

BURSTING WITH LIFE

Ruvuma's flourishing forests and rivers are havens for many of Africa's most charismatic species, including African savanna elephants, lions and wild dogs

The region has one of the largest elephant populations in east Africa, with an estimated 15,500 in the Selous-Mikumi ecosystem. Research on elephant movements shows that the Selous-Niassa wildlife corridor is an important route for elephants moving between Selous Game Reserve/Nyerere National Park and the Niassa Special Reserve. It also supports its own population of around 600 individuals.

African savanna elephants are highly sociable. Each family unit usually consists of around 10 females and their calves, and several families often join up to form a 'clan', consisting of up to several hundred members led by a female matriarch. These giants of the landscape mainly eat leaves and branches from bushes and trees, and they can also eat grasses, fruit, and bark, depending on the time of year.



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Powerful and majestic, the king of beasts has no natural predators, but African lion populations are estimated to have declined by over 40% in just two decades. Their main threats are retaliatory or targeted killings to protect people and livestock, as well as decreasing natural prey and habitat loss.

Lions mainly prey on ungulates such as buffalo, wildebeest, waterbuck and antelope, as well as giraffe, warthog and zebra. They can eat up to 40kg of meat in a single meal – around a quarter of their body weight.

One of the world's most endangered mammals, African wild dogs are opportunistic predators that hunt medium-sized herbivores, such as gazelles. They mainly gather in packs of around 10 individuals, but some packs can number more than 40.

Major threats include accidental or targeted killings by humans to prevent wild dogs preying on livestock, diseases like rabies and distemper, habitat loss and competition with larger predators, such as lions.



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WITH INCREASING PRESSURES ON THE LANDSCAPE, IT'S VITAL THAT WE BETTER UNDERSTAND SPECIES MOVEMENTS TO SEE HOW ANIMALS ARE ADAPTING TO THREATS INCLUDING NEW ROADS AND AGRICULTURAL EXPANSION. WITH THE GUARDIANS' SUPPORT, WE PLAN TO CARRY OUT FURTHER WILDLIFE MONITORING WITH OUR PARTNERS IN WILDLIFE CORRIDORS AND ACROSS THE RUVUMA LANDSCAPE AS A WHOLE.

COMPLEX CHALLENGES

222,000 HA

THE RUVUMA REGION IS IN THE TOP FIVE AFFECTED REGIONS FOR DEFORESTATION IN TANZANIA, LOSING AROUND 222,000 HECTARES OF TREE COVER DURING 2021

Despite its incredible biodiversity and critical importance, Ruvuma is under intense and growing pressure from a number of threats

© Michael Poliza / WWF

POACHING AND THE ILLEGAL WILDLIFE TRADE

In recent decades, poaching has devastated Ruvuma's elephant population and almost wiped out its black rhinos. Today, only a few individual rhinos may remain in Selous Game Reserve, marking a catastrophic decline from the estimated 3,000-strong population of the 1980s.

Dedicated efforts have been successful in tackling illegal wildlife trade and elephant populations are stabilising. However, poaching (including increasingly for wild meat) remains a persistent threat, made worse by the expanding road and transportation networks. Community-based patrols in Tanzania's Selous-Niassa wildlife corridor have recently reported increasing signs of illegal activity in Wildlife Management Areas, including snares and wild meat seizures.



74%

IN THE SELOUS-MIKUMI ECOSYSTEM ALONE, A STAGGERING 74% OF ELEPHANTS WERE LOST TO POACHING IN JUST SEVEN YEARS - DECREASING FROM AROUND 50,000 ELEPHANTS IN 2006 TO AS FEW AS 13,000 IN 2013

© Rex Lu / WWF

HABITAT LOSS AND DEGRADATION

Planned industrial scale agriculture and increased clearing of land for farming and raising livestock are fragmenting forests and grasslands, intensifying the risk of conflict between people and wildlife. Overgrazing and illegal logging, along with firewood collection and charcoal production are all adding to the problem and are largely due to a rapidly growing population and increasing migration to the region.

Poverty is high, with most people relying on subsistence farming to feed their families and earn an income. The majority of people lack basic services, and there are few other livelihood options – something we're urgently seeking to address.

FRESHWATER UNDER THREAT

Unregulated overfishing, poor waste management and chemical run off from unsustainable farming practices are all impacting on freshwater. For example, communities living near Lake Niassa rely heavily on fishing. Yet without regulation it can lead to reduced fish stocks and a potential collapse of the ecosystem. What's more, as people, crocodiles and other wildlife compete for the same dwindling resources, the risk of conflict and retaliatory killings increases.



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HUMAN WILDLIFE CONFLICT

Conflict between people and wildlife is a growing problem across the region, with deaths and injuries reported in hotspots such as the Tunduru and Namtumbo districts of Tanzania and Sanga in Mozambique. Elephants raiding crop fields and lions preying on livestock are both major concerns, as are attacks from crocodiles and hippos.

As people eke out a living, the pressures of encountering wild animals or losing their much-needed crops or cattle can be too much to bear, leading to resentment, intolerance and, sometimes, retaliatory killings.

ESCALATING INCIDENTS

Data shared with WWF from 2021-22 shows there were 12 human fatalities and 14 injuries from hippos, lions and crocodiles in Sanga. Meanwhile, 11,053 acres and 8,937 people have been affected by wildlife crop raiding in Tunduru and Namtumbo since 2017 – 97% of which were associated with elephants.

CLIMATE CHANGE

Like so many natural habitats across the world, Ruvuma is facing the effects of our warming climate. More unpredictable weather patterns can increase the risk of heavy flooding, prolonged droughts and other extreme conditions. These all threaten land, villages and other infrastructure, whilst increasing competition for already fragile water sources.

THE THREATS ARE HUGE AND INTENSIFYING WITH EVERY MOMENT. BUT THE SHOOTS OF A NEW AND FLOURISHING FUTURE ARE EMERGING, THANKS TO THE PEOPLE WHO CALL RUVUMA HOME.

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**BRINGING OUR WORLD
BACK TO LIFE**



LEADING THE WAY

With our partners and local communities, we're working to ensure the Ruvuma Landscape can be protected and well-managed to nurture all the life it sustains

Restoring and safeguarding precious habitats and resources, tackling poaching and reducing conflict with wildlife involves the hard work, commitment and collaboration of a number of partners, including local government authorities, civil society organisations, other NGOs, the private sector and local communities.

We've been working with our partners in Tanzania since 1990 and in Mozambique since 2001, supporting a range of projects across the landscape. As an emerging Transfrontier Conservation Area, Ruvuma has huge potential to support large-scale and coordinated conservation initiatives between the two countries. Initiatives that can enhance collaboration, increase understanding of how ecosystems connect and species move across the landscape, strengthen protected areas, and improve people's livelihood opportunities.

With the Guardian's help, we'll be supporting the governments of Tanzania and Mozambique to develop and agree a high-level treaty and action plan for a truly transboundary Ruvuma landscape. The involvement of local people is crucial to this, and the Guardians can also support a range of community-centred approaches – from expanding community-managed forests and conservation areas to developing new livelihood opportunities.

“COMMUNITIES IN THE RUVUMA LANDSCAPE ARE THE GUARDIANS OF THE WILDLIFE, SO FOR CONSERVATION TO BE SUCCESSFUL, THEY MUST ALSO BENEFIT FROM IT BEING THERE. WE ARE ALWAYS LOOKING FOR SOLUTIONS THAT CAN SUPPORT PEOPLE'S LIVELIHOODS AT THE SAME TIME AS PROTECTING WILDLIFE.”

DEOGRATIUS KILASARA, COMMUNITY BASED NATURAL RESOURCE MANAGEMENT OFFICER, RUVUMA LANDSCAPE, WWF-TANZANIA



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PARTNERS IN PROSPERITY

Improving the management of natural resources and embracing sustainable opportunities can help communities in Ruvuma thrive alongside wildlife

With our partners, we support community-run Wildlife Management Areas (WMAs) that protect wildlife and promote long-term sustainable rural economic development, through the management of natural resources.

To form a WMA, an interested village (or group of villages) must follow a rigorous process. Firstly, villages must agree to set aside part of their land for wildlife and elect village members to represent them. Land use plans are then developed, with bylaws and regulations put in place and a Resource Zone Management Plan or General Management Plan written, forming the basic framework for running the WMA.

SAFETY MEASURES

To help protect the WMAs' natural resources, Village Game Scouts such as Hassan are helping to monitor wildlife and reduce conflict between animals and people

Recruited from their communities, the Village Game Scouts work with district authorities to patrol the local area, monitoring the presence of elephants and other wildlife. They also record signs of any illegal activities, such as logging.

If the elephants are found to be straying too close, the Village Game Scouts spring into action. One technique is to use thunderflashes – a type of pyrotechnic that emits a bright flash and loud bangs – to safely scare them away. Thanks to our supporters, we were able to distribute over a thousand thunderflashes throughout 2021.



© Deogratius Kilisara / WWF-Tanzania

“SOMETHING THAT HAS MADE ME VERY HAPPY IS A REDUCTION IN POACHING INCIDENTS. BEFORE, THERE WERE NO ANIMALS. BUT NOW THEY ARE SEEN IF WE MAINTAIN PROTECTION”

HASSAN MOHAMED NIUKA, VILLAGE GAME SCOUT

NATURAL BARRIERS

By introducing harmless yet effective deterrents, communities can safely discourage elephants from raiding crop fields

Nothing attracts elephants more than the smell of ripened crops and maize is one of their favourites. Yet a large herd can destroy a whole year's harvest in just one night, causing people extreme hardship.

Spicy strategy

One of our more novel approaches to deterring elephants involves using chilli, which they don't like the smell of. By growing chilli around crops or smothering rope fences with it, local people can keep elephants at bay. In 2021, elephants avoided 80% of fields with chilli fences in four villages we support, preventing elephant raids and improving crop yields.

Creating a buzz

Elephants also avoid bees, which can sting the soft parts inside their trunks and around their eyes. Placing beehives around crop fields can make elephants buzz off, and people can sell the tasty honey the bees produce to earn some extra money.



1,000

BETWEEN JULY 2021 AND JUNE 2022, WE DISTRIBUTED 135 BEEHIVES TO RUVUMA COMMUNITIES, AND IN 2021 WE HELPED TRAIN 1,000 PEOPLE ON CHILLI FENCE CONSTRUCTION, AS WELL AS OTHER METHODS OF CONFLICT MITIGATION

WITH THE GUARDIANS' SUPPORT, WE CAN SCALE UP OUR WORK IN NORTHERN MOZAMBIQUE WHERE HUMAN WILDLIFE CONFLICT IS A HUGE PROBLEM. WE CAN ALSO WORK WITH OUR PARTNERS TO DEVELOP HOLISTIC LANDSCAPE STRATEGIES FOR REDUCING CONFLICT.

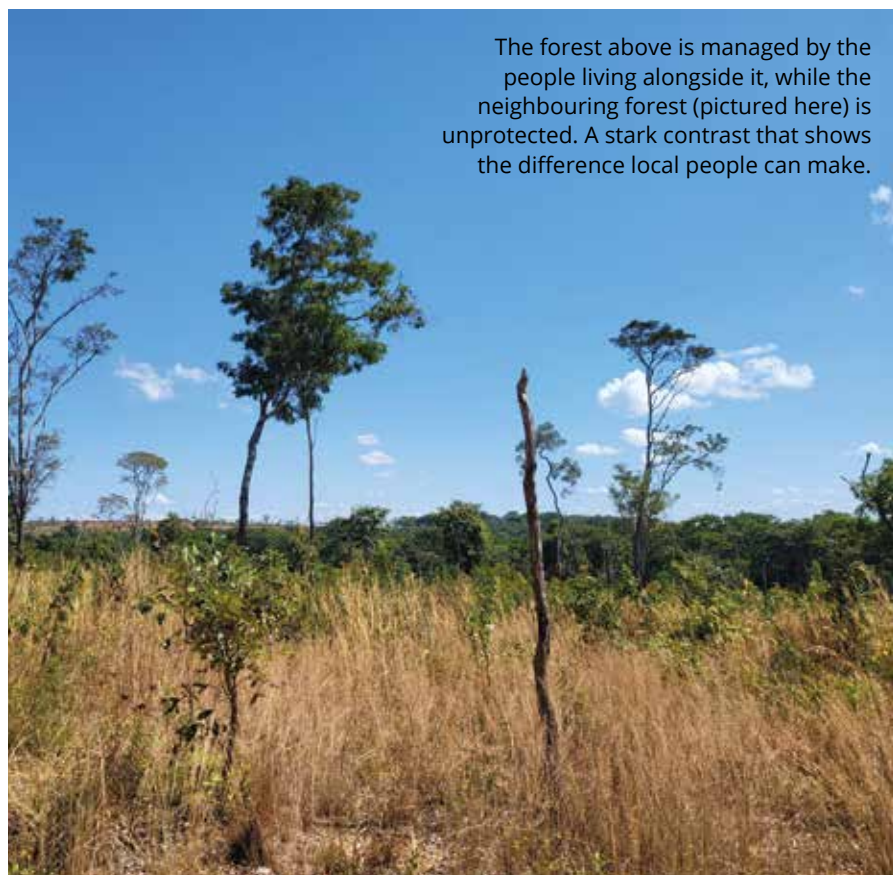
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HEALTHY HARVESTS

Taking ownership of the forests on their village lands enables communities to gain from the timber they produce, whilst maintaining forest growth and regeneration

Forming Village Land Forest Reserves (VLFRs) is a great way for communities to set up sustainable timber harvesting – often through Forest Stewardship Council (FSC) certification. This means trees can be felled and sold in a sustainable, controlled way, which keeps the forest healthy.

Around 50% of the income generated from timber harvesting is invested back into the neighbourhood to help fund school classrooms, healthcare and other priorities. Approximately 45% supports the continued upkeep of the forests, including staff and patrol costs, and the remaining 5% is shared with the wider district. This shared approach is reaping some encouraging benefits. The forests are home to important wildlife and local people are helping to monitor populations via surveys and camera traps.



The forest above is managed by the people living alongside it, while the neighbouring forest (pictured here) is unprotected. A stark contrast that shows the difference local people can make.

© Katherine Elliott / WWF-UK

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NURTURING INVOLVEMENT

Our *Foresters for the Future* programme is helping to inspire the next generation of community conservationists

This innovative programme teaches primary school children how to plant and nurture tree saplings, raising their awareness of conservation at the same time. So far, six village tree nurseries are being supported by the students, with 13,500 tree saplings raised during last year's rainy season.

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YOUR GIFT CAN HELP ENSURE MORE VLFRS ARE ESTABLISHED. YOU CAN ALSO SUPPORT CRUCIAL TRAINING ON KEY SUBJECTS SUCH AS SUSTAINABLE TIMBER MANAGEMENT, GOOD LAND MANAGEMENT, POLICY AND GOVERNANCE.

24,656 HA

IN 2021, WE HELPED ESTABLISH 24,656 HECTARES OF VLFR-MANAGED FOREST ACROSS THE TANZANIAN PART OF THE RUVUMA LANDSCAPE. THIS BRINGS OUR GRAND TOTAL TO OVER 550,000 HECTARES SO FAR – THE EQUIVALENT OF ALMOST 400,000 FOOTBALL PITCHES!

SEEDS OF CHANGE

In Mchakama Village, Tanzania, members of the Maendeleo women's business group are hard at work making sunflower oil

This promising new venture involves 20 local women who use a press donated by WWF and our partners. Together, they process the seeds from sunflowers they've grown into oil, which they can sell for a higher price.

Previously, many of the women had no paid income and they see the business as a life saver. As well as creating their own oil, they also process seeds from other community members, adding another stream of income.

Research shows that elephants don't like the taste of sunflowers and avoid sunflower farms, which helps reduce the risk of conflict. Sunflowers are also drought resistant and require less water than other crops, making them a practical and rewarding choice for the women.

POWERING NEW CAREERS

We're helping to train young technicians such as Fatuma and Baraka to install solar panel systems in local villages, providing clean energy for communities and new careers for them

Across the Ruvuma Landscape, charcoal production is a key driver of deforestation. Traditional charcoal-making methods increase harmful carbon emissions and are a waste of wood reserves. As the effects of climate change intensify, reducing reliance on fossil fuel is vital, and sustainable alternatives such as solar panels can also help prevent the risk of wildlife encounters.

“THIS SOLAR INITIATIVE HAS HAD A BIG IMPACT ON OUR LIVES AND OUR PROSPERITY. I SEE MANY VILLAGES FOLLOWING IN OUR FOOTSTEPS BY CHOOSING TO INVEST IN RENEWABLE ENERGY”

LATIFA MOHAMMED, YOUTH SOLAR ENGINEER

Fatuma helped install solar panels on Miyuyu's community resource centre, where local leaders come together to discuss how best to manage resources. And the village now has Tanzania's first solar-powered barber shop, serving its 1,000+ residents.

SOLAR SIGNIFICANCE

Baraka has helped install solar panels in Miyuyu village market centre, where businesses used to close at sunset for fear of what might happen after dark

“We used to be scared,” recalls Village Executive Officer, Rashid Chilumba. “Our village is located in an isolated area surrounded by thick forests, and you can't rule out encounters with wild animals.”

Thankfully, life has changed for this off-grid community, following installation of the solar panels. “The first action was to set up solar streetlights in the village market centre,” Rashid explains. “The village became lively! Now businesses stay open until 10pm and we are free to move around after dark.”

With a newfound sense of security, the number of women establishing businesses has increased significantly. Of the 12 new enterprises set up in 2020, six were owned by women. “Lighting the market centre has entirely changed women's lives,” says Rehema Thomas, who sells vegetables. “We feel safe working after dark and walking home because of the lights.”

