Chapter Sixteen

Human-Wildlife Conflict and Human (In)security in Zimbabwe's Kariba and Victoria Falls Towns

Knowledge Mwonzora
Centre for Security, Peace and Conflict Resolution
Nelson Mandela University

Gift Mwonzora
Willy Brandt School of Public Policy
University of Erfurt
Erfurt, Germany

Abstract

Over the past decade, several countries in Africa and elsewhere have recorded high numbers of human mortalities and injuries owing to wildlife attacks. Due to climate change characterised by high temperatures, incessant drought, and water holes being drained, most wild animals migrate or encroach into human settlements throughout most parts of Zimbabwe. Also, urban sprawl and urbanisation result in the growth and expansion of cities and towns encroaching into areas formerly inhabited by wildlife animals. The search for food by wildlife animals and their mobility have resulted in clashes between humans and wildlife in some towns like Kariba and Victoria Falls in Zimbabwe. This chapter analyses how animal mobility has engendered human-wildlife conflict (HWC), an area that has not yet elicited intense academic scrutiny. Researching this contributes to a nuanced and granular perspective on how human-wildlife conflict affects human security among communities adjacent to conservancies and wildlife zones.

Such an inquiry is timely considering the pervasiveness of such a trend in Zimbabwe's (peri)urban and rural communities. Through a qualitative research approach, we seek to provide an in-depth understanding of human-wildlife conflict (HWC) and how this affects human security and livelihoods of communities living adjacent to conservancies, national parks or game parks. The data was gathered through qualitative interviews, field observations, desktop review, and Focus Groups Discussions (FGDs) with residents from Victoria Falls and Kariba.

Introduction

Human-wildlife conflict (HWC) is one of the major challenges in places that border protected areas, wildlife corridors, and wildlife zones in Zimbabwe (Gandiwa, Heitkönig, Lokhorst, Prins & Leeuwis, 2013; Marecha, 2017). Such conflicts are exacerbated by the population increase of wildlife species, recurring droughts and human encroachment into wildlife habitats (Jeke, 2014). As of today, the interaction between wildlife animals and human beings continues to trigger violence and human insecurity in areas adjacent to national parks and wildlife habitats. The impact of HWC in such communities is evident in crop raids, destruction of property, human fatalities and livestock predation. Although challenges of human-wildlife conflict are prevalent in Zimbabwe, not much has been written on human (in)security in areas bordering wildlife habitats. Such a phenomenon, therefore, warrants scholarly analysis.

This chapter specifically focuses on examining human insecurity and the loss of livelihoods of residents of Kariba and Victoria Falls towns. Wildlife animals cause this loss of livelihoods, and insecurity in these communities. Data for this study were gathered through qualitative interviews with key informants and Focus Groups Discussions (FGDs) with residents from the two towns used as case studies. Desktop review and field observations were also utilised to collect data. The chapter is structured as follows: In the following section, we engage with the concept of human security to understand how human-wildlife conflict (HWC) affects the personal, health, physical, and environmental security and safety of residents living in

areas infested by wildlife. We review the global, regional and Zimbabwean literature on human-wildlife conflict. We then present the empirical discussion on human-wildlife conflict and coping mechanisms, followed by concluding remarks.

Human Security and Wildlife

The discussion draws on the concept of human security and conflict. Scholars argue that human security has become a major referent to human development (Gasper & Gómez, 2023; UNDP, 2022). It is a concept that places salience on the security of people (human beings). It is significant to note that human security has only gained traction in the past few decades. Thanks to the work of policy experts and academics, such as Mahbub ul Haq, who is credited for conceptualising what has come to be referred to as human security (Gasper & Gómez, 2023:2). Haq has gained global acclaim for his pioneering work and prolific conceptual and analytic articulations as well as grounded policy insights that fed into in the United Nations Development Programme (UNDP) and Human Development Reports (HDRs) (Haq, 1999; Gasper & Truong, 2005). Linked to human security is human development, which offers an expansive view of human flourishing (Alkire, 2002:182). However, scholars argue there is a reason why the concept of human security is linked to human development or *vice versa*. This is simply because human security, broadly conceived as *freedom from fear* and *freedom from want,* is paramount in making one's life flourish to the fullest (Gómez & Gasper, 2016; UNDP, 1994).

During the Treaty of Westphalia era in 1648, societies were preoccupied with state security (Hassan, 2006). It is to this end that societies were concerned with state-centric security. Such a focus placed much salience on the security of states. However, major developments occurred at the end of the Cold War and also owing to the articulations on social and human development. Presumably, after the emphasis on sustainable development, the aspect of human development started to elicit sustained policy attention. This followed the publication of the Human Development Report of 1994 and much wider use

in 2012 in the wake of the United Nations General Assembly's adoption of the concept (Gómez & Gasper, 2016:2).

The 1994 global HDR articulated the seven pillars of human security, which are food, personal, economic, environmental, health, community, and political (UNDP, 1994:24–25). However, even in all these articulations, the personal security of humans is also featured as one of the crucial aspects. It then came as no surprise that human beings have become a central focus in development planning and policy since then. To this end, securitisation has shifted from the state to the human being. Within this prism, we can locate the concept of human security, which places the human being at the epicentre of human development. Scholars opine that human security places salience on human beings' personal, community and political security (Gómez & Gasper, 2016).

We argue in the context of raging and variegated attacks on human beings by animals that communities living adjacent to wildlife parks, conservancies, and wildlife corridors are susceptible to, causing loss of life. Hence, their security is in danger and not guaranteed. Yet, as the duty bearer, it is the duty of the state to guarantee its citizens' rights. However, this does not suggest that community members (right holders) abrogate the right to protect themselves. For instance, one must walk on paths where one is unlikely to encounter wild animals. Not only that, but one must also walk/travel during daylight to guarantee security by avoiding direct contact with wild animals. From this perspective, to guarantee security, it is noted that rights (freedom of movement) come with responsibilities and consequences. But in the same vein, the government must strive to mitigate or eliminate the potential hazards to communities because wildlife animals encroach into communities. Here, it is essential to refer to the conceptualisation and articulations of human security as advanced by Gasper and Gómez, an analysis which is worth quoting at length as it is illustrative:

> Human security analysis looks at threats to fulfilment of basic values in people's lives. It seeks to reorient use of the prioritizing concept 'security,' towards

> securing basic needs of ordinary people. So, it answers the question 'whose security?' with: 'each of us and all of us.' In addressing the question 'security of what?,' some forms of human security analysis have adopted compartmentalization, trying to separately discuss 'personal security,' 'economic security,' 'environmental security' and so on. This can be helpful, and fits established bureaucratic and disciplinary convenience. It is also often unhelpful (Gasper & Gómez, 2015:1).

They further go on to articulate emphatically that:

> Many important threats arise out of the interconnections between different aspects and forces in particular situations, so that much of the value-added from human security analysis comes not from putting a new name on topics already considered under existing bureaucratic and disciplinary arrangements but from functioning as a boundary concept to transcend those divisions, flexibly according to the nature of particular situations. A focus on how people live and can live, and the function of looking at priority values and priority threats, require a transdisciplinary holistic perspective (Gasper & Gómez, 2015:1–2).

We agree with this generous articulation of the conceptual and analytic challenges that come with a parsimonious view of human security as charged by Gasper and Gómez (2015) and others. In the context of human-wildlife conflict, we see that several risks, vulnerabilities and insecurities intersect to the extent that one has to view the different typologies that holistically construct human (in)security. In what follows, we turn to a discussion on human-wildlife conflict on a global and regional level.

Scholarship on Human-Wildlife Conflict

Through academic and policy articulations, it has become clear that human-wildlife conflicts have become a global

phenomenon (Seoraj-Pillai & Pillay, 2017; Gandiwa *et al*., 2013; Shanko *et al*., 2021). Zimbabwe is also not spared from this type of conflict, like the rest of Africa. HWC has gained prominence and has attracted the attention of researchers, conservationists, policymakers and social scientists who have been pondering strategies to mitigate the effects of the phenomena. One early scholar of HWC, Madden posits that:

> Human-wildlife conflict is increasing in both frequency and severity worldwide and will likely continue to escalate. Protected areas are increasingly becoming islands of habitat surrounded by seas of cultivation and development (Madden, 2004:249).

Without delving much into the local, global, and regional literature, it is important to first understand what human-wildlife conflict entails. In conceptualising human-wildlife conflict, scholars like Madden posit that, it occurs:

> when the needs and behaviour of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the needs of wildlife. These conflicts may result when wildlife damage crops, injure or kill domestic animals, threaten or kill people (Madden, 2004:248).

There is no gainsaying that human-wildlife conflict is escalating and becoming a pressing global issue. Such developments require urgent action to reduce the loss of lives and household food security and to eliminate the phenomenon of livestock predation and crop raids by wildlife (Mekonen, 2020).

Scholars agree that HWC continues to afflict societies in developing and developed countries (Distefano, 2005; Madden, 2004; Woodroffe, Thirgood & Rabinowitz, 2005; Hodgson, Redpath, Sandstrom & Biggs, 2020; Göttert & Starik, 2022). It is thus unsurprising that a rich corpus of global scholarship on HWC now exists through adopting varied thematic and methodological foci. It seems several existing studies have focused on human-wildlife conflict (HWC), specifically on

livestock predation and crop raids (Parker & Osborn, 2006; Mekonen, 2020; Gemeda & Meles, 2018) without giving much attention to human security and urban mobility aspects. In light of such gaps, this study is an addition to the literature on human-wildlife conflict, with new nuances, peering into human (in)security in urban areas.

On this count, this set of literature has grown in leaps and bounds owing to the escalation of human-wildlife conflict, high mortality rate, crop raids and livestock predation on all continents. This is evident in the research that has been conducted in sub-Saharan Africa (Mashalla & Ringo, 2015; Ladan, 2014), West Africa (Larson, Conway, Hernandez & Carroll, 2016); East Africa (Mnzava & Sirima, 2022) and Southern Africa (Le Bel, Murwira, Mukamuri, Czudek, Taylor & La Grange, 2011), focusing on human-wildlife conflict. HWC has become more prevalent over the past two decades. Scholarship on HWC underscores that such a conflict occurs in all areas where human beings and wildlife coexist partly due to competition over limited resources (Distefano, 2005). This scholarship on HWC has also been evident in Zimbabwe, a country experiencing high rates of conflicts between humans and wildlife (Marowa, Matanzima & Nhiwatiwa 2021; Musiwa & Mhlanga, 2020). In fact, much of the existing strands of the Zimbabwean scholarship focuses on how communities living adjacent to wildlife zones have been grappling with multiple challenges in guarding and averting crop raiding, livestock predation and guaranteeing human safety (Matseketsa, Muboko, Gandiwa, Kombora & Chibememe, 2019; Pisa & Katsande, 2021). The trend is also mimicked in other contexts elsewhere in Africa (Mekonen, 2020). What seems to be missing in this extant literature are discussions on HWC intersecting with the human security of residents in urban areas.

Contextualising Human-Wildlife Conflict in Zimbabwe

The issue of human-wildlife conflict is a complex environmental subject that has gained prominence in the past

few years in Zimbabwe. This is in part owing to the increase in the population of wildlife species (Gandiwa *et al*, 2013; Musiwa & Mhlanga, 2020), especially elephants *(Loxodonta Africana)* in Mbire, Kariba, Nyaminyami, Victoria Falls, Hwange, Chiredzi and Kwekwe. Further, the continuous increase in the human population in Zimbabwe is undoubtedly leading to conflict over limited resources for humans and wildlife species. Additionally, the current climate changes experienced worldwide have also resulted in negative consequences for human inhabitants and animals (Matanzima, 2022). As such, erratic and unpredictable rainfall is causing recurring droughts. This, in turn, engenders the depletion of natural resources across Southern Africa. Consequently, this has stoked competition for food among wildlife species and human beings.

Drivers of Human-Wildlife Conflict in Kariba and Victoria Falls

Research has established that varied and interlinked factors lead to HWC in many parts of the world. In Zimbabwe, there are major drivers of human-wildlife conflict, which include—but are not limited to—the proximity of communities to wildlife areas such as national parks, and conservancy areas, human encroachment onto wildlife corridors and protected areas, infrastructure development, and human and wildlife population growth. They include illegal hunting and poaching, climate change, successive droughts and the associated food scarcity, and limited grazing areas and livestock water sources, to mention a few (Marecha, 2017; Matseketsa *et al*., 2019). In the two study sites, Victoria Falls and Kariba, the major drivers of HWC are the proximity of these towns to wildlife corridors. As such, residents noted that wildlife species like baboons and elephants encroach into suburbs on their way to the water sources. This situation is more prevalent during the dry season. As such, the frequency of HWC and human killings is seasonal and more pronounced during the dry season as compared to the summer period.

The expansion and increased demand for land in these towns further exacerbate the HWC situation. As such, the continued increase in human population and change in land use remain the major drivers of human-wildlife conflict since it leads to fragmentation and degradation of the natural habitat. To this end, destroying natural habitats is forcing wildlife and other species to encroach into human settlements in Kariba and Victoria Falls in search of food and grazing land. As such, these two sites, just like any other HWC hotspots in Zimbabwe, experience regularity in human and wildlife interactions, a trend which heightens conflict susceptibility.

Policies and Legislative approaches to mitigating HWC

In Zimbabwe, several legislative frameworks and policies govern the interaction of human beings and wildlife. The question, however, is whether they are effective. Not only that, but whether they are being implemented and to what effect. These regulatory frameworks are crucial in the conservation, management, and sustainable exploitation of wildlife and natural resources in Zimbabwe. Such laws include the Parks and Wildlife Act [Chapter 20:14], which governs wildlife conservation and sustainable utilisation in Zimbabwe. Other legal frameworks that protect and preserve natural habitats and the environment include the Wildlife Policy, which was promulgated in 1996, and the Traditional Leaders Act (Chapter 29:17).

We argue that residents in the two study sites are aware of and conversant with the wildlife and legislative policies that protect, preserve and conserve natural resources and habitats. However, besides wielding such knowledge, research participants in the two study sites underscored the need to review the current wildlife policies. Their reasoning was inspired by local communities not benefiting from natural resources within their locality. In communities where governments seek to conserve wildlife, animal contestations always arise. Zimbabwe is not unique. This is evident in Kariba and Victoria Falls, where residents harbour negative perceptions regarding

the conservation of crocodile species *(Crocodylus niloticus)* and elephants *(Loxodonta africana)*. This entails that communities are more concerned with human security than wildlife and environmental considerations. No wonder residents in such areas loathe the criminalisation of cutting down of firewood in nearby forests, the killing of wildlife animals and fishing in Lake Kariba.

Communities living adjacent to national parks, including those in Kariba and Victoria Falls specifically, believe that the Zimparks (which is responsible for wildlife animals) should at least offer fishing licences and permits to cut firewood for cooking to the residents. In such and other contexts, citizens are at the forefront of advocating for equitable distribution and benefits deriving from wildlife through shares, community ownership, and conservancies such as the Nyangambe Conservancy in Chiredzi and Midlands Black Rhino in Kwekwe. In their view, such benefits to local communities will help reduce the escalation of HWC, improve the conservation of natural habitats, guarantee the protection of endangered species and wildlife, and enhance human-wildlife co-existence. Such concerns are also being raised by the Zimbabwe Environmental Law Association and other non-state actors who advocate for wildlife conservation. In 2020, a top official—Dhliwayo, from the ZELA—argued that "the Parks and Wildlife Act must be reformed through the development of a new and comprehensive Parks and Wildlife Act that is anchored on the principles of sustainable wildlife management that includes transparency, participation and accountability in line with the constitution" (Dhliwayo, 2020). His was a call for programmatic action in implementing issues of social justice, namely the inclusion of affected communities in the governance of natural wildlife. However, challenges with such civic-driven efforts relate to the background of issues relating to human security. Whilst there is an ever-growing need to mitigate HWC, there is also a strong need to ensure and guarantee human security, which has since become a major referent of human development in contemporary societies. This particularly applies to people

living in areas bordering national parks and game areas in Zimbabwe and beyond.

The impact of HWC on local communities in Kariba and Victoria Falls

As of today, there is no denying that human–wildlife conflict has become a major threat to human life in most communities living along wildlife zones. Such a problem has been witnessed globally. This is a claim that needs not to be rehashed. In the areas under study, we witness that elephants *(Loxodonta africana),* crocodiles *(Crocodylus niloticus),* hippopotamuses (*Hippopotamus amphibius*), and lions (*Panthera leo*) are the main wildlife species that injure or kill people. This phenomenon is widespread to the extent that in 2021, the spokesperson of the ZimParks, Mr Farawo, stated that elephants (*Loxodonta africana*) and crocodiles (*Crocodylus niloticus*) account for 90 per cent of human fatalities, followed by buffaloes and lions (Dzinduwa, 2022). In 2021, Mr Farawo further acknowledged this trend in the following words: "This year alone we recorded 71 deaths while wild animals injured 50 people compared to about 60 deaths and 40 injuries last year" (Michael Magoronga, *The Chronicle,* 23 December 2021). From such evidence, it is clear that these attacks continue to affect the human security of citizens staying adjacent to national parks.

Further empirical research combined with national trends in incidents of human attacks point to a drastic increase in frequency since 2000. This shows the poor policy implementation in stalling these attacks at the level of government. However, this does not come as a surprise considering the seeming importance accorded to animals at the expense of humans. Throughout different eras, the Zimbabwean government has shown a penchant for prioritising wildlife, as evident in passing laws and policies on endangered species and regulated hunting. While such laws and regulations are welcome as they guarantee the rights of animals and the sustainable conservation of wildlife, they are largely viewed as falling short of safeguarding the rights of community members. Evidence

abounds in areas infested with wildlife where one can attract a hefty sentence for killing wildlife even in circumstances of attack. We argue such restraining legislation coupled with poor policy implementation to halt HWC has intensified the attacks of human beings by wildlife animals. This affects not only their mobility as these attacks also endanger their lives.

Consistent with scholars who write on human security, such attacks will amount to challenges that hinder the realisation of personal, human, health and environmental security (Gómez & Gasper, 2016). Not only that, but the danger posed by wildlife in Victoria Falls and Kariba and elsewhere hinders the exercise of human capabilities (Nussbaum, 2007). What is worrying, though, is that even in light of such evidence, the trend of HWC continues to spike, triggering questions around what needs to be done or what must be done.

In the era spanning from 2002 to 2006, statistics reveal that Zimbabwe recorded more than 5,000 cases of Human-Elephant Conflicts (HEC). As a result, 774 elephants *(Loxodonta africana)* were killed under the problem animal control operations (Campfire Programme, 2007). Such prevalence in cases of HWC shows how the security of human beings is endangered not only in Kariba and Victoria Falls but across various Zimbabwean communities.

To contextualise the study of HWC, looking at the real-life challenges and realities communities face at risk of wildlife attacks is pertinent. Societies reeling from wildlife attacks have always witnessed variegated vulnerabilities. This is because they are prone to attacks that may leave people nursing permanent injuries. In Victoria Falls and Kariba, the community is not in short supply of incidents that have resulted in the loss of lives, while it may be convenient to dismiss such acts as isolated. Doing so amounts to being economic with the truth. Research and public disclosures have shown how several victims of human-wildlife conflicts have lost their lives in Victoria Falls and Kariba, with the National Parks officials ignoring the public calls to fence off the sanctuaries of wildlife. Cumulatively, such inconsiderate approaches to HWC have engendered human

insecurity in the Kariba and Victoria Falls communities. Given such evidence, what should nudge scholarly and policy interest amongst researchers is why the responsible officials continue to pay lip service to human security. In this regard, one can legitimately question whether the loss of life is a 'necessary' occurrence that should be tolerated and permitted only for the sake of the conservation of wildlife. This question relates to striking a balance between human life (human security) and environmental and animal considerations.

As established by the research, residents in Chinotimba Township in Victoria Falls also feel the effects of HWC, as encapsulated in the quotation below.

People are affected in terms of income, and food security as the gardens are destroyed by baboons. The baboons are a daily problem, they empty bins, thus causing pollution on the environment. We are tired of this situation, something should be done, otherwise, we will put poison in our gardens to kill them (FGD participant, 19 July 2022).

In societies experiencing human-wildlife conflict, research has shown that people's livelihoods have been negatively affected. Their mobility is also equally constrained. This is particularly evident in the curtailment of the freedom of movement in fear of wild animals. The magnitude of the effect of HWC is heavily felt on the socio-economic front. Just like most, if not all parts of Zimbabwe, the Victoria Falls and Kariba communities heavily rely on informal activities to earn a livelihood. To this end, the danger posed by wild animals affects their social and economic activities. It is not far-fetched to concur with Kariba residents who lament how the human-wildlife conflict has adversely affected their livelihoods. In areas like Kariba, residents rely mainly on fishing, buying, and selling (informal trading). The fact that elephants are close affects their economic activities. Residents stay indoors when darkness falls as going out after 6 pm is risking one's life. In such and several other communities, residents then resort to staying indoors by 6 pm as a precautionary and safety measure. In placing human and personal safety first, we see that the residents are deprived

of their freedom of movement, which is one basic, fundamental, and inalienable right.

Notably, in Zimbabwean communities, residents who stay in areas adjacent to wildlife corridors are vulnerable to wildlife attacks. Kariba residents are but an example of a community concerned about the increase in crocodiles in Lake Kariba. Through interaction with such a community, it was reiterated that these crocodiles pose a threat not only to their livelihoods. Many have suffered physical attacks from crocodiles. No one puts it across better than one resident of the Nyamhunga suburb in Kariba who had the following to say:

We often meet wild animals in the forests on our way to fishing at Lake Kariba. There is no free movement, we move around searching for sweeping material for selling. The existence of wild animals like elephants limits us from our fishing activities and our search for sweeping material in the nearby forest. We also risk being attacked by crocodiles at the lake because we do not have proper boats and nets (Participant of FGD, 6 July 2022).

These findings confirm that the existence of different wildlife species in the two study sites has posed threats to food security, caused loss of livelihoods, and endangered the security of human beings.

Coping Mechanisms and Elusive Solutions for HWC

Taking from the above, communities living in wildlife-infested areas ranging from Kariba, Chiredzi, Victoria Falls and Mbire have consistently called for government interventions. The reason for this is the need to cull and securitise communities through erecting fences and installing bomas.[1] In areas like Mola in Nyaminyami, this practice is already in use as attested by the installation of bomas to minimize livestock predation. Most of these efforts are donor-driven, they aim to secure the

1 Bomas are enclosures used to surround kraals to prevent livestock predation from wild animals like lions and hyenas. They are physical structures/ enclosures made from the same material that makes camping tents.

safety of humans who are at risk of attack by wildlife animals. While such efforts are externally driven, it should also be noted that when left to themselves with little if any government intervention, most communities have resorted to using Indigenous Knowledge Systems (IKSs) to ward off wild animals.

These include beating drums to scare wildlife animals like elephants (*Loxodonta Africana*) and erecting scarecrows to wade off baboons and monkeys. Whilst these IKSs might prove useful in some communities, it was established in the context of Kariba and Victoria Falls that they have since become less effective (Interview with Ward 1 Councillor in Victoria Falls, 20 July 2022). This is considering the fact that wildlife animals in such areas have become accustomed to human beings to the extent that they are no longer easily frightened by the common scare tactics. On the other hand, others still opine that the planting of pepper (chilli) around the yard as part of IKSs still works in warding off wild animals like elephants *(Loxodonta africana)* (Parker & Osborn, 2006; Nokuthaba Dlamini, *The Independent,* 21 February 2023). Whether these approaches work in effectively guaranteeing the human security of communities living in wildlife-infested areas in Zimbabwe is a subject that may attract mixed responses.

Cognisant of these differing views, one could argue that these are only self-help local initiatives that must be done to complement government efforts. But what happens without a permanent, and solid, state intervention in guaranteeing the human security of affected communities? Humans have to do what they can do. This assertion resonates with the dictum that 'invention is the mother of all necessity.' Having stated the above, it needs no emphasis that community members have been left to the vagaries of the roaming and marauding wild animals owing to the complete inconsiderate or lethargic implementation of policies. Things have not been helped by the fact that the rigid legal framework also ensnares and limits the intervention of community members. One illustrative example is how community members are criminalised for killing wildlife animals, even for meat to consume at the household level.

In the towns of Kariba and Victoria Falls, residents direct the blame for the raging human-wildlife attacks to the responsible agencies like Zimbabwe Parks and Wildlife Management Authority (ZPWMA) and Campfire for the lethargic response, reluctance and inefficiency. This pertains to reporting cases of HWC within their communities. The charges are that Zimbabwe Parks and Wildlife Management Authority and Campfire do not react swiftly in a case where human beings are killed or attacked by a wildlife species. This behaviour is also evident in the thinking of the officials. This is a clear testament that residents are on their own faced with the daunting challenge of warding off wild animals without government support. Nowhere has this been made more evident than in an interview with one key informant from the Zimbabwe Parks and Wildlife Management Authority who posited that to mitigate HWC, residents of Kariba were supposed to learn to cohabit with wildlife since they were allocated residential stands in wildlife corridors and game areas (Interview with Zimparks official, 7 July 2022). He further stated that humans should desist from moving around at night, using small boats, and practising illegal fishing on the shores of Lake Kariba. In the wake of such a depressing reality, residents often resort to using other reporting channels, though as a desperate measure. According to councillors from the two case study sites, as a desperate plea for help residents report cases of HWC to them. These desperate pleas fail to usher in human security because the council remains under-resourced and incapacitated in swiftly responding to incidents of HWC.

Affected communities in Zimbabwe also lament the failure of the Zimbabwe Parks and Wildlife Management Authority to provide compensation for the injured victims. In the wake of government failure to guarantee human security, Victoria Falls and Kariba communities opine that the least the state can do is provide compensation to the injured victims. Not only that but the government is also supposed to provide funeral assistance and meet the cost of medical bills in the event one is injured. This is considering that the buck ends with the state which fails to prioritise the personal security of humans at the expense

of wild animals. As established in this study, one respondent narrated the fateful event in which an elephant killed his son whilst he was on his way from fishing in Lake Kariba. That the Zimbabwe Parks and Wildlife Management Authority did not offer any meaningful assistance speaks to the neglect of the victims of HWC even at the national level.

Risks, Vulnerabilities and Challenges Facing Kariba and Victoria Falls Residents

Nuancing the debate further, the risks posed by wildlife animals in the selected case studies include permanent injuries, damage to property and loss of livelihoods. Although baboons and monkeys are not a direct threat to human life, residents in Kariba and Victoria Falls live in perpetual fear as these species encroach into communities daily. In doing so, they grab foodstuffs and destroy property, vegetable gardens and fruit trees. Such acts pose a danger to the daily lives of young people and children who are always at the receiving end of confrontations with baboons and monkeys. Residents in Kariba, in particular, bear testimony to these attacks as school-going kids, pregnant women and elderly people always fall prey to baboon attacks. Such evidence underscores the human security challenges that Zimbabwean communities live adjacent to wildlife areas face.

Looking at the behaviour traits of wild animals like elephants, one notices that they stray into the communities from 4 pm onwards. In the interactions with community members, the first researcher established that Kariba businesses close around 3.30 pm, so people get home safely. Again, to guarantee their security and as part of the precautionary measures, residents avoid moving around from 6 pm to 6 am. Employing the intersectionality approach, we also argue that some specific age groups are at the receiving end of the HWC. In Kariba, for example, school-going children are the most vulnerable to the presence of elephants within communities. This is because they delay going to school when marauding elephants roam their communities. In these areas, residents often get in contact

with elephants when coming from work. To revellers, they also cannot risk life by going back home on foot due to the presence of elephants. The trend in such communities is that revellers without cars always stay out at night and only return home the following morning. All such evidence points to a context where residents' freedoms and rights have been curtailed owing to the government's failure to address issues of HWC by taking practical policy and administrative measures to address this enduring phenomenon.

To complicate the situation, the families of victims of HWC are not compensated (Mhlanga, 2001). Whilst this is evident in Victoria Falls and Kariba, it is a problem that is also common in other countries. In attacks, families do not receive compensation from the responsible authorities. Considering that humans are the victims, the residents would expect to be compensated for their relatives who had been injured or killed by wildlife species. This is also logical, considering that the government is the duty bearer responsible for guaranteeing the human security of the residents. This, however, is not to take away the individual responsibility and duty to safeguard personal security without passing the buck to the state.

In an interview with a survivor of a crocodile attack in Mahombekombe, Kariba, the victim, who was miffed and who could not mince his words, narrated the sorrowful event of how he was attacked by a crocodile while fishing at the shores of the lake. The victim suffered double if not multiple, attacks. In the sense that a crocodile attacked him but was also 'attacked' by Zimparks' inefficiency, as expressed in how the institution respects, protects and accords rights to wildlife more than human beings. This stems from the fact that when a snare catches a wild animal, they tend to react faster than when residents report incidents of HWC. The unfortunate incident of the victim mentioned above reverberates with victims of HWC in Victoria Falls and areas elsewhere where they receive no compensation (Leonard Ncube, *The Chronicle,* 10 June 2022). In the case of the victim mentioned above, he had to seek medical attention in Zambia and was hospitalised for a period spanning three months. That he sustained injuries on the leg and arm

speaks volumes to the multiple human, health, physical, and socio-economic vulnerabilities that stand in the path of residents of Kariba and Victoria Falls, where human security is not a guarantee owing to the marauding wildlife that pounces on humans.

Conclusion

The study finds evidence that communities living adjacent to wildlife areas face multiple vulnerabilities, including attacks, destruction of property, livelihoods and physical harm, including injuries and loss of life. This then affects their safety. It was established that residents in Kariba and Victoria Falls live in fear due to wildlife animals like elephants, crocodiles, hippos, buffalos, lions, monkeys and baboons. It was established that in such communities, residents self-organise and make up self-help remedies and initiatives, including using scarecrows to scare away animals like baboons from their gardens, beating tins or other noise-making devices to scare away elephants. Residents also resorted to initiating and observing curfews and walking in safe paths to guarantee their survival and safety. Though they implement such local efforts that are twinned with indigenous knowledge systems (IKS), it is apparent that such efforts are just desperate efforts of communities that feel abandoned by the government. It is from this perspective that other members had suggestions that the responsible authorities, including Zim Parks, should practise culling to reduce the population of elephants *(Loxodonta africana)*, crocodiles *(Crocodylus niloticus)* and other dangerous wildlife species. Others even suggest decongesting national parks by relocating wildlife species to other areas. In light of the available evidence, we also reason that securing national parks (game areas) and communities with electrified and solar-powered fences also help mitigate HWC in Kariba and Victoria Falls areas and other hot spots throughout Zimbabwe.

The study offers significant academic and policy insights that can be utilised by not only the Zimbabwean government but also by communities, animal rights advocates, rangers, and donor agencies, among other stakeholders, in better managing

HWC. We posit that future research should attend to the ongoing quest to realise the personal (human) security of communities living in wildlife-populated areas. Such a research endeavour will help articulate how communities can co-exist with wild animals or live in peace without fear and trepidation owing to their susceptibility to animal attacks.

References

Alkire, S. 2002. Dimensions of human development. *World Development*, 30(2):181-205. https://doi.org/10.1016/S0305-750X(01)00109-7

Campfire Programme 2007. *PAC statistics 2002-2006*. Harare, Zimbabwe: Campfire Association. https://doi.org/10.1016/S0305-750X(01)00109-7

Distefano, E. 2005. *Human-wildlife conflict worldwide: Collection of case studies, analysis of management strategies and good practices*. Food and Agricultural Organization of the United Nations (FAO) Sustainable Agriculture and Rural Development Initiative (SARDI). [Retrieved 27 March 2023] http://www.fao.org/sard/common/ecg/1357/en/hwc_final.pdf

Dhliwayo, M. 2020. Zimbabwe must reform the Parks and Wildlife Act to promote transparency and accountability in the wildlife sector. *Zimbabwe Environmental Law Association Journal*, 14 May. [Retrieved 11 June 2022] https://zela.org/zimbabwe-must-reform-the-parks-and-wildlife-act-to-promote-transparency-and-accountability-in-the-wildlife-sector/

Dzinduwa, S. 2022. Human-wildlife conflict on the rise in Africa. [23 August 2023] https://www.africanexponent.com/post/18217-human-wildlife-conflict-on-the-rise-in-africa

Gasper, D. & Truong, T.D. 2005. Deepening development ethics: From economism to human development to human security. *The European Journal of Development Research*, 17(3):372-384. https://doi.org/10.1080/09578810500209130

Gandiwa, E., Heitkönig, I.M.A., Lokhorst, A.M., Prins, H.H.T & Leeuwis, C. 2013. CAMPFIRE and human-wildlife conflicts in local communities bordering northern Gonarezhou National Park, Zimbabwe. *Ecology and Society*, 18(4):7. https://doi.org/10.5751/ES-05817-180407

Gemeda, D.O. & Meles, S.K. 2018. Impacts of human-wildlife conflict in developing countries. *Journal of Applied Sciences and Environmental Management*, 22(8), 1233-1238. https://doi.org/10.4314/jasem.v22i8.14

Gasper, D. & Gómez, O.A. 2015. Human security thinking in practice: 'Personal security,' 'citizen security' and comprehensive mappings. *Contemporary Politics*, 21(1),100-116. https://doi.org/10.1080/13569775.2014.993906

Gasper, D. & Gómez, O.A. 2023. Solidarity and human insecurity: Interpreting and extending the HDRO's 2022 Special report on human security. *Journal of Human Development and Capabilities*, 1-11. https://doi.org/10.1080/19452829.2022.2161491

Gómez, O.A. & Gasper, D. 2016. A thematic guidance note for regional and national human development report teams. *United Nations Development Programme Human Development Report Office*.

Göttert, T. & Starik, N. 2022. Human–wildlife conflicts across landscapes: General applicability vs. case specificity. *Diversity*, 14(5):380. https://doi.org/10.3390/d14050380

Haq, M. 1999. *Reflections on human development*. 2nd Edition. Delhi: Oxford University Press.

Hassan, D. 2006. The rise of the territorial state and the treaty of Westphalia. *Yearbook of New Zealand Jurisprudence*, 9:62-70.

Hodgson, I.D., Redpath, S.M., Sandstrom, C. & Biggs, D. 2020. *The state of knowledge and practice on human-wildlife conflicts: Research report*. Gland, Switzerland: The Luc Hoffman Institute.

Jeke, L. 2014. Human-Wildlife coexistence in Omay communal land: Nyaminyami Rural District Council in Zimbabwe. *Mediterranean Journal of Social Sciences,* 5(20):809. https://doi.org/10.5901/mjss.2014.v5n20p809

Ladan, S.I. 2014. Examining human-wildlife conflict in Africa. Paper presented at: *International Conference on Biological, Civil and Environmental Engineering*, Dubai, UAE, March 17–18.

Larson, L.R., Conway, A.L., Hernandez, S.M. & Carroll, J.P. 2016. Human-wildlife conflict, conservation attitudes, and a potential role for citizen science in Sierra Leone, Africa. *Conservation and Society*: 14(3):205-217. https://doi.org/10.4103/0972-4923.191159

Le Bel, S., Murwira, A., Mukamuri, B., Czudek, R., Taylor, R. & La Grange, M. 2011. Human wildlife conflicts in Southern Africa: Riding the whirl wind in Mozambique and in Zimbabwe. *The importance of biological interactions in the study of biodiversity*, :283-322. https://doi.org/10.5772/23682

Madden, F. 2004. Creating coexistence between humans and wildlife: Global perspectives on local efforts to address human-wildlife conflict. *Human dimensions of wildlife*, 9, 247-257. https://doi.org/10.1080/10871200490505675

Marecha, N. 2017. Perspectives of the human wildlife conflict situation from the standpoint of environmental justice A case study of Hwange National Park, Zimbabwe. Master's Thesis. Uppsala: Swedish University of Agricultural Sciences.

Marowa, I., Matanzima, J. & Nhiwatiwa, T. 2021. Interactions between humans, crocodiles, and hippos at Lake Kariba, Zimbabwe. *Human–Wildlife Interactions*, 15(1):25.

Mashalla, A. & Ringo, J. 2015. Status of human-wildlife conflicts in Mpanga/Kipengere Game Reserve, Tanzania. *International Journal of Environment and Bioenergy*, 10(1):26-40.

Matanzima, J. 2022. We were displaced several times since 1956: The Tonga–Goba involuntary resettlement experiences at the Kariba Dam. *Water International*, 47(8): 1249-1266. https://doi.org/10.1080/02508060.2022.2085851

Matseketsa, G., Muboko, N., Gandiwa, E., Kombora, D.M. & Chibememe, G. 2019. An assessment of human-wildlife conflicts in local communities bordering the western part of Save Valley Conservancy, Zimbabwe. *Global Ecology and Conservation*, 20, e00737. https://doi.org/10.1016/j.gecco.2019.e00737

Mekonen, S. 2020. Coexistence between human and wildlife: The nature, causes and mitigations of human wildlife conflict around Bale Mountains National Park, Southeast Ethiopia. *BMC ecology*, 20(1):51. https://doi.org/10.1186/s12898-020-00319-1

Mhlanga, L. 2001. Conflict between wildlife and people in Kariba town, Zimbabwe. *Zambezia*, 28(1):39-52. https://doi.org/10.4314/zjh.v28i1.6757

Magoronga, M. 2021. 71 dead in human wildlife conflicts. *The Chronicle,* 23 December. [Retrieved 17 September 2022] https://www.chronicle.co.zw/71-dead-in-human-wildlife-conflicts/

Mnzava, E.E. & Sirima, A.A. 2022. A bibliometric analysis of human-wildlife conflicts in East Africa. *International Journal of Conservation Science*, 13(1):213-220.

Musiwa, A.R. & Mhlanga, W. 2020. Human–wildlife conflict in Mhokwe Ward, Mbire District, North-East Zimbabwe. *African Journal of Ecology*, 58(4):786-795. https://doi.org/10.1111/aje.12774

Ncube, L. 2022. No compensation for wildlife conflict victims. *The Chronicle*, 10 June. [Retrieved 29 March 2023] https://www.chronicle.co.zw/no-compensation-for-wildlife-conflict-victims/

Nokuthaba, D. 2023. Chilli peppers help Zimbabwean villagers save their crops from elephants. *The Independent*, 21 February. [Retrieved 14 May 2023] https://www.independent.co.uk/voices/campaigns/giantsclub/chilli-peppers-save-crops-from-elephants-b2286575.html.

Nussbaum, M. 2007. Human rights and human capabilities. *Harvard Human Rights Journal*, 20(21):21-24.

Parker, G.E. & Osborn, F.V. 2006. Investigating the potential for chilli Capsicum spp. to reduce human-wildlife conflict in Zimbabwe. *Oryx*, 40(3):343-346. https://doi.org/10.1017/S0030605306000822

Pisa, L.S. & Katsande, S. 2021. Human-wildlife conflict in relation to human security in the Gonarezhou National Park, Zimbabwe. *International Journal of Earth Sciences Knowledge and Applications*, 3(2):98-106.

Seoraj-Pillai, N. & Pillay, N. 2017. A meta-analysis of human–wildlife conflict: South African and global perspectives. *Sustainability*, 9:34. https://doi.org/10.3390/su9010034

Shanko, G., Tona, B. & Adare, B. 2021. Human-wildlife conflict around Belo-Bira forest, Dawro zone, southwestern Ethiopia," *International Journal of Ecology*, 2021:1-7. https://doi.org/10.1155/2021/9944750

UNDP, 2022. *New threats to human security in the Anthropocene: Demanding greater solidarity.* New York: UNDP.

Woodroffe, R., Thirgood, S. & Rabinowitz, A. 2005. *People and wildlife: Conflict or coexistence?* Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511614774