



In early October, the rains have not yet arrived in northern Zimbabwe. In this area, Zambezi National Park, as well as in the nearby Hwange National Park, free-roaming elephants like this one frequent artificial waterholes supplied by pumped water.

Photo: Still from video footage by Antonio Erasmus, HSRC

Human-elephant coexistence in Zimbabwe:

“We are part of them; they are part of us”

The world is facing a biodiversity crisis. In some countries, however, communities have adapted to coexisting with wildlife. With the advent of the first international conference on disaster risk management, co-hosted by the HSRC, the *HSRC Review* team visited the town of Victoria Falls in Zimbabwe, where people come into frequent contact with elephants. The experiences of these communities offer lessons for mutually beneficial coexistence. But the situation is more complex than it appears. **By Andrea Teagle**

In 1928, Hwange National Park’s first warden, Ted Davison, first had the idea to build water pumps so the newly declared reserve could support a year-round elephant population. At the time, it seemed a good idea: a constant and park-bound elephant presence would boost tourism and reduce human-animal conflict. A century later, the situation looks very different.

Before the pumps were built, an estimated 2 000 elephants roamed the area in the rainy season, undertaking a great migration at the start of the dry season. Now, bolstered by an ongoing artificial water supply, the mostly stationary population has soared to 45 000. Human settlements have expanded too, further interrupting elephants’ migration routes and bringing people and elephants into ever closer contact. The elephants are both a boon and challenge for local communities: they are a drawcard for tourism, but they also damage crops and occasionally conflict fatally with people.

In October 2022, the HSRC co-hosted the 1st International Conference on Risk and Disaster Management in Victoria Falls, Zimbabwe. Many of the disasters under discussion take place at the nexus of human and planetary well-being: natural hazards related to the climate crises, epidemics born of increasing human-wildlife overlap, and the socioeconomic reverberations of ecosystem collapses. As human populations expand, some researchers are calling for an alternative model of conservation, termed [convivial conservation](#), that finds ways for humans to live alongside nature rather than in opposition to it.

The *HSRC Review* team visited the communities around Victoria Falls to take a closer look at how people have adapted to living in proximity to elephants.

Living with elephants

It is early October, and the landscape around Victoria Falls is dry, with most trees still bare despite the 30°C heat. One

local told the team that the first rains these days arrive only in mid-December, two months later than in previous decades. Climate change is one of the reasons that the elephants wander into settlements, he explained: [dry season is lasting longer](#) and they are searching for food and water.

Nearby, to the south-east of Victoria Falls, the Hwange National Park has no natural permanent water sources, and the pumps are not always reliable or adequate. In 2019, a national drought left [more than 200 elephants](#) dead at dry waterholes in Hwange and Mana Pools National Park in the north.

Although there are no signs of the elephants in the villages, adaptations to the giant visitors are all around, for those who know what to look for. Pieces of metal glint on the gates of some houses: the reflected sunlight deters elephants from approaching. Small squares of crops are guarded by pieces of dung on the ends of sticks – the presence of dung near a potential source of food is reportedly off-putting to hungry elephants. And around the perimeters of some fields, the smell of chilli-garlic lingers: elephants will avoid the crops due to this smell. In other places, beehives act as deterrents.

Although these strategies are effective to an extent, crop damage by the elephants in areas around the Hwange remains an issue. In some cases, farmers resort to actively guarding their fields at night, chasing away the animals with flashlights.

Elephants that frequently stray into human settlements or become violent are classified as problem animals, and eventually shot by Parks and Management. The villagers point to where a man was killed by an angry elephant one night just a few months back. In villager Chenjerai Museka’s backyard are the crumpled remains of a car – a Honda Fit – that he says drove right between the legs of an elephant in the dark of night. The driver was fortunately unscathed, Museka assures us, and the bull ambled off with only minor injuries.

Elephant-human conflict

According to the World Wide Fund for Nature (WWF), human-wildlife conflict is a growing public health, humanitarian and development issue, as well as a conservation and biodiversity concern. Directly, it affects the safety, well-being and livelihoods of local communities; indirectly, it impacts broader societies through agricultural and biodiversity losses.

The HSRC's Wilfred Lunga observes that the positioning of Victoria Falls within a national park makes some degree of human-elephant conflict inevitable. "Animals can stray into the communities, maim, and even kill people."

Violent clashes and lost crops have led some locals to call for culling to reduce the size of the elephant population – and by extension their overlap with humans.


Yet, many of the villagers spoke about the elephants positively, describing them as friendly animals that do not cause trouble for no reason. Professor Jephias Matunhu of Midlands State University, east of Hwange National Parks, spoke with the *Review*.

"We need these animals. They belong to us," said Matunhu. "We are part of them; they are part of us. They make a perfect ecosystem with us when properly managed. But they become a problem – and we can also become a problem to them – if we do not know how to coexist."

While an artificially large elephant population is one part of the human-elephant conflict story, another part concerns the increasing encroachment of human settlements into 'buffer zones' that connect protected areas. Migration patterns are further disrupted by poaching – the animals will try to remain in areas that they perceive to be safer, which puts further pressure on local resources. Elephants that have seen their kin killed by poachers are also more likely to behave aggressively towards humans.

Researcher Peter Makumbe, based at Shangani Holistic, a farm south-east of Hwange, is involved in projects to promote harmonious coexistence of elephants and humans. One such project involves collaring and tracking elephants so that local chiefs can provide early warnings to villagers of an elephant's approach.

In November 2022, the Zimbabwean government introduced a human-wildlife conflict relief fund to assist victims and/or their families in instances of death, maiming or injury.



Irregular pieces of metal adorn a fence around a small plot of vegetables in Victoria Falls, Zimbabwe, October 2022. Sunlight reflecting off the metal deters elephants from raiding the crops.

Photo: still from video footage by Antonio Erasmus, HSRC

Campfire programme rebooted

Wildlife in Zimbabwe has been the [communal property of the people](#) since the passing of the Parks and Wildlife Act in 1975. In 1989, the Communal Area Management Programme for Indigenous Resources (CAMPFIRE) was set up to ensure that locals benefit from living alongside wildlife. Revenue from tourism and from controlled hunting is fed back into the community, to develop infrastructure like roads, clinics and boreholes.

“In places where it is properly managed, it’s one of the best ways of ensuring that animals and human beings coexist to the benefit of communities,” says Matunhu. The programme is laudable for making the benefits of biodiversity preservations tangible at a local community level. However, residents of Victoria Falls say CAMPFIRE is not operational in this area.

“In the 1990s into the early 2000s, CAMPFIRE was very effective in solving human-wildlife conflict,” Makumbe says. However, he adds, over the past 20 years, the programme has suffered from the economic challenges facing Zimbabwe. “The finances were not being ploughed back into the community.”

In 2021, the government changed the structure of the programme such that traditional leaders, rather than the parks authority board, are tasked with handling the revenues. The restructuring recognises that chiefs are better placed to know how to channel the proceeds most usefully.

Makumbe is hopeful about the new structure. “I think that’s the correct route, as long as the finance department or ministry supervises the process,” he says. “The community leaders are directly affected by human-elephant conflict, so they would want to see some benefits from the wildlife.”

Value of megafauna

Part of the impetus to save the elephants here is the decline in African elephant numbers globally, due to poaching and other pressures. According to [the WWF](#), just under a century ago African elephants numbered as many as 10 million; today, that number stands at 415 000. The loss of these [complex, social animals](#) would be incalculable.

The conservation of large mammals, or megafauna, is also important to the health of ecosystems, and by extension to human health and well-being. For instance, Mike Seay writes in an article on [the African Wildlife Foundation site](#): ‘the disappearance of large mammals in African savannas triggers a cascade effect: in their absence, small grazing mammals become more abundant, which in turn increases the abundance of fleas, increasing the transmission risk of flea-borne zoonotic outbreaks’.

Megafauna also actively shape landscapes, with implications for climate change and biodiversity, as attested to by the growing number of rewilding projects in [Europe](#) and [America](#).

One of the biggest threats to remaining megafauna in Africa and elsewhere is the fragmentation of natural habitats. Some conservationists believe that human living environments can be structured to [accommodate wildlife](#). They are looking at [case studies of human-wildlife coexistence](#) in Brazil (jaguars), Finland (wolves), California (grizzly bears) and Tanzania (lions). In Zimbabwe, Makumbe’s research emphasises the importance of maintaining green corridors to preserve elephant migration routes.

Managing elephant populations

In 2021, the Zimbabwean government released a [national elephant management plan](#). Zimbabwe explicitly recognises the value of the animals, channelling funds towards their protection and to stem poaching. However, the government is faced with the task of both protecting the elephants and managing the population levels – goals that do not easily align.

Although the optimal number of elephants in the park is debated, it is generally accepted that the current numbers – around 2 to 3 elephants per square kilometre – are unsustainable. According to the plan, ‘Elephant impacts on vegetation reached alarming levels by 1964 ... The first major cull of elephants took place in the park in 1965. Large culls in the 1980s reduced the population to about 13 000.’

In a 2016 interview for [Wildlife Photography Africa](#), Mark Butcher of Imvelo Safari Lodges recalled that at that time, plants and wildlife flourished: ‘we had a lot more sable and a lot more buffalo then. We had young trees,’ he said, adding that the woodlands ‘are in an absolute nose-dive.’

Building [more water pumps](#) may be an attractive option, but does not solve the problem in the long run. Probably the most humane option would be to sterilise some of the female elephants. While this [might become a reality in the future](#), it is not currently possible.

Over the years, Zimbabwe has come under fire for proposing that ivory from legally hunted animals be sold to increase conservation revenue. Conservationists fear that reactivating the ivory trade would lead to a spike in poaching and have devastating consequences for elephant populations. In the past, it was the sale of ivory that funded the kinds of large-scale culling that brought down the population to sustainable levels. Today, negative public sentiment towards mass culling might in any case make that unfeasible.

As it stands, despite controversy around it, controlled hunting (without the sale of ivory) remains one way of bringing in revenue and managing local populations.

Whose biodiversity is it anyway?

If history has any lessons, it is that choking the animals' migratory pathways will only swing the ecosystem further out of balance. If elephant population levels are reduced to sustainable levels, then restoring corridors and phasing out water holes would arguably remove the need for future culling. If it can be rebooted, CAMPFIRE can provide communities with the socioeconomic means to protect these spaces.

Cooperation between SADC countries could also help to coordinate responses to biodiversity loss and the climate crisis. Given that elephants and other wildlife move between Zimbabwe and Botswana, for instance, a coordinated approach to elephant conservation makes sense.

The HSRC has signed a memorandum of understanding (MOU) with Midlands State University in Zimbabwe to co-produce disaster risk management research. "The SADC region is experiencing a lot of disasters of late. And climate change hazards are really wreaking havoc ..." Lunga says, adding that collaborations between African countries are critical. "The MOU is a start."

Environmental groups are calling for [wealthy nations to increase spending on biodiversity conservation](#) in developing countries, to account for the harm done by international trade.

Said WWF International director-general Marco Lambertini, according to [Reuters](#), "This is an investment in the services that biodiversity is generating for our society, for our economy, for our well-being and health."

The 1st International Conference on Risk and Disaster Management was hosted by the HSRC, the University of the Free State, Midlands State University, National Disaster Management of Africa, and the Civil Protection Unit of Zimbabwe.

Author: Andrea Teagle, a science writer in the HSRC's Impact Centre

ateagle@hsrc.ac.za

Researcher: Dr Wilfred Lunga, a senior research specialist with the HSRC's Developmental, Capable and Ethical State research division

wlunga@hsrc.ac.za

Acknowledgments: The *Review* thanks Antonio Erasmus, Wilfred Lunga, Learnmore Nyoni, and Jephias Matunhu of Midlands State University for their time, knowledge and assistance in Victoria Falls.





Learnmore Nyoni stands outside a fresh produce marketplace at Chinotimba township, Victoria Falls, Zimbabwe, October 2022. Small-scale farmers of this community use elephant dung to discourage elephants from raiding their crops.

Photo: still from video footage by Antonio Erasmus, HSRC