife. This is fundamental in promoting good local community and protected area relationships (Mutanga *et al.*, 2015, Fischer *et al.*, 2011), which are important for wildlife conservation.

Strategic networks between Government authorities, conservation agencies, the private sector, Non-Governmental organisations, and the communities may be important to

support local community tourism and assist the local people with establishment and sustainability of their operations and activities, as well as inform continued innovation in community tourism development. This could be through enhancing local capacity building in research, planning, and management of natural resources as this is important for sustainable tourism and profit realisation. Hitchner *et al.* (2009) point out that local organisations must guide the vision, pace, and trajectory of ecotourism development within communities. However, using a tree metaphor, Saurombe *et al.* (2017) argue that for community projects to be successful, the community, with the support of the relevant government ministries and the tourism industry, should provide strength and support for the projects like the trunk does for the whole tree.

8.5 Conclusion and recommendations

The study aimed at evaluating threats to the sustainability of wildlife tourism and based on our findings, we conclude that all the evaluated threats are serious with the most perceived serious threats being illegal hunting, destruction of wildlife habitats and human-wildlife conflict. We conclude that despite some differences observed between tourist categories in Gonarezhou National Park on lack of involvement of local people in national park tourism as a threat to the sustainability of wildlife tourism and in Matusadona National Park on attitudes towards tourism by local residents as a threat to the sustainability of wildlife tourism, no significant differences exist in tourists' perceptions of the threats to the sustainability of wildlife tourism between Gonarezhou and Matusadona National Parks.

To enhance the conservation and management of the wildlife resource, park management can boost conservation and tourism benefits to local communities so as to promote positive relationships between local communities and protected areas. It is also necessary for park management to increase law enforcement measures so as to minimise illegal resource harvesting. This can ensure the sustainability of wildlife conservation and tourism. Wildlife conservation influence the future of travel and recreation considering that protected areas, especially those in developing countries, are increasingly becoming popular destinations for wildlife tourists. Wildlife tourists are becoming more environmentally conscious (Balmford *et al.*, 2015), and as such the ability of protected areas to continuously offer the remoteness and natural attractiveness which tourists desire

in destinations is important to ensure good tourism experiences and positive perceptions about the destinations.

8.6 Acknowledgements

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Appendix 8.1: Descriptive statistics for tourist perceptions of the threats to the sustainability of wildlife tourism in Gonarezhou and Matusadona National Parks

Item	Mean	Standard deviation	Skewness	Kurtosis
Gonarezhou National Park				
Illegal hunting	4.96	0.21	-4.51	18.85
Destruction of wildlife habitats	4.87	0.34	-2.19	2.90
Human-wildlife conflict	4.43	0.82	-1.64	3.35
Lack of involvement of local people in national park tourism	3.90	0.96	-0.54	-0.11
Lack of benefits from national park to local communities	3.93	0.97	-0.66	-0.02
Negative attitudes towards tourism by local residents	4.06	0.90	-0.76	0.49
Poor local community and national park relationships	3.94	0.97	-2.29	-1.16
Matusadona National Park				
Illegal hunting	4.92	0.28	-3.13	8.03
Destruction of wildlife habitats	4.80	0.54	-3.37	12.90
Human-wildlife conflict	4.18	1.13	-1.29	0.72
Lack of involvement of local people in national park tourism	3.97	1.15	-0.88	-0.20
Lack of benefits from national park to local communities	3.87	1.16	-0.73	-0.45
Negative attitudes towards tourism by local residents	3.77	1.20	-0.55	-0.84
Poor local community and national park relationships	3.89	1.11	-0.59	-0.71

CHAPTER 9: An analysis of tourist trends in northern Gonarezhou National Park, Zimbabwe, 1991–2014*‡

*‡ *A revised version of this Chapter is under review as:*

Mutanga, C. N., Gandiwa, E. and Muboko, N. An analysis of tourist trends in northern Gonarezhou National Park, Zimbabwe, 1991–2014. *Cogent Social Sciences*.

Abstract

The objectives of this study were to: (i) determine trends in tourists' arrivals in northern Gonarezhou National Park for the period 1991-2014, and (ii) compare trends in arrivals among local, regional and international tourists, as well as among overnight and day visitors. Tourist visitation data were collected from the park's tourist records. For each of the years, we totaled the estimated number of visits into the park for every month, and then summed these totals across the whole year. To determine tourist trends, we used descriptive analyses (frequencies), and line and column graphs. An increase in tourist arrivals was recorded between 1991 and 1998 and between 2008 and 2014, while decline was recorded between 1999 and 2007. We concluded that tourism is volatile and its success depends on the destination's ability to manage the destination's image and a number of challenges that can easily alter visitor flows.

Keywords: community, image, protected area, tourist arrivals, wildlife tourism

9.1 Introduction

Over the years tourism has rapidly grown and it is an important sector for many regions and countries all over the world (UNWTO, 2016). There has also been a growing demand for recreation and recreational facilities and activities close to home where people can spend their leisure time (Torkildsen, 2005). Baud-Bovy (2002) define leisure as free time available to the individual when the disciplines of work, sleep and other basic needs have been met, while recreation covers any pursuit taken up during leisure time other than those to which people have a high commitment. Recreational activities can be home-based, for example, reading and watching television, or outdoor, for example, sports, theatre, cinema, driving for pleasure, walking, picnicking, and day excursions to parks and beaches as well as leisure tourism involving overnight stay like longer distance travel, tours, weekend breaks, holidays and vacations (Tribe, 2005).

Participation in recreational activities is associated with benefits such as enhancing one's self-image, developing/maintaining interpersonal relationships, developing a valued identity, having pleasurable experiences and enhancing quality of life and well-being (MacCosham, 2017, Stebbins, 2015). Recreation services are important assets for the prosperity of destinations considering that they often represent a significant share of the total economic activity in a destination and are recognised as essential for the attractiveness of a region (Öner and Klaesson, 2017). Tourism, where recreation is the main tourist activity and often referred to as recreational tourism, is seen as a form of leisure that takes place away from home (Goeldner and Ritchie, 2012). However, travel for non-leisure purposes is also often included in tourism, for example, business and conference travel, although such travellers generally mix business and pleasure (Gjorgievski *et al.*, 2013). People's participation in recreation and leisure is a process made to satisfy their needs and this partly explains why people choose certain destinations over others. Some destinations such as protected areas in developing countries are increasingly becoming popular for wildlife tourists (Job and Paesler, 2013, Newsome *et al.*, 2005). This is because protected areas are synonymous with wild life, e.g., the 'Big Five' in Africa and other charismatic species which offer tourists the opportunity to see and gain an understanding of a wide variety of species (Ballantyne *et al.*, 2011). Moreover, protected areas offer the remoteness, and natural attractiveness which some environmentally

conscious tourists desire in destinations (Balmford *et al.*, 2015) and which enhance tourists' enjoyment of nature (Job and Paesler, 2013, Bateman, 2011).

Nature and/or wildlife tourism has emerged as one of the fastest-growing segments of the industry (Jones and Ohsawa, 2016, UNWTO, 2014). Wildlife tourism is a niche for the tourism business, concentrating on visitor interaction with wildlife resources (Higginbottom, 2004). Wildlife watching and photography is a part of wildlife tourism that comprises watching, observing, listening to and photographing wild animals in their natural environment. Gogoi (2014) defines photographic tourism as that form of special interest tourism in which tourists visit a particular place with the primary aim of photographing subjects that are unique to them. Wildlife tourism has the potential to generate sustainable local benefits that can also act as incentives for local people to support wildlife conservation and increase national revenue (Walpole and Goodwin, 2001). The success of wildlife conservation is important for tourism considering that wild animal abundance and diversity are among the common motives for visiting protected areas (Gandiwa, 2011). Thus, protected areas need to ensure that biodiversity is effectively conserved, that there are harmonious relationships with the neighbouring communities (Mutanga *et al.*, 2015, Holmes, 2013, Buscher and Whande, 2007), and good marketing strategies among other factors as a way of promoting both tourist arrivals and receipts (Tsiotsou and Goldsmith, 2012, Tsiotsou and Vlachopoulou, 2011, Knowles *et al.*, 2001).

There has been a steady growth in tourism in recent years (UNWTO, 2016). The main causes of the development of tourism include peaceful relations among nations, income growth in developed countries that allows them to spend money on travel, dissemination of culture and education, advances in the development of transport and developing media (Bader, 2010, Honey and Gilpin, 2010, Kanjilal, 2008). However, tourism is a very volatile industry and a number of challenges are encountered in this industry which can easily alter visitor flows. Considerable research efforts have thus been devoted to factors that affect tourism (Saha and Yap, 2015, Karambakuwa *et al.*, 2011, Honey and Gilpin, 2010). Some of these common factors include terrorism, civil unrests, disease pandemics, global financial crisis (Saha and Yap, 2015), depletion of natural resources, limited accommodation, poor transport infrastructure and communication

technologies development, and natural hazards (Bader, 2010, Kanjilal, 2008, Goeldner and Ritchie, 2006b). Knowledge of these factors is important especially in protected area management so that budgets can be effectively directed towards mitigation of high priority impacts which have the potential of reducing both wild animal populations and tourist numbers.

Tourist visitation monitoring is an important part of the management policy of protected areas in many countries (Bell *et al.*, 2007). Understanding of tourists' arrival trends is essential for protected area planning in terms of infrastructure, carrying capacities and impacts on ecosystems. The most common visitation information measured by protected areas includes number of visits, duration of visit and socio-economic factors such as sex, age, income and region or country of residence, length and means of travel and amount of money spent, the level and type of participation in recreation activities, visitor satisfaction, motives and the expectations of visit and experiences. However, much is less publicised on the trends in tourists visits to the world's protected areas in general (Jones and Ohsawa, 2016, Balmford *et al.*, 2015) and in Zimbabwe in particular. In most countries there is no long term monitoring or statistics of tourist visitation which makes it less easy to determine the trends (Bell *et al.*, 2007). In working towards addressing this problem, Gonarezhou National Park (hereafter, GNP), Zimbabwe was chosen as a case study given that some dynamics have occurred between 1991 and 2014 which may have affected wildlife conservation and photographic tourism, e.g., drought and economic crisis, land reforms and political instability (Gandiwa *et al.*, 2014a). This study sought to: (a) determine trends in tourists' arrivals in northern GNP for the period 1991-2014, (b) compare trends in arrivals (i) among local, regional and international tourists, and (ii) between overnight and day visitors to northern GNP for the period 1991-2014.

9.2 Methods and Materials

9.2.1 Study area

GNP, whose coordinates are 21° 00'–22° 15' S and 30° 15'–32° 30' E (Figure 9.1) was purposively selected as a case study because of its rich wildlife conservation history. GNP, which is the second largest national park in Zimbabwe after Hwange National Park is widely known for the wilderness experience and its exceptional landscapes which include

Chilojo Cliffs and Red Hills. The park and its surrounding areas have been part of the Great Limpopo Transfrontier Conservation Area since 2002 together with Limpopo National Park in Mozambique and Kruger National Park in South Africa. GNP is composed of two distinct units, i.e., Chipinda Pools, referred to as northern GNP (3,000 km²) in the northern section and Mabalauta, southern GNP (2,000 km²) in the southern section of the park. Since its creation in the 1930s as a game reserve and its later proclamation as a national park in 1975, it was solely managed by the Department of National Parks and Wildlife Management (DNPWLM) now Zimbabwe Parks and Wildlife Management Authority (ZPWMA) up to 2003. As from 2004, the ZPWMA was operating as a parastatal following its transformation from the then Department of National Parks and Wildlife Management after the amendment of Zimbabwe's Parks and Wildlife Act (Chapter 20:14) of 1996 which resulted in direct increase in funds available for park management (Gandiwa *et al.*, 2013b). From 2007, GNP has been managed under a public-private partnership arrangement between the Zimbabwe Parks and Wildlife Management Authority and Frankfurt Zoological Society.



Figure 9.1: Location of Gonarezhou National Park and its two management sites, Chipinda Pools and Mabalauta in southeast Zimbabwe.

GNP opened for tourism in 1968, but was closed between 1976 and 1982 due to Zimbabwe's war of national liberation (Goodwin *et al.*, 1997). The park was re-opened in 1982, but in 1984 civil conflicts in the neighbouring Mozambique led to the park being closed again to tourists for the period 1988 to 1989. The park was re-opened to tourists in 1990 (Goodwin *et al.*, 1997). Chipinda Pools, in northern GNP, is the main entry point with 80% of the total visitors to GNP and is the focus of this study on the tourist visitation component. Tourists are classified into three categories: (i) local/domestic tourists, who travel from their normal places of residence but within the same country; (ii) regional tourists, who visit within a defined geographic region, for example in this case, the Southern African Development Community (SADC) region; and (iii) international tourists, who travel outside their countries of residence and their regions usually to another

continent or any other defined geographical region (Tureac and Turtureanu, 2010). In this present study, the term ‘tourist’ is used to refer to both overnight and day visitors.

Tourism facilities and attractions in northern GNP include tented camps, camp sites, waterfalls, cliffs and natural water pans. The park is endowed with a wide variety of large carnivores, e.g., leopard (*Panthera pardus*) with a population estimated at 388, lion (*Panthera leo*) with population estimates of 125, spotted hyena (*Crocuta crocuta*) whose population was estimated at 642 (Groom *et al.*, 2015), and large herbivores, e.g., Cape buffalo (*Syncerus caffer*) with a population estimated at 6,691; African elephant (*Loxodonta africana*) with population estimates of 11,120; and Plains zebra (*Equus quagga*) whose population was estimated at 1,368 (Dunham and van der Westhuizen, 2015).

9.2.2 Data collection and analysis

This paper is part of a bigger study generally aimed at improving both wildlife conservation and tourism in developing countries. Secondary data were used in this study. We collected historical data of visitor inflows to northern GNP between 1991 and 2014 from the Chipinda Pools Administration Offices in December 2015. For each of the years, we estimated total tourists visits per year by totalling the estimated number of visits into the park for every month from January to December, and then summing these totals across the whole year. We compiled counts of visits to the park which we categorised into day visitors and overnight visitors. Following Wood *et al.* (2013) and Balmford *et al.* (2015) we counted a day visit (when a person spends at least a portion of a day in the park) as a visit and overnight(s) stay as a single visit. Each of these visitor categories was further divided into local, regional, and international visitors. In some cases (though very few) data were unavailable for some days within the months or for the whole months. There may also be some biases in visit data, for example, probably leading to systematic under-reporting of tourists visits (Cochrane, 2003). Such errors could not be addressed but could mean that our aggregate estimates of tourists visits are probably conservative (Balmford *et al.*, 2015). Permission to collect the secondary data was obtained from the Zimbabwe Parks and Wildlife Management Authority in December 2015.

Data were tested for normality using the Shapiro-Wilk test (Razali and Wah, 2011, Shapiro and Wilk, 1965) and tourist data were found to be not normal (even after $\log(x + 1)$). We therefore used descriptive statistics (frequencies) to determine trends in tourists' arrivals. We averaged tourists' visits across the years for which we had data, and the statistics were used to plot line and column graphs for local, regional and international tourists, and for overnight and day visitors using Microsoft Excel Version 2007.

9.3 Results

An increase in tourist arrivals was recorded in northern GNP between 1991 and 1998 whereas a decline in tourist arrivals was recorded between 1999 and 2007 with an increase in tourist arrival being recorded thereafter, i.e., between 2008 and 2014. Tourist arrivals in 2014 were lower than those of the 1990s (Figure 9.2). The average tourist visitation per year was $3,636 \pm 557$ (mean \pm standard error), the highest year being 1998 with 11,181 tourists while 2003 was the lowest with 1,581 tourists.

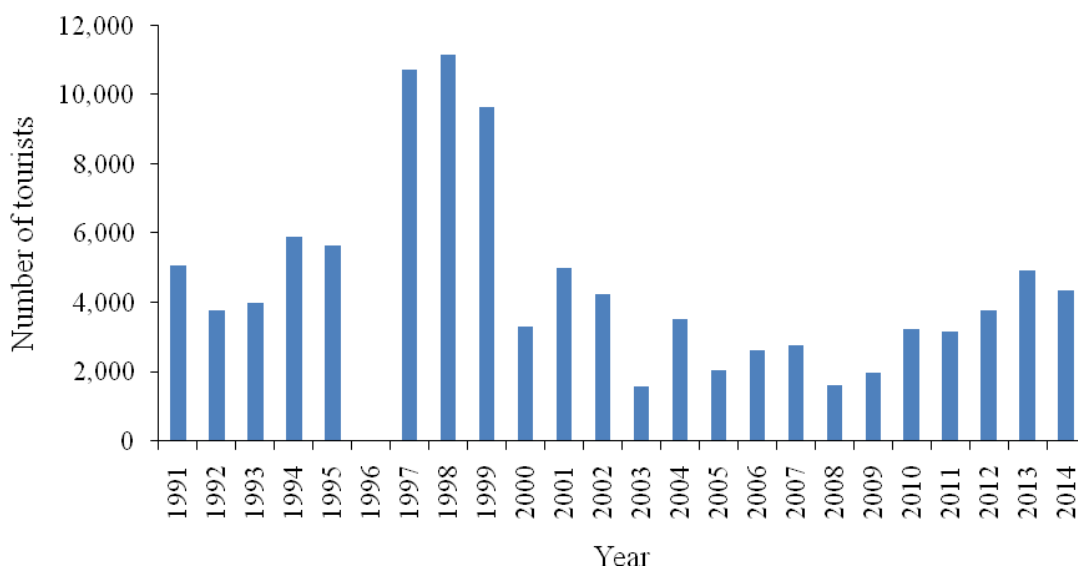


Figure 9.2: Trend in total number of visitor arrivals in northern GNP, Zimbabwe from 1991 to 2014. Notes: data were unavailable for the year 1996. Source: Chipinda Pools' tourist records.

More local tourists (81%) were recorded between 1991 and 2014 as compared to regional (11%) and international tourists (8%, Figure 9.3). About 84,206 local tourists, with an average visitation of $3,661 \pm 464$ visited northern GNP, with the highest recorded number of local tourists at 9,115 in 1997 and the lowest 1,359 in 2008. Regional tourists who visited northern GNP were about 11,540 with an average visitation of 502 ± 82 with the highest number of tourists (1,292) recorded in 1998 and the lowest (97) was recorded in 2000. The total number of international tourists was 8,573 and the average visitation per year was 371 ± 70 , the highest year being 1998 with 1,312 tourists while 2003 was the lowest with 35 tourists.

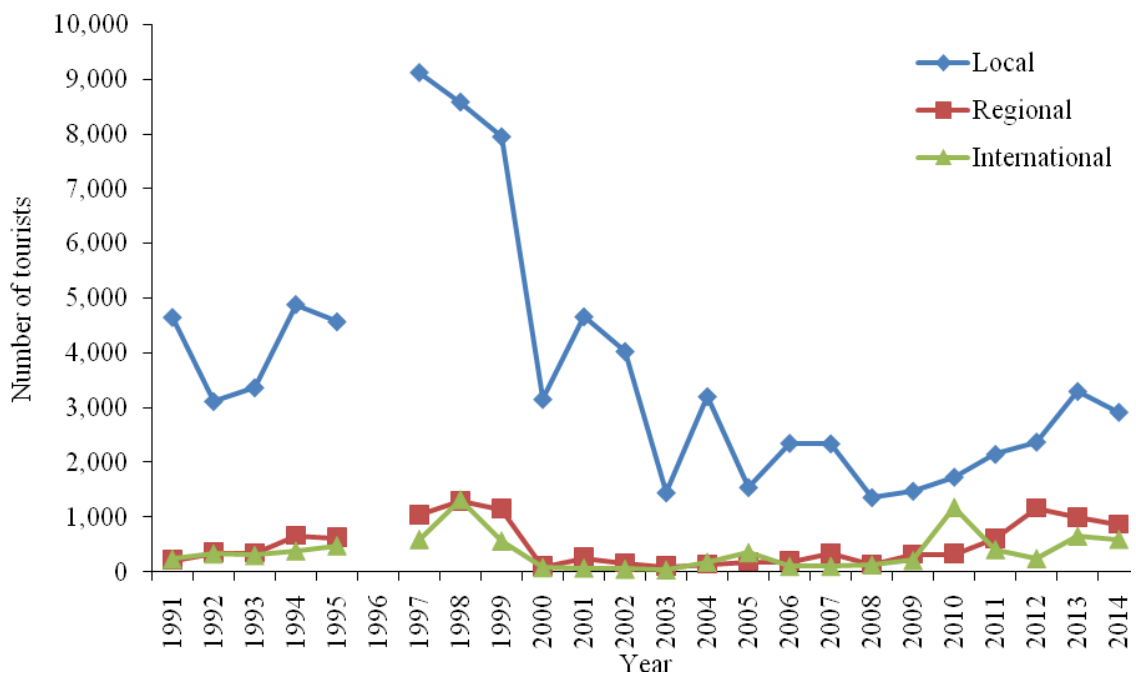


Figure 9.3: Trends in local, regional and international tourist arrivals in northern GNP, Zimbabwe, 1991-2014. Notes: data were unavailable for the year 1996. Source: Chipinda Pools’ tourist records.

Overnight visitors were generally fewer (43%) than day visitors (57%) between 1991 and 2014 (Figure 9.4). The total number of overnight tourists was 41,014 with an average visitation per year of 1.783 ± 177 and the highest year being 1999 with 3,493 tourists while 2005 was the lowest with 730 tourists. There were about 63,269 day visitors

who visited northern GNP, with an average visitation of $2,751 \pm 418$ and the highest recorded number of day visitors was 8,021 in 1998 while the lowest was 632 in 2008.

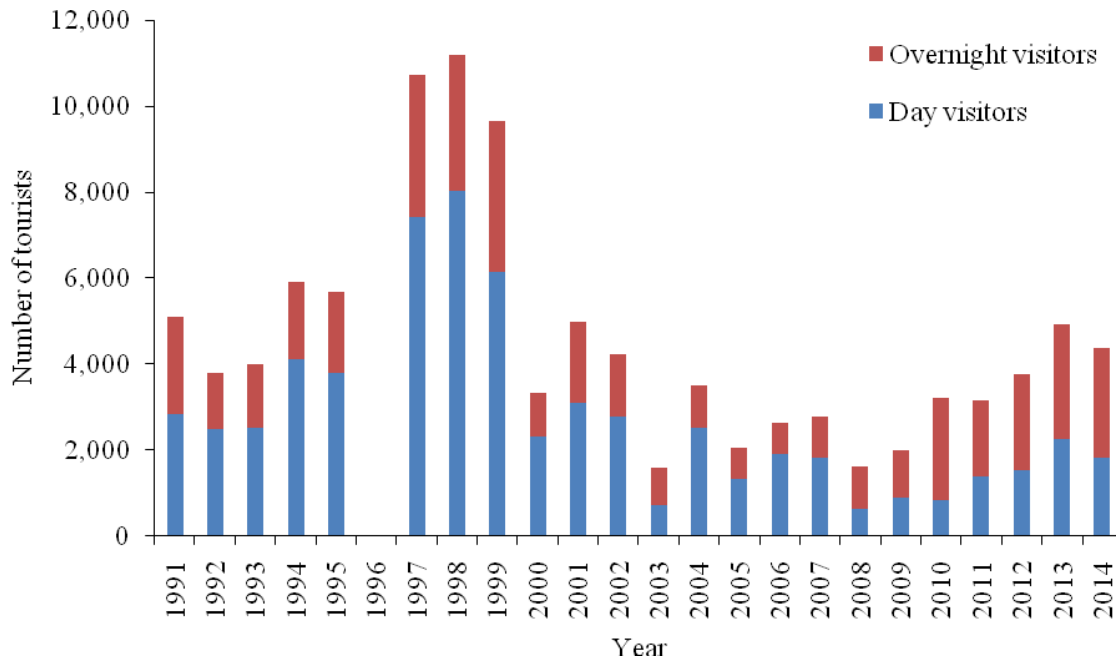


Figure 9.4: Trends in day and overnight visitor arrivals in northern GNP, Zimbabwe, 1991-2014. Notes: data were unavailable for the year 1996. Source: Chipinda Pools' tourist records.

9.4 Discussion

Our results showed that there were some variation in the temporal tourist visitation to northern GNP characterised by an increase in tourist arrivals recorded between 1991 and 1998, whereas a decline was recorded between 1999 and 2007, whilst an increase was recorded between 2008 and 2014. Factors that could have affected the trends in visitation to northern GNP and Zimbabwe in general include the peace and positive image of the country after the national unity of 1987 (ZTA, 2014) which contributed to the general increase in visitor inflows in the period between 1990 and 1999. Moreover, in the period between 1997 and 1999, tourist arrivals were very high in northern GNP as compared to the other years which can be attributed to the 1997 Convention on International Trade in

Endangered Species of Wild Fauna and Flora (CITES) Conference which was held in Harare, Zimbabwe, which likely resulted in a spill-over effect of tourist visitation to nature-based tourist destinations in the country. The decline in tourist numbers between 2000 and 2008 in northern GNP could be attributed to the unstable political situation and economic depression in the country associated with the fast track land reform (Scoones *et al.*, 2011), especially the negative media publicity. Tourism industry is highly sensitive to insecurity and so politically unstable countries tend to be considered unsafe destinations to visit (Saha and Yap, 2015, Issa and Altinay, 2006). Finally, the increase in visitor numbers between 2009 and 2014 in northern GNP could be attributed to a number of factors which included aggressive tourism marketing, countering negative media publicity, the adoption of a multi-currency regime, and the wildlife-based land reform which started in 2004 resulting in a peaceful environment between protected area staff and local communities and an improved economic and political environment in Zimbabwe.

The increase in visitor inflows to northern GNP as from 2009 could also be attributed to changes in management regimes following the establishment of the conservation partnership arrangement. In 2007, the Government of Zimbabwe signed a Memorandum of Understanding with the Frankfurt Zoological Society (FZS) which led to technical and financial support to park management and infrastructural development in GNP. Thus, the partnership led to improved infrastructure which facilitated enhanced access into the park and increased accommodation facilities, i.e., tented camps. Moreover, law enforcement was improved and a boundary or veterinary control fence was established in the northern part of park (Mutanga *et al.*, 2016b, Gandiwa *et al.*, 2012). Although the establishment of the boundary fence might have negatively affected the relationship between park staff and local communities, it managed to help minimise illegal activities inside the park such as encroachments by livestock and people and illegal resource harvesting thus providing secure habitats for wildlife and better quality wildlife tourism experiences.

Furthermore, the increase in tourists from 2009 could be attributed to positive perceptions of the destination by the tourists. According to Muboko *et al.* (2016a), the framing of tourist perceptions is influenced by events occurring or perceived to be present

at a given protected area, hence the positive perception about Zimbabwe during this period might have led to an increase in tourist numbers. For example, the policy of reconciliation adopted by the Government in 1987 produced positive results by creating an image of Zimbabwe as a peaceful destination (Ndlovu, 2009). From this period up to around 1999, Zimbabwe's popularity as a tourist destination increased as a result of the country's positive image in source markets which saw the tourism industry grow rapidly (Ndlovu, 2009). This growth was reflected in the increase in the number of tourist arrivals and receipts from Western markets, the construction of many hotels, lodges and restaurants, and the availability of a considerable number of tour operators and travel agents operating in the country (The National Consultative Forum, 2001). In addition, in 1995, the World Tourism Organisation (WTO) ranked Zimbabwe as the fourth most-favoured destination in Africa (WTO, 2005).

An increase in local tourists in northern GNP was recorded during the period between 1991 and 2014 as compared to regional and international tourists. This finding is not surprising considering that at national level, even though tourism was improving, local visitors still formed a greater percentage of all the visitors to Zimbabwe's tourism attraction sites, e.g., in 2012 and 2013, hotel bed occupancy accounted for 37% of the total hotel capacity, and local visitors constituted 87% of that while foreign visitors constituted the remaining 13% (ZTA, 2014). This suggests that regional and international visitors are still lower than locals in Zimbabwe and northern GNP is no exception. More local than foreign tourists were also found to visit the Kruger National Park, South Africa which is part of the GLTP (Kruger and Saayman, 2010, Van Der Merwe and Saayman, 2008).

Most day visitors than overnight visitors visited northern GNP between 1991 and 2014. This could be attributed to the fact that the park mainly offers game and scenic viewing opportunities, and recreational fishing, and does not have many tourist night activities on offer for visitors. Moreover, the quality of wildlife viewing offered by national parks is important to tourists (Ham and Weiler, 2012) who seek both the quality of wildlife, especially the 'Big Five' and the opportunity to see wildlife in their natural habitats. Although GNP has most of these animals, e.g., elephant and buffalo, the lack of some big game, e.g., rhino, can put pressure on tour operators who are determined to

satisfy their clients. The rhino is missing from the 'Big Five' in northern GNP as it went locally extinct in the early 1990s largely due to illegal hunting (Dunham, 2005). According to Lindsey *et al.* (2007), large and charismatic mammals have been known to be responsible for attracting most tourists to protected areas although tourist preferences are not limited to such species. This could explain the reliance on day visitors by the park most of whom come from the neighbouring town of Chiredzi especially over the national public holidays.

While the importance of wildlife as a tourist attraction and an important motive for visiting protected areas is widely acknowledged (Van Der Merwe and Saayman, 2008, Saayman and Saayman, 2006, Eagles and McCool, 2002), it is important to note that successful conservation alone is not enough to attract tourists especially after natural and social disasters, e.g., political instability and economic crises. Even when these problems are finally resolved, re-creating positive perceptions of the destination in the minds of the tourists may take time. For instance, after the widely publicised Zimbabwe's fast track land reform of 2000, it was reported that conservation relationships became bad to the extent that many cases of poaching, deforestation and disease outbreak were brought to the attention of the world's media (Gratwicke and Stapelkamp, 2006, Wolmer *et al.*, 2003). This led to the negative image of Zimbabwe as a destination which was portrayed as an unsafe destination and a sharp decline in tourists across the whole country. Although in reality, animal populations did not significantly decline (Gandiwa *et al.*, 2016, Dunham and van der Westhuizen, 2015), it takes time to create a positive perception of the country in people's minds and for tourist arrivals to increase to the levels before the economic and political instability.

9.5 Conclusion

Tourist visitation to northern GNP was characterised by first an increase in tourist arrivals recorded between 1991 and 1998, followed by a decline recorded between 1999 and 2007 and then an increase recorded between 2008 and 2014. During the period between 1991 and 2014, more local tourists were recorded as compared to regional and international tourists and more day visitors were recorded than overnight visitors. We conclude that while tourist arrivals were fluctuating, many tourists who visit the park are local and are

day visitors. This leads to the fact that tourism is volatile and its success depends on the destination's ability to manage a number of challenges that can easily alter visitor flows at any given time, for example economic crisis, civil unrests and health pandemics.

To promote tourism, especially with regards to increasing regional and international visitors and increasing their length of stay, we recommend that the park management should consider: (i) putting more effort in conserving wildlife resources as well as developing unique and innovative products that are always attractive to tourists, (ii) developing clear marketing objectives, promotional plans and mitigating strategies that could contribute to enhancing the image of the park and increase its tourist market share, (iii) allocation of adequate resources for the marketing of park, (iv) conduct market research to investigate the level of visitor satisfaction, and endeavouring to increase levels of tourist satisfaction, and (v) focusing on the positive aspects of the park in order to change the way that people think about the park and always creating a better and more positive destination image. This may be achieved through countering negative publicity and always striving to improve the situation.

In this paper we focused on the situation in Gonarezhou National Park, Zimbabwe, but we drew insights from trends and issues arising elsewhere. Knowing about these trends enables park management both in Gonarezhou National Park and other parks especially in the SADC region which may experience similar environmental pressures, to position their planning and marketing of the parks in the context of changing pressures and sensitivities of the external environment in which recreation and wildlife tourism activities are located.

9.6 Acknowledgements

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CHAPTER 10: General Discussion, Conclusions and Implications

10.1 Introduction

The main objective of this study was to analyse the interactions between PA-community relationships and nature-based tourism in developing countries such as Zimbabwe. Specifically, the study sought to: (i) assess PA-community relationships in selected PAs in Zimbabwe, (ii) assess community perceptions of wildlife conservation and tourism, (iii) ascertain tourists' travel motivation, their wildlife experiences, and satisfaction with the experiences in Zimbabwe, (iv) examine tourist perceptions on wildlife tourism threats in large PAs, and (v) determine trends in tourists' visitation to PAs in Zimbabwe. In this Chapter, I integrate and synthesise the major findings of my study which are reported in the preceding Chapters and discuss the scientific contributions and practical implications of my study.

10.2 Integration of main findings

10.2.1 Living on the edge: Park-people relationships

The increasing environmental issues have provoked reconsideration of the human-nature relationship (Fox and Xu, 2017). Chapter 3, assessed PA-community relationships from the views of both PA staff and local communities in Umfurudzi National Park, Gonarezhou National Park, Matusadona National Park and Cawston Ranch. Community members mostly reported negative perceptions on their relationship with PA staff, while PA staff had mixed perceptions which were mainly positive in Matusadona National Park and Cawston Ranch, and negative in Umfurudzi and Gonarezhou National Parks. Based on communities' and PA staff' expectations from each other, I established seven determinants of PA-community relationships (Table 10.1), i.e., benefit-sharing, human-wildlife conflict, lack of compensation for losses from wild animals, communication between PA staff and local communities, community participation in the management of CAMPFIRE projects, community participation in tourism in PAs, and perceptions of PA staff/communities. My findings on determinants of PA-community relationships concur with some of the determinants reported in a similar study on the perceptions of PA managers and local communities in 13 PAs in South Africa (Thondhlana and Cundill, 2017). Thondhlana and Cundill (2017) also recorded restricted access to PAs, lack of benefits accrual from PAs and communication problems as some of the factors affecting PA-community

relationships. These factors therefore have an important role in fostering positive PA-community relationships and meaningful people-centered conservation.

Table 10.1: Determinants of PA-community relationships based on communities' and PA staff's expectations. Notes: 'X' means expectation was not met and √ means expectation was partially met.

Determinant	Communities			PA staff		
	Unanimous	Majority	Minority	Unanimous	Majority	Minority
Benefit-sharing		X	√	X		
Human-wildlife conflict	X			√		
Compensation for losses from wild animals	X			X		
Communication between PA staff and local communities		X	√	√		
Community participation in the management of CAMPFIRE projects	X			X		
Community participation in tourism in PAs		X	√	√		
Perceptions of PA staff/communities		X	√	X		

In my study, human-wildlife conflict was found to be a major conservation challenge and an important factor of PA-community relationships especially because Zimbabwe has no compensation policy for losses from wildlife. A review paper by Ravenelle and Nyhus (2017) shows that compensation for wildlife damage is a widely used economic tool to mitigate this conflict. The effectiveness of this management tool is however, widely debated, with many researches making more negative comments compared to positive comments regarding compensation (e.g., Anyango-Van Zwieten *et al.*, 2015, Bulte and Rondeau, 2005). I posit that an understanding of the strengths and weaknesses of compensation as a conflict mitigation tool is necessary for more fruitful analyses and ultimately more effective conflict mitigation strategies. From this Chapter, I construe that while investigating communities' expectations is important for building and maintaining positive PA-community relationships, it is important to understand that what communities expect from PAs may often be beyond the mandate of PAs and as such PA agencies need to proceed with caution. Some of the communities' expectations may, if not carefully

planned or managed, go against the objectives of the PAs which are centered on biodiversity conservation.

In Chapter 4, I provide important insights of local communities' views on their relationship with PAs, and the role of land use and PA management in influencing PA-community relationships. I established that although mixed, communities generally perceived a negative relationship with adjacent PA staff. It is expected that relationships between the PAs and the local community can be harmonious, conflicting or both (Liu *et al.*, 2010). The tested determinants of PA-community relationships had varying influence and levels of significance across the four study sites (Table 10.2). I observed that relationships between communities and PAs are influenced by differences in management of PAs, whereas differences in land use patterns do not influence community perceptions of their relationships with PAs.

Table 10.2: Importance of determinants of PA-community relationships based on communities' views. Notes: √√√ = high priority determinants, √√ = middle priority, √ = low priority. 'X' means that the determinant is not important and 'n/a' means not applicable.

Determinant	Community			
	Umfurudzi	Gonarezhou	Matusadona	Cawston Ranch
History of PA creation	X	√	X	n/a
Communication	√	√√√	√√√	√√√
Perceptions of tourism	X	√√√	√√√	√√√
Perceptions of conservation	√	√√√	√√√	√
Perceptions of PA staff	X	√	√√√	√√√
Problems caused by PA existence to adjacent communities	X	X	X	√√
Benefit-sharing	√	√√	√√	X
Community involvement	X	X	√√	√√

History of PA creation, communication, community perceptions of tourism, conservation and PA staff, PA staff perceptions on communities, benefit-sharing and community involvement in CAMPFIRE or tourism can be considered priority areas. I inferred that there are other factors that also influence PA-community relationship besides the tested eight factors as shown by the different regression coefficients of the models.

Nurturing positive PA-community relationships is therefore not an easy task and thus requires continuous efforts to always keep abreast of the priority areas that need attention.

In Chapter 5, I explored the relationships between PA staff and adjacent communities in and around four PAs in Zimbabwe. In this Chapter, I established that communities generally perceived the relationship they had with the PAs to be negative while PA staff generally perceived a positive relationship with the communities. There were noticeable differences in PA staff and communities' levels of trust for each other, their perceptions on the degree of power that they have to influence one another, their satisfaction levels with each other, and their levels of commitment to each other. From the communities' perspective, I established that all factors except problems caused by PA existence to adjacent communities, had influence on PA staff-community relationships, whereas from the PA staff perspectives, four of the factors with the exception of benefit-sharing and problems caused by communities to PAs had significant influences on PA staff-community relationships (Table 10.3).

Table 10.3: Differences in communities and PAs' views on the factors that influence their relationship and the importance of the factors. Notes: $\sqrt{\sqrt{\sqrt{\quad}}}$ = high priority determinants, $\sqrt{\sqrt{\quad}}$ = middle priority, $\sqrt{\quad}$ = low priority. 'X' means that the determinant is not important and 'n/a' means not applicable.

Determinant	Communities	PAs
History of PA creation	$\sqrt{\sqrt{\sqrt{\quad}}}$	$\sqrt{\quad}$
Communication	$\sqrt{\sqrt{\sqrt{\quad}}}$	$\sqrt{\sqrt{\quad}}$
Perceptions of tourism	$\sqrt{\sqrt{\sqrt{\quad}}}$	n/a
Perceptions of conservation	$\sqrt{\sqrt{\sqrt{\quad}}}$	n/a
Community perceptions of PA staff / PA staff perceptions on communities	$\sqrt{\sqrt{\sqrt{\quad}}}$	$\sqrt{\quad}$
Problems caused by PAs to the communities / by communities to PAs	X	X
Benefit-sharing	$\sqrt{\sqrt{\sqrt{\quad}}}$	X
Community involvement	$\sqrt{\sqrt{\sqrt{\quad}}}$	$\sqrt{\quad}$

From these three chapters (Chapters 3 to 5), I established that relationships between PA staff and communities are complex and they vary depending on whose view it is (the communities' or PA staff' views). Thondhlana and Cundill (2017), also reported sharp contrasts in perceptions between PA managers and local communities where PA managers generally perceived that there were no conflicts with local communities and that their

relationship with them was positive while local communities perceived a negative relationship with PA managers. My study therefore confirms that a relationship is a two way process and both PA staff and communities have a role to play in building harmonious PA-community relationships. This point to the importance of examining both parties (PA staff and adjacent communities) perspectives considering that local communities are often directly affected by conservation efforts while PA officials have to implement any policy changes. In other words, achieving the goal of integrating biodiversity conservation with local development can translate from principle to reality if the views of local communities and conservation officials are considered. Thondhlana and Cundill (2017), point out that PA-community relationships are mostly characterised by conflicts and yet conflict resolution mechanisms are often constrained by little appreciation of the perceptions of the principal agents (PA managers and local communities) about such conflicts. A lack of understanding of the different parties' positions can make it difficult to embark on negotiated settlement agreements aimed at achieving conservation and livelihood goals.

In Chapter 6, I established that though mixed, communities' perceptions on conservation were generally positive while perceptions on tourism were generally negative in all four communities. Moreover, I recorded variable correlations between socio-demographic factors and community perceptions on wildlife conservation and tourism among the different study communities. There was a strong correlation between community perceptions of wildlife conservation and age, level of education, and number of years stayed in the village. I also established a correlation between community perceptions of wildlife tourism and gender, age, number of years stayed in the village, and total number of livestock. These results are in support of Snyman (2012), who, in her study on the role of tourism employment in poverty reduction and community perceptions on conservation and tourism in southern Africa, found out that the majority of community members had positive perceptions on conservation and these attitudes differed depending on household income levels, education, population density and age groups. Similar findings were also recorded in a more recent study on attitude and perceptions of local communities towards the conservation value of Gibe Sheleko National Park in Southwestern Ethiopia (Tilahun *et al.*, 2017). While communities were worried about wildlife destruction on their properties, the majority of the community members had

positive attitude toward the conservation values of the Gibe Sheleko National Park. My results are important in terms of managing relations between conservation areas and adjacent communities. I therefore posit that it is important for PA staff to consider the heterogeneity that exists among community members if positive PA-community relationships are to be nurtured.

10.2.2 Wildlife tourism, conservation and tourists' perspectives

In Chapter 7, I observed that tourists' activities in Gonarezhou and Matusadona National Parks were mainly general scenic views from picnic sites, lodges and campsites, self-drive in the park viewing animals, tour guided game drives, guided walks, and recreational fishing. Tourists to Matusadona National Park also participated in boat cruises. These activities require some form of interpretation for them to be memorable. In order to sufficiently provide a tourism experience for visitors, it is important to identify their motivations for travel (Beh and Bruyere, 2007). I established that tourists' push factors for visiting national parks were 'recreation and knowledge seeking', 'appreciating wildlife' and 'feeling close to nature'. While my study combines two aspects of recreation and knowledge seeking, these aspects are also reported in other studies independently. For example, recreation has been identified by Cheung and Fok (2014) in Hong Kong with two other motives of novelty and escape. Similarly, knowledge seeking has been identified in Kakum National Park in Ghana where four motives, i.e., adventure, education, escape and social interaction were recorded (Amuquandoh, 2017). Nature-related motives have also been identified in many areas, for example, in Bako National Park, Sarawak in Malaysia. Kamri and Radam (2013), found out four motives which are; challenge excursion, social trip, nature tour and getaway outing, and in Kruger National Park, South Africa, Van Der Merwe and Saayman (2008) recorded six motives which are; nature, activities, attractions, nostalgia, novelty and escape from routine. I construe that push motivations are almost the same for nature-based tourists and what differs are the pull factors which are destination specific. However, in my study, Gonarezhou and Matusadona National Parks had similar pull factors which included abundance of wildlife, availability of different animal species, availability of different plant species, wilderness, beautiful landscape and peaceful/quiet environment. I ascertained correlations among some of these

motivations and age, income and tourist origin. Socio-demographic factors help in predicting variation in tourist motivation to travel for marketing purposes (Jönsson and Devonish, 2008).

Seeking good wildlife experiences is one of the important reasons why people visit national parks (Kruger and Saayman, 2010). In this chapter, I established that wildlife tourism experiences (interpretation and interaction with wildlife) in both parks were generally good. Similar findings were recorded in a study on nature-based tourism and visitor experiences in Chitwan National Park in Nepal (Kafle, 2014). The study found that Chitwan national park was able to create a good, meaningful experience among the visitors and as such the visitors had good wildlife experiences. Moreover, I observed a positive relationship between gender and tourist origin, and wildlife tourism experiences in Matusadona National Park. I also found out that different motivation factors influence interpretation and interaction experiences with wildlife differently. My findings show that tourists were satisfied with their wildlife experiences. Wildlife tourists' experiences with interpretation and interaction with wildlife enhance their satisfaction with wildlife tourism (Ham, 2002). Similarly, a study carried out in Mole National Park, Ghana indicated that most visitors were satisfied with their visit to the park because of interaction with wildlife (Kafle, 2014). Kafle (2014), also found that the overall satisfaction level of the visitors in Chitwan national park was good and most of the visitors had the same opinion that they would recommend Chitwan national park as the park to visit. Price also has an influence on satisfaction (Asadi *et al.*, 2014). In this study, I established that experiences with wildlife interaction and satisfaction with prices charged in the parks influence satisfaction with wildlife tourism experiences.

Nature-based tourism is one of the easiest and readily available tools for development of rural economies (Margaryan and Fredman, 2017). Wildlife resources are an important asset for nature-based tourism and an attraction for tourists especially in Africa and other developing countries hence successful wildlife conservation is important for nature-based tourism as this strengthens the attraction base for these countries (UNWTO, 2014). Tourists' perceptions about threats to wildlife conservation are important for conservation (Ballantyne *et al.*, 2009). In Chapter 8, I established that

tourists (local, regional and international) in both Gonarezhou and Matusadona National Parks perceived a number of threats as serious to wildlife conservation with the most severe being illegal hunting, destruction of wildlife habitats, and human-wildlife conflict. Elsewhere, in a study on tourist perceptions on wild animal poisoning in Hwange National Park, Zimbabwe by Muboko *et al.* (2016a), poaching, cyanide poisoning, and habitat destruction through uncontrolled veld fires were identified by tourists as some of the major threats to wildlife conservation. As suggested by the tourists, strengthening CAMPFIRE and CBNRM, employing locals in adjacent PAs, and strengthening education and awareness programmes are some of the strategies that can be used to enhance conservation (Muboko *et al.*, 2016a). These strategies are important in promoting positive PA-community relationships, especially employment in the parks and CBNRM projects (Mutanga *et al.*, 2017, Mutanga *et al.*, 2016b, Allendorf *et al.*, 2012, Méndez-Contreras *et al.*, 2008). I posit that law enforcement measures are also important to reduce illegal hunting.

Despite the tourists' good wildlife tourism experiences in Gonarezhou and Matusadona National Parks, in Chapter 9, I recorded that there were some variations in tourist visitation to northern Gonarezhou National Park (Chipinda Pools) as shown by an increase in tourist visitation between 1991 and 1995, a decline between 2000 and 2008, and an increase between 2009 and 2014. The improvement in the country's economy following the adoption of a multi-currency system in 2008, and the positive image due to a relatively peaceful environment contributed to the increase in tourists' visitation from 2009 to 2014. While tourist arrivals were fluctuating, many tourists who visited the park were local and most of them were day visitors. Fluctuations in PA visitation have been recorded elsewhere, for example, in the United States of America, there was a drop in visits between 1987 and 2006 which totalled to about 14.6 million, or a 5.1 percent decrease from a peak of 287.2 million (Burkett *et al.*, 2010). However, in some other countries, there have been increases in PA visitation over the years, for example, in Tongariro Whanganui Taranaki Conservancy, New Zealand, which show that the number of international visitor arrivals had been steadily increasing (Harbrow, 2014), Japan's national park visitation has shown longitudinal consistency from 1950 to 2013 albeit a 20 per cent decline in 2012 visitation compared to the 1991 peak (Jones and Ohsawa, 2016). Trends in PA visitation help in

understanding how issues affecting PA visitation may have changed over time. For example, evaluating how counts by month have changed with weather over time could inform estimates for how visitation might shift seasonally in some PAs with changes in temperature.

I inferred that even the wilderness and good tourism experiences can be compromised by socio-political issues. I concluded that since tourism is volatile, besides managing the sustainability of wildlife, the success of wildlife tourism also depends on the destination's ability to manage a number of challenges that affect tourist visitation, for example economic crisis, civil unrests and disease pandemics.

10.3 Revisiting the conceptual model for tourism and wildlife management in a changing environment

The original research model, Figure 10.1 (outlined in Chapter 1), outlines the issues surrounding conservation and PA development showing the significance of PA-community relationships in the conservation discourse and the importance of understanding tourists' perceptions, motivation, experiences, satisfaction, and visitation trends, in the management and planning of nature-based tourism. However, this study has given new insights that aid in enhancing the model, i.e., (i) internal and external environmental factors, and (ii) national, regional and international legal instruments and institutional frameworks. Literature review and the empirical investigation done in the study showed that PA-community relationships can be positive (harmonious), neutral or negative (conflicting), and that PA-community relationships are influenced by a number of factors which include benefit-sharing, HWC, communication, community attitudes, PA staff attitudes and community involvement in CBNRM and nature tourism (Chapters 2 to 5). These issues have been captured in the modified model for park-people relationships in nature tourism and wildlife management.

While findings from Chapters 3 and 5 indicate that communities generally perceived a negative relationship with their neighbouring PAs whereas PA staff's perceptions were generally divided, with some perceiving a positive relationship and some perceiving a negative relationship with adjacent communities, the proposed framework is

intended for all PAs, regardless of the nature of their relationship with the communities. PAs with negative and even neutral relationships with adjacent communities need to invest in the identified determinants so as to improve their relationships. Similarly, those PAs with positive relationships with adjacent communities still need to invest in the identified determinants to compliment what they are already doing if it's different. This will ensure continued positive PA-community relationships. A similar case is found in Chapter 6 in which I concluded that some PAs have not fairly shared the benefits from the sustainable utilisation of natural resources with adjacent communities. Benefit-sharing has been identified as one of the important determinants of PA-community relationships and as such this is a lesson for all PAs, those who are fairly sharing PA benefits with communities and those who are not. PAs who are already sharing PA-benefits with communities need to continue doing so and even invest in more benefit-sharing schemes and other identified determinants so as to enhance positive relationships with the communities. Similarly, PAs who have not yet shared PA benefits with communities need to invest in some benefit-sharing schemes as well as the other determinants for the betterment of their relationships with communities.

The literature review and the empirical investigation also showed that tourists' decisions to visit particular destinations are an interplay of both push and pull factors (Chapter 7), and that tourists perceived a number of issues as threats to wildlife tourism and these include illegal hunting, habitat destruction and human-wildlife conflict (Chapter 8). These issues have also been captured in the modified model for park-people relationships in nature tourism and wildlife management.

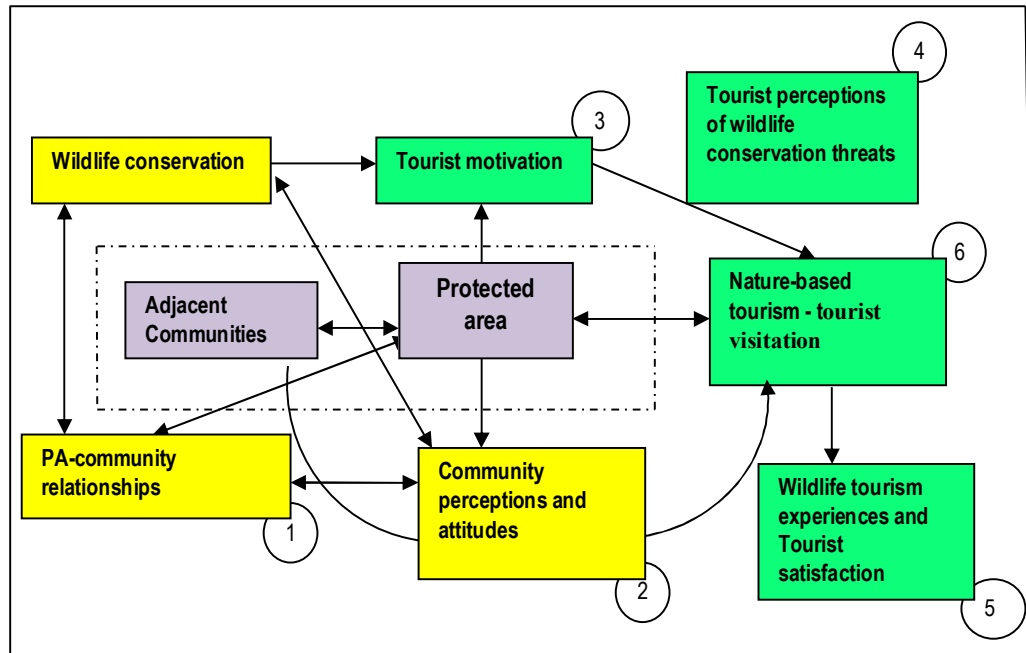


Figure 10.1: The original model for park-people relationships in nature tourism and wildlife management

The figure, which is also shown in Chapter 1, indicates: (1) relationship between PA staff and the community, (2) community perceptions on wildlife conservation and tourism, (3) tourist motivation for visiting the PA, (4) tourists' perceptions on the threats to the sustainability of wildlife tourism, (5) wildlife tourism experiences and tourists' satisfaction with, and (6) trends in tourist visitation. *Notes: The purple boxes bordered by broken lines indicate the key aspects of the study (PA and adjacent communities), yellow boxes show issues surrounding PA-community relationships and conservation, whereas green boxes show tourism related issues. Numbered circles represent important themes that are interrogated in this study and arrows indicate relationships between themes.*

10.3.1 Internal and external environmental factors

Findings from Chapter 9 have shown that tourism is affected by a number of factors like depletion of natural resources which can either be due to internal factors (e.g., poor PA-

community relationships), or external factors, e.g., political unrests and financial crises. Building on to these findings, literature also shows that PA tourism may be damaged by war and civil unrest, especially in Africa and parts of Asia. Tourism is very sensitive to reports of war, civil unrest and personal danger. For example, the Biwindi Impenetrable Forest National Park in Uganda was a site of military activity against national park visitors in the year 2000 and this killed many people and damaged a promising ecotourism industry (Eagles, 2004). Elsewhere, the terrorist bombing in Bali in 2002 damaged the tourism flow in much of Southeast Asia for several years, while the terrorist bombing of a resort in Kenya in 2003 severely damaged the important Kenyan tourist economy as visitation dropped steeply and also badly damaged the tourism flows to neighbouring Tanzania (Eagles, 2004). Similarly, Zimbabwe, a number of events have occurred between 1991 and 2014 which may have affected wildlife conservation and photographic tourism, e.g., drought and economic crisis, land reforms and political instability (Gandiwa *et al.*, 2014a). These external factors bring complications to PA management as PA managers can do little to effectively deal with dramatic and well-publicized incidents. However, they can prepare for news reports that over emphasize the dangers, for example, they can prepare public relations material in anticipation of negative news or news that is not accurate.

At a national level, tourism can be affected by government legislation which may affect aspects like regulation of industry, a priority on job provision, poverty reduction and social mobility goals (Burns and Novelli, 2007). The economic environment affects tourism entities in different ways, for example tourism destinations can be affected by economic fluctuations in those countries which supply the majority of its visitors (tourism generating countries), as well as its economic attractiveness compared to competitive resorts (Tribe, 2010). Moreover, domestic economic environments affect the expenditure patterns of domestic tourists whereas international economic environment affects the costs of supplying tourism services.

The supply side's socio-cultural factors like lifestyles and inter-cultural differences, attitudes and values about travel, availability of paid leave and unemployment, and even the push travel motivations may influence demand for tourism products (Tribe, 2010). Finally, technological improvements may lead to improvements in goods and services and

in better marketing or efficient distribution, while poor technology may result in an organisation's product or service becoming obsolete, or subject to new forms of competition. The model (Figure 10.2) show that the success of nature-based tourism requires more than managing the wildlife resource and understanding tourists' perceptions, motivation, experiences, satisfaction, and visitation trends. It also depends on certain environmental factors, for example, political or economic stability, which the destination may or may not have control over, but whose effects need to be managed. Burkett *et al.* (2010) put forward that PA visitation is influenced by micro behaviour (micro level, park and somewhat controllable management and marketing factors) and macro trends (those regarding macro level, exogenous and mostly uncontrollable factors). Macro factors consist of demographic variables like population size, age, income, and employment; travel-related factors like exchange rates and travel costs; and new information technologies and entertainment opportunities.

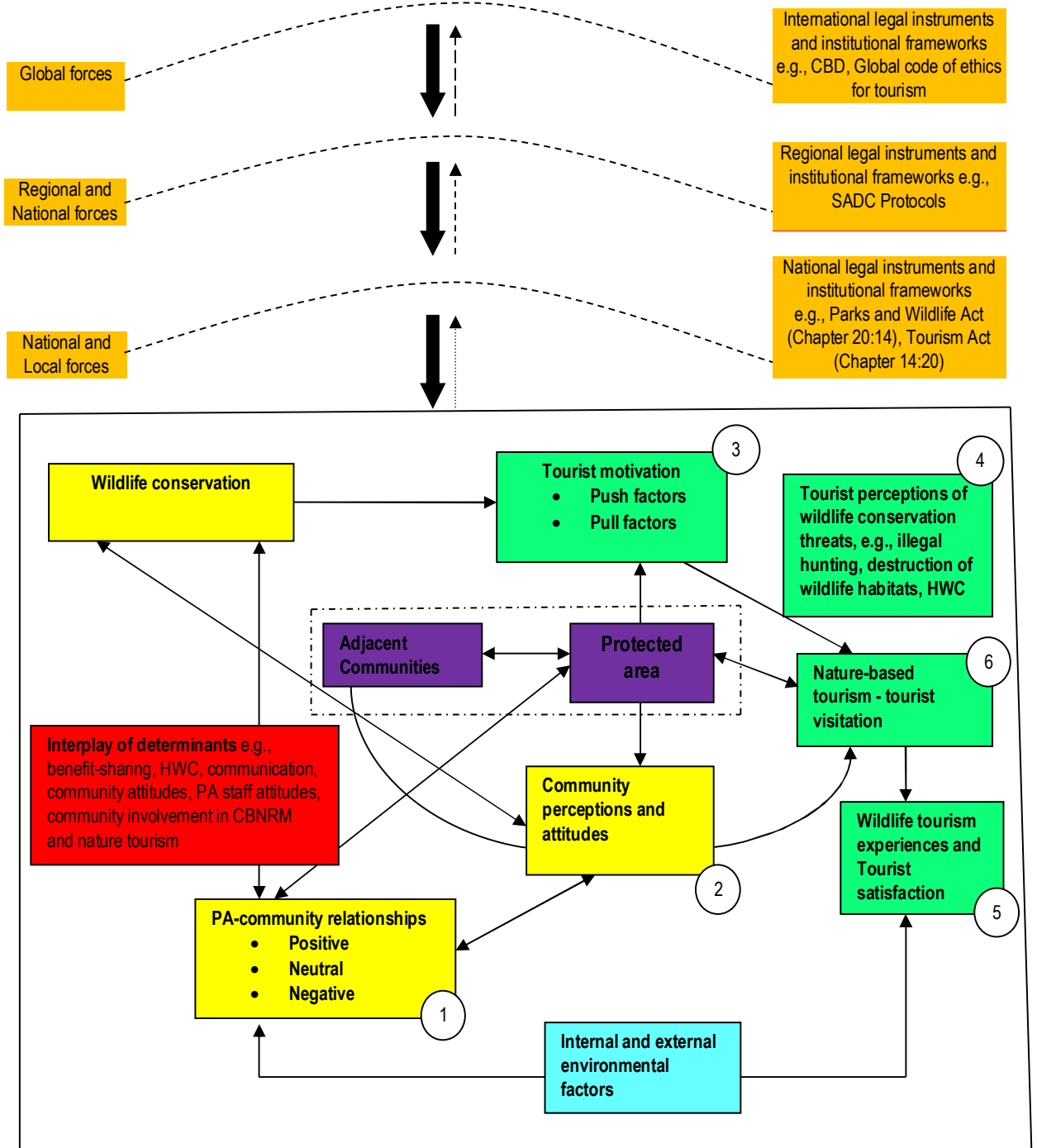


Figure 10.2: A modified model for park-people relationships in nature tourism and wildlife management.

In the figure, the blue and orange boxes show the elements added to the original model (Figure 10.1): (i) internal and external environmental factors, and (ii) national, regional and international legal instruments and institutional frameworks. Thickness and direction of arrows indicates the strength and direction of influence of the legal instruments and institutional frameworks. *Notes: CBD stand for Conservation of Biological Diversity and SADC stands for Southern African Development Community. Numbered circles represent important themes that are interrogated in this study and arrows indicate relationships between themes. The purple boxes bordered by broken lines indicate the key aspects of the study (PA and adjacent communities), red box show determinants of PA-community relationships, yellow boxes show issues surrounding PA-community relationships and conservation, whereas green boxes show tourism related issues, i.e., tourist motivation, perceptions and visitation interrogated in the original model. Model modifications are adapted from Giller et al. (2008).*

10.3.2 Legal instruments and institutional frameworks

Chapters 3, 4 and 5 have shown that legal instruments and institutional frameworks structure the space within which PA-community relationships are shaped. For example, PA management is shifting gradually from government agency structures, with centralised financial control, to parastatal or quasi-governmental forms, with flexible financial management (Eagles, 2004). This can be done through contracting some PA operations to private profit-making corporations, thereby replacing government employees and publicly-funded services, or transferring some management functions to NGOs, or restructuring the PA agency into a corporate organization with a management structure similar to a private corporation. These approaches tend to be motivation driven more by income generation than one of public service or environmental protection. Examples include South African National Parks, the Kenya Wildlife Service, Parks Canada and Ontario Parks where this form of management has proven to be robust, flexible and effective with park tourism management (Eagles, 2004). However, my study has shown that while there is undoubted financial and managerial effectiveness, this may also be a source of friction between PA

management and local communities. For example, Umfurudzi Park and Gonarezhou National Park in Zimbabwe which are under joint public-private management were fenced as a way of reducing poaching, but in the process limiting benefits to the local people like grazing land causing more resentment by the local communities (Mutanga *et al.*, 2016a).

While law enforcement and fence boundaries are necessary to reduce illegal hunting, they are also among the causes for communities' negative attitudes towards PA staff, which in the long run frustrates conservation efforts by PAs. A similar example can be seen in a study on conservation policy-community conflicts in Bogda Nature Reserve, China, which showed that whilst the local community supported heritage conservation and development, they expressed negative attitudes towards their present living conditions, especially due to policy-induced loss of benefits (Liu *et al.*, 2017). The grazing restriction policy was the major source of conflict and negative relationships between Bogda Nature Reserve officials and the adjacent community. Though conservation laws have saved some endangered wildlife and natural resources, the restriction in the use of resources for subsistence-level basic livelihoods seems to be inconsistent with the interests of local communities (Wallner *et al.*, 2007).

I posit that PA-community relationships depend largely on PA staff and communities' attitudes and other previously discussed factors like benefit-sharing, communication and history of PA creation (Chapters 2,3,4 and 5), but these factors are constrained or enabled by policies and regulations at higher levels. Influences from global to regional and national levels are often very strong. The proposed modified model for tourism and wildlife management (Figure 10.2) has international, regional and national legal instruments and institutional frameworks as additional elements.

The globalisation of environmental issues has led to an increase in the number and scope of legal instruments and institutions relating to the conservation of biodiversity planning at the international, regional and national levels (Boer, 2002). Principles and concepts related to sustainable development infuse the provisions of the more recent conventions and instruments and are, to some extent, being adopted at a national level, for example, Convention on the Conservation of Biological Diversity (CBD) 1992. At the regional level, several legal and institutional instruments like the SADC Protocols have

been put into place to guide and standardise the work of SADC with Member States. For example, the SADC Protocol on Wildlife Conservation and Law Enforcement (1999) which stipulates that member states shall establish management programmes for the conservation and sustainable use of wildlife and integrate such programmes into national development plans.

At the national and local levels, biodiversity conservation in Zimbabwe is guided by environmental law and regulatory framework on environmental issues, for example, the Constitution of Zimbabwe (Amendment No 20) Act of 2013, Parks and Wildlife Act (Chapter 20:14) first passed in 1975 and amended in 1996, Policy for Wildlife Zimbabwe (1999), Wildlife Based Land Reform Policy (2006), Traditional Leaders Act (Chapter 29:17) of 1988 and amended in 2001, and Rural District Act (Chapter 29: 13) 1988 and amended in 2002 (Chibememe *et al.*, 2014).

International conventions relating to biodiversity conservation need to be adequately implemented by regional agreements and national legislation. As such, the main elements of a legal and policy framework for biodiversity planning at a national level are guided by the regional and international legal and policy frameworks (Boer, 2002). For example, as required by the CBD, a number of countries, including Zimbabwe, are exploring ways in which Access and Benefit Sharing (ABS) issues can be dealt with locally and nationally through law and policy (Chibememe *et al.*, 2014) although some have not registered much success in terms of conservation and benefit-sharing. For example, Nepal's CBNRM developed and implemented by state forestry agencies and Philippines' CBNRM both of which failed to strike a reasonable balance between the conservation and the socio-economic needs of the people. The Constitution of Zimbabwe provides the foundation and legal basis for local community engagement in the conservation and sustainable use of biodiversity and the sustainable development process by recognising the rights of local communities to access and benefit from natural resources in their areas. The Constitution is therefore consistent with the third objective of the CBD and the objectives of its Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization. CBNRM programme in Zimbabwe and other countries did well in some communities. For instance CBNRM

initiatives in Botswana encourage communities to legally create trusts entrusted with allocating wildlife quotas in agreement with the wildlife management department (Mazambani and Dembetembe, 2010). Zambia's ADMADE, which was criticised for not actually benefiting the local communities (Chapter 1) also initiated its community based wildlife programme in the early 1990s taking lessons from Zimbabwe's CAMPFIRE (Zunza, 2012). Namibia's approach which is very successful borrows from and improves upon the CAMPFIRE experience. It gives tenure to the local communities over use of and wildlife protection. Although each country has worked out its own model, they are all based on the idea that resources are used sustainably and benefits are shared. If benefit-sharing schemes are implemented effectively, they should result in a win-win situation for the PAs and the communities for the success of wildlife conservation. In Chapters 3, 4 and 5, I also established that benefit-sharing was an important determinant of PA-community relationships. However, as indicated in Chapter 6, the benefits from the sustainable utilisation of natural resources have not been fairly shared among stakeholders in some communities hence the negative relationships between communities and their neighbouring PAs.

Similarly for tourism, the United Nations World Tourism Organisation (UNWTO) promotes competitive and sustainable tourism policies and instruments and encourages the implementation of the Global Code of Ethics for Tourism to maximise tourism's socio-economic contribution while minimising its possible negative impacts. Regionally, the SADC Protocol on the Development of Tourism in the Southern African Development Community (1998, amended in 2009), which builds upon the region's potential as a tourist destination. At the national level, the policy framework for tourism in Zimbabwe is provided in the National Tourism Policy (2014). The National Tourism Policy stipulates that the Government shall ensure the protection of biological diversity of wildlife in all designated areas which contribute to conservation and nature tourism. The Government is also to encourage the involvement of local communities in wildlife management so as to ensure that they receive significant share of the benefits of wildlife-based tourism through a broad based empowerment scheme, e.g., the establishment of community-based programmes like CAMPFIRE (Chapter 2).

10.4 Scientific contributions

This study aims to contribute to the existing body of knowledge on the interactions between PA-community relationships and nature-based tourism in developing countries such as Zimbabwe. Some of the knowledge contributions that are necessary to sustain the above mentioned aim are listed below:

10.4.1 A full understanding of PA-community relationships especially in developing countries

I propose a framework for assessing PA staff-community relationships that takes into consideration the attitudes of both PA staff and local communities and their determinant factors. This way, I contribute to the methodology of assessing PA-community relationships. Previous studies have mostly examined PA-community relationships from the perspectives of communities only, and yet, a good relationship involves both parties (Blumstein and Kollock, 1998). Looking at the relationships from both PA staff and local communities' perspectives is important in exploring approaches that promote collaboration and positive relations, hence, reducing conflicts between PA staff and local communities. Borrowing from the social exchange theory which implies a two-sided, mutually contingent and rewarding process involving transactions or simply exchange, I construe that understanding both sides of the relationship would help strengthen PA-community relationships. I thus attempted to fill this gap by incorporating PA staff perspectives of the factors that influence their relationship with the community. Social exchange theory posits that human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. It is therefore imperative to understand what each of the parties (PA staff and communities) is expected by the other party to bring into the relationship and what they expect to get out of the relationship too. This is important because as outcomes of relationships fall below the level of perceived outcomes, individuals may not commit to the relationships, or worse still, may try to sabotage it. An example would be where a community does not get expected benefits from the PA, they may choose not to support conservation initiatives by the PA and participate in social ills like illegal hunting, collaborating with external poachers, animal poisoning, veld fires, and encroachment into PAs. This theory shows that that to attain positive PA-community relationships much more

is required than just an assessment of communities perspectives: we need to go beyond a single perspective to PA-community relationships (Chapters 3 and 5).

Still looking at the study's contribution to methodology, the framework I proposed in Chapter 2 captures multiple factors affecting PA-community relationships. In order to get a full understanding of PA-community relationships, I have examined PA-community relationships beyond the most commonly researched community participation and benefits from conservation. While models that encourage community participation in sustainable conservation through ICDPs have been developed, e.g., CAMPFIRE in Zimbabwe, ADMADE in Zambia and LIFE in Namibia, none of these studies have attempted to link PA-community relationships and tourism holistically. Many of the previous studies (with a few exceptions; Chapters 1 and 2), highlight particular aspects of PA-community relationships and yet PA-community relationships cannot be influenced by just one factor but a number of factors. While the few exceptions are valuable in understanding PA-community relationships, they fall short in the methodology used in that they used a one way perspective to assess a two-way relationship. Many countries including Zimbabwe lack such comprehensive frameworks that take into consideration both PA staff and communities' perspectives as well as capture multiple factors, which make comparisons among PAs complicated. It was this multiple and interrelated nature of PA-community relationships that I aimed to address (Chapters 3-5). For example, assessing how a PA is faring in terms of benefit-sharing (CBNRM) only, or in terms of human-wildlife conflict only, or in terms of its communication with the community would not give a full picture of the relationship between a PA and its adjacent communities. However the proposed framework offers a more comprehensive view of PA-community relationships where the multiple aspects of PA-community relationships can all be examined. The framework also facilitates comparison across PAs (Chapters 3 and 5) which becomes even more relevant at higher levels than the local level, for example, the framework can help to inform national policies on good practice guidelines on enhancing PA-community relationships. Moreover, this study has provided insights into the differences in perceived nature of relationships and existence and sources of conflict between local communities and PA staff, as a basis for designing interventions aimed at eliminating or repairing conflicting relationships.

On top of assessing multiple factors from both PA staff and communities, I also consider the heterogeneity that exists among community members in different PAs. This way I allowed for an exploration of different experiences among community members. King and Peralvo (2010) assert that community conservation often operates with a limited understanding of community, which numerous scholars suggest is presented as generic or homogenous. As such, findings from many PA-community relationship studies are often presented in homogenous terms, which obscure the multiple impacts of conservation planning upon local populations. I posit that this understanding minimises differences within communities that directly affect the outcomes of PA-community relationships. For example, leaders and the youths in the same community may have different experiences with PA staff (e.g., PA benefits, communication experiences with PA staff or level of involvement in CAMPFIRE) considering the different roles they play in the community. As a result, the way these two groups view PA staff may be different and their attitudes towards PA staff or conservation may be different too. Similarly, although research has evaluated the diversified effects of PAs, there have been few empirical studies that examine the role community differentiation plays in shaping perceptions on conservation and tourism. This therefore demonstrates the need to document the divisions that shape the outcomes of PA-community relationships and conservation planning (Chapters 3 and 6). Moreover, a few studies of PA-community relationships have focused on multiple study areas. I attempted to fill this gap by using four case studies, i.e., Gonarezhou National Park, Umfuruzi Park, Matusadona National Park and Cawston Ranch and their surrounding communities. These PAs which are under different management regimes, different land use patterns and surrounded by communities who are enjoying different benefits from wildlife resources (some have CBNRM projects and others do not have), gave me an opportunity to compare PA-community relationships in different situations.

By using a combination of qualitative and quantitative methods, I help bring out the interplay between the two methods in shaping PA-community relationships. Previous studies have mainly used either qualitative (King and Peralvo, 2010). However, as King and Peralvo (2010): 266 assert, “we believe what is most needed is a blending of statistical analyses with the qualitative case study approach to provide a richly detailed picture of how conservation interventions are perceived by individuals within partnering

communities". While this is the case, there have been few studies that combine qualitative and quantitative methods on PA-community relationships.

This study facilitates the systematic understanding of PA-community relationships. A multi-disciplinary approach is needed to understand such a complex set of relationships between people and their environment. It entails a reorientation from disciplinary parameters, or components of the relationship (e.g. ecological, economic, social and the applied study areas of leisure and tourism) and suggests that PA-community relationships should be studied as an integrated, complex system grounded in local people's physical relationships with the PA and their perceptions of the PA (socio-ecological systems). By framing sustainability within the confines of the interplay between conservation (through PA-community relationships) and tourism, my study provides new information related to the theory of sustainability science and socio-ecological systems. Biodiversity loss and deforestation are sustainability challenges that the society is struggling with. Social issues such as the willingness of communities to share the responsibility for biodiversity conservation and choice of management activities may help in conservation management. The determinants of PA-community relationships identified in this study, e.g., benefit sharing, collaborative participation in CBNRM projects and PA tourism, and controlled human-wildlife conflicts (Chapters 2-5), can help communities become a part of nature where they sustainably use land and natural resources. Similarly, the determinants of PA-community relationships, e.g., effective communication and less unsustainable practices by the communities, can enhance PA staff to support communities in harmony with nature. Ultimately, these PA-community relationship determinants facilitated by the use of a new dimension to PA-community relationship studies, i.e., looking at the relationships from both PA staff and local community perspectives could be used to improve the interactions between natural and social systems. If PA-community relationships are healthy, communities can willingly participate in conservation, which means vices like poaching, encroachments into PAs and habitat destruction will be reduced or even eradicated in the long run thereby contributing to the sustainability of wildlife resources. If conservation is improved, the nature tourism product is improved.

10.4.2 Insights into the interplay of travel motivation, wildlife tourism experiences and tourist satisfaction

In order to get insights into the interplay of travel motivation, wildlife tourism experiences and tourist satisfaction, I used the tourism system model by Leiper (1979). The traveller-generating region provides the ‘push’ to stimulate and motivate travel while the tourist destination region usually has the attractions that ‘pull’ tourists to visit destinations and create demand for travel in the generating region. Most studies on tourist motivation to PAs were done in popular parks with high visitation like Kruger National Park in South Africa, with little on other parks with low visitation. Besides, a small number of studies have investigated satisfaction with wildlife tourism opportunities. I address this knowledge gap by providing detailed information on the motives, experiences and satisfaction of wildlife tourists especially in PAs with low visitation. Through research, some of the challenges being faced by the parks with low visitation can be fixed. For example, improving interpretation techniques in the parks and harnessing on the identified push and pull motivations can help in motivating more tourists to visit the parks (Chapter 7). In order to adequately provide a tourism experience for visitors, it is thus important to identify their motivations for travel. Motivations that are met or fulfilled tend to lead to good wildlife tourism experiences and consequently tourist satisfaction while those that are not met usually lead to bad wildlife tourism experiences and tourist dissatisfaction (Chapter 7). In addition, my study contributes to existing knowledge on PA’s visitation trends as well as the factors that influence the sustainability of wildlife conservation and tourism, areas which have also received little attention in scientific studies. This knowledge could help improve protected area attraction base, tourist visitation, and satisfaction. Nature tourism can help in improving socio-ecological benefits in that when communities benefit from tourism, they would want to participate in conservation and this will result in a win-win situation for the community and conservation. Through tourism, the financial needs of the community can be partly resolved and the financial obligations for conservation are also met.

10.4.3 New insights that enhance the understanding of PA-community relationships and nature tourism dynamics

As indicated earlier, previous studies have not made much effort in linking PA-community relationships and tourism holistically. Closely linked to this, I construe that the effect of external environmental factors on PA-community relationships and tourism, and the influence of legal instruments and institutional frameworks on both PA-community relationships and tourism have not been given much attention in the broader picture. This study has therefore brought new insights towards the understanding of PA-community relationships and nature tourism dynamics. In Chapter 9, I established that the success of nature-based tourism requires more than managing the wildlife resource and understanding tourists' perceptions, motivation, experiences, satisfaction, and visitation trends. Rather, it also depends on certain environmental factors, for example, political or economic stability, which the destination may or may not have control over, but whose effects need to be managed. For instance, the fast track land reform of 2000 led to political unrest in the country and an economic depression coupled with the associated negative publicity which painted Zimbabwe as an unsafe destination. Although this situation was beyond the control of PAs, for example, Gonarezhou National Park, it led to the decline in tourist numbers between 2000 and 2008 in park. This shows the strength of environmental factors in enabling or constraining tourist flows into a destination. Similarly, the 2000 fast track land reform could have contributed to negative PA-community relationships attributed to high levels of poaching by the communities. For example, according to Gratwicke and Stapelkamp (2006), wildlife on most of the privately owned conservancies and game farms in the dryer areas of the country were severely poached and the country suffered losses of irreplaceable endangered species such as black rhinos and painted dogs, as well as the destruction of commercially important herds of wildlife. This goes to show how external environmental factors can also structure PA-community relationships.

On the other hand, national, regional and international legal instruments and institutional frameworks also structure the space within which PA-community relationships are shaped. PA-community relationships which depend largely on available local resources are constrained or enabled by policies and regulations at higher levels. The influence from the local level to higher levels is often very weak, whereas influences from

national to regional and global levels are often stronger (Giller *et al.*, 2008). For example, following the objectives of the Convention of Biological Diversity which are: “.....reducing significantly the actual loss of biodiversity at a global, regional, national and sub-national levels and contribute to poverty reduction and the search for sustainable development”, signatory countries should: use conservation benefits to alleviate poverty; stop relocation or sedentarisation of communities without their prior informed consent; and understand the priorities, capacities, practices and values of indigenous peoples and local communities (Janishevski *et al.*, 2008). In line with this, CBD objectives, many countries are trying to find ways for local community engagement in the conservation and sustainable use of biodiversity by recognising the rights of local communities to access and benefit from natural resources in their areas. This has mainly been done through CBNRM programmes, for example, CAMPFIRE in Zimbabwe, ADMADE in Zambia and LIFE in Namibia. This indicates that CBD has a strong influence on PA-community relationships in signatory countries.

10.5 Practical implications: Science-society-policy interface

Based on my results, I infer that if well managed and framed, tourism in PAs can contribute to socio-economic sustainability in terms of the revenue that is generated through visits from tourists hence improving local communities' welfare (Margaryan and Fredman, 2017, Strickland-Munro, 2010, Goodwin and Santilli, 2009). This in turn may be instrumental in enhancing PA-community relationships and driving the local people to conserve the wildlife heritage. This points to the fact that the sustainability of both wildlife conservation and tourism can benefit more from integrating ecological and socio-economic issues.

My assertion is that enhancing positive PA-community relationships can ensure that wildlife conservation is sustainable (Tessema *et al.*, 2010). Therefore investing in the factors that influence PA-community relationships, i.e., history of PA creation, communication, community perceptions of tourism, conservation and PA staff, PA staff perceptions on communities, benefit-sharing and community involvement in CAMPFIRE or tourism, is important. This can be done through a number of strategies which may include: extending more benefits to the communities, for example, employing more local

people in PAs, increased but controlled access to PA resources like thatching grass, providing feeding schemes for animals outside the PAs, product diversification to compliment CAMPFIRE, for example ecotourism and curio shops, and allocating lease sites for photographic tourism within the PAs for community enterprises. Also, of importance are: capacity building for communities to enhance skills, empowering communities to start small tourism ventures, strengthening education and awareness programs, and improving communication channels between PA staff and communities. Moreover, PA management need to put in place effective animal control measures as well as explore conflict resolution options which will reduce levels of human-wildlife conflict like compensation schemes for losses due to animal depredation, and even help rural communities improve their capacity to live with problem animals. On another note, taking into account that the success of wildlife tourism is a function of wildlife conservation and other external factors (Figure 10.2), the ability for destinations to control or manage these factors is an important ingredient in ensuring the viability and sustainability of wildlife tourism. This evident interaction of conservation and wildlife tourism emphasises the need for researchers and industry practitioners to bridge the natural and social sciences gap in ensuring the sustainability of both wildlife conservation and wildlife tourism.

For wildlife conservation policymakers, the PA-community relationship framework can provide insights to enhance sustainable use of wildlife resources and harmonious relationships between PAs and local communities. The framework can inform policy makers on good practice guidelines that could encourage better comprehension between PAs and local communities for the promotion of wildlife conservation and tourism. The identified PA-community determinants can help to inform national policies on wildlife conservation. Mutually beneficial relationships have the potential to improve local communities' welfare through economic benefits from tourism which are enough to drive the local people to conserve wildlife heritage as a source of income. Mutual relationships thus enhance sustainable tourism that works for both protected areas and the local communities. On a local level, the framework can be used to shape PA management strategies to promote positive PA-community relationships. PAs would benefit from the use of the framework to address factors that influence PA staff and local community relationships, and pressures on resources at different levels. PA management and adjacent

communities should continuously seek to improve collaboration between both parties, and address all the determinants which help improve their relationships. Furthermore, it is important for PA management to nurture positive perceptions and direct more effort in changing negative perceptions in order to improve community appreciation of conservation and tourism.

Findings point to the following push motivations, i.e., ‘recreation and knowledge seeking’, ‘appreciating wildlife’ and ‘feeling close to nature’. Important pull factors for the two parks included the abundance of wildlife, availability of different animal species, availability of different plant species, wilderness, beautiful landscape and peaceful/quiet environment. These results on push and pull factors have implications for both the destination management organisation, ZTA, and the individual protected areas. Considering that Zimbabwe’s attraction base is mainly based on natural attractions such as Victoria Falls, and the flora and fauna, marketing for both the Zimbabwean tourism product in general and the individual parks in particular, need to harness on tourists’ motivations for visiting PAs (push factors) vis-à-vis the parks’ attributes which are important in satisfying the tourists’ internal desires (pull factors). Since park tourists were found to be heterogeneous, their demographic profiles should be considered in the development of different travel products and promotional programmes. It is also important to note that while understanding tourist motivations is important, it is more beneficial for park planning and management to understand the predictors of good wildlife tourism experiences which include undisturbed nature and wilderness suitable for walking safaris as well as taking photos of wildlife and landscape.

Tourists perceive a number of threats to the sustainability of wildlife conservation and tourism with the most perceived serious threats being illegal hunting, destruction of wildlife habitats and human-wildlife conflict. This calls for stringent conservation measures to sustainably manage the wildlife resources and to ensure the sustainability of wildlife tourism. There is therefore need for park management to enhance conservation and management of the wildlife resource through increased law enforcement measures so as to minimise illegal resource harvesting, and to promote good local community and protected

area relationships by managing the PA-community relationship determinants highlighted earlier.

Finally, my findings point to the fact that while wildlife resources are important in motivating tourists to visit and in enhancing tourism experiences and tourist satisfaction, they may not be enough to pull tourists to Zimbabwe as there are other internal and external environmental factors at play, for example, the political and economic environment. These findings have implications for the wildlife conservation and tourism industry at large and in particular the Ministry of Tourism and Hospitality, ZTA, and the individual PAs. Collaborative effort among all the stakeholders is required to make sure that a positive image about the destination is created and maintained.

10.6 Conclusions

The study sought to, (i) establish and compare PA-community relationships and the determinant factors in selected PAs in Zimbabwe, (ii) determine community perceptions of wildlife conservation and tourism, (iii) determine tourists' travel motivation and satisfaction with their wildlife experiences in Zimbabwe, (iv) establish tourist perceptions of wildlife tourism threats in large PAs, and (v) determine trends in tourists visitation to PAs in Zimbabwe. The study concludes that, (i) the benefits from the sustainable utilisation of natural resources have not been fairly shared among stakeholders in some communities, (ii) PA-community relationships are generally unhealthy (mostly negative as perceived by communities) indicating that the current PA-community relationship management strategies are not effective and need to be redressed and this can be done through investing in the identified factors that influence PA-community relationships, (iii) abundance of wildlife, availability of different animal species, availability of different plant species, wilderness, beautiful landscape and peaceful/quiet environment are important selling points for Zimbabwean national parks, (iv) human-related challenges like illegal hunting and human-wildlife conflict pose a great threat to the sustainability of wildlife conservation and nature tourism indicating to the need to invest in positive PA-community relationships as an incentive for communities to conserve wildlife, and (v) nature-based tourism can be influenced by other factors besides the wilderness. Overall, I conclude that investing in the following PA-community relationship determinants, i.e.,

history of PA creation, communication, community perceptions of tourism, conservation and PA staff, PA staff perceptions on communities, benefit-sharing and community involvement in CAMPFIRE or tourism while taking into consideration internal and external environmental factors, as well as legal instruments and institutional frameworks may help improve wildlife conservation and nature-based tourism.

10.7 Limitations of the study and suggestions for future studies

Some of the specific limitations were discussed in the respective chapters of the thesis. Firstly, the study focused on Zimbabwe, which makes the findings more applicable to tropical areas especially in developing countries. Future studies could benefit from looking at other ecosystems in both developing and developed countries to improve the generalisability of the results. Secondly, this study assessed PA-community relationships from the perspectives of communities and PA staff. However, it would be more beneficial and interesting to include the perspectives of spectators who are not part of the interactions between PAs and their adjacent communities. Thirdly, the study is cross-sectional in nature which may restrict conclusions especially with regards to tourist motivation and satisfaction. I propose that future studies could collect data across time periods using a longitudinal framework to strengthen the conclusions. Finally, for assessing tourist motivation and satisfaction, this study used two parks with low visitation which may constrain the generalisability of the results. I suggest that future studies may repeat the present study using parks with high visitor numbers.

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