

In Mkomazi National Park, park management redesign strategies to build climate change and covid-19 resilience

Tackling climate change is increasingly becoming complex while developing countries continue to feel its impact while their contribution to climate change is minimal. As the world gets ready for [COP26](#) in Glasgow next week, many nations are [upping](#) their pledges to lower emissions before 2030. However, sadly, according to a [UN report](#) released on Tuesday, even if Argentina, Britain, Canada, the EU, South Africa, and the US achieve their pledged goals, it would account for only [one-seventh of the reductions needed](#) to limit global temperature rise to 1.5 degrees Celsius. The [report projects](#) that even if countries uphold their climate promises, temperatures will rise by [about 2.7 degrees Celsius](#) by 2100 above [pre-industrial levels](#). This outcome would have catastrophic effects on the planet, such as [punishing heatwaves](#), extended droughts, [ecosystem collapse](#), [flooding](#), wildfires, and [crop failure](#). This report's findings, however, rely on the basis that countries will follow through with their proposed plans — but that is hardly a guarantee. Without [policies and regulations](#) to enforce emissions cuts, warming will get even [worse](#). The impact is being felt in conservation hot spots in Africa and in Tanzania in particular. The snows of Mt Kilimanjaro are rapidly disappearing and will be gone by 2033, predicts the most detailed analysis yet of the iconic glaciers gracing Africa's highest peak. The situation has been made worse by covid-19 pandemic which reduced tourism earnings and threatening to reverse the conservation gains achieved over the years. The rhino, which is considered a flagship species that is already threatened by poaching and illegal trade for its horn is increasingly threatened by these two threats.

During Emanuel Moirana childhood, sighting rhinos in was a normal occurrence. “When it was a good lucky day, it would be very difficult for us to pass through rhino areas without seeing a rhino or two and sometimes even more roaming in the wild and appearing less tensed,” when narrating to WWF. Emanuel, 44 years, grew up in the Serengeti National Park, one of the largest protected area and with the most rhino population in Tanzania. Nestled alongside the Mara River and typical savannah woodlands, the black rhino population was at the mercy of the tourists who enjoyed viewing the big five. During high tourism season when rains have subsided, tourists would watch as the tour drivers maneuver their four wheel Toyota Land cruisers, invading their rhino areas before driving off into the rest of the park to see the other big five.



A group of journalists from different media on a promotion visit to Mkomazi National Park as a tourism destination led by WWF and TRAFFIC EA

With the lasting memory from childhood, little did Emanuel who holds a masters degree in Wildlife Management from Sokoine University of Agriculture in Tanzania new that he will one day also be a conservationist to the level of an Assistant Conservation Commissioner to oversee Mkomazi National Park, one of the critical trans boundary protected area bordering Tsavo National Park, the largest protected area in Kenya. In Mkomazi, being a small protected area, the pressure from human activities is intense including poaching threats, bushmeat and livestock encroachment. These threats among others are constantly experienced due to enforcement challenges posed by the poor infrastructure and difficult terrain as well as harsh adverse weather conditions, and the few drainage systems with only River Umber as the permanent water source means there is a serious water shortage. Efforts have been made to dam four areas in order to catch surface run off which again are silted and cannot ensure all year round water provision for wildlife. Sinking of boreholes to supply water has not been successful since the water is salty and not suitable for consumption. As a result, wildlife is extremely susceptible to drought — over 50% mortality in 2009 for instance. Climate change is exacerbating Mkomazi’s rainy seasons, this means more households adjacent to the park will experience potentially devastating droughts — especially those in lowland areas with high wildlife numbers, occupied primarily by the most vulnerable Masai community.

While the water shortage is not easing up, there is new light on the horizon

Today, Emanuel with support from WWF and other conservation partners and the adjacent local communities are working on the Mkomazi Rhino Project, to co-develop solutions for water shortage due to drought and other challenges including the impact of covid-19 pandemic which

has reduced budgetary allocation to the park making enforcement through patrols by rangers difficult. This has, posed a security risk to wildlife and especially to the endangered rhino population that are enclosed in the sanctuaries and remains dear to the park. Together, they are building a network of partners and community-designed and managed approaches that reduce covid-19 and drought related risks, ensure steady water supply and increased enforcement through patrols. The park is also creating new income-generating opportunities including establishment of a tourism rhino sanctuary and corporate social responsibilities to support community projects including bee keeping.

Reclaiming land for rhino range spaces

When WWF first started supporting Mkomazi National Park rhino project in 2020, surrounded by a fairly dense settlement - which covers five districts in two administrative regions namely Kilimanjaro and Tanga — not only faced tremendous water shortage challenges, but also lacked adequate resources to carry out effective enforcement and biological management of the rhinos among other challenges including rhino range expansion to cater for the increasing rhino numbers and to avoid inbreeding. WWF quickly learned that true change would come from developing partnerships with other conservation organizations like FZS and Save The Rhino International (RTI) addressing recommendations from rhino experts assessment including provision of clean water, review of the General Management Plan, development of a rhino plan, assessment for rhino suitability for expansion of rhino range, ear notching of rhinos lands, pulling down some of the rhino paddocks etc rather than creating new activities that may not be impactful. Transforming these into actionable interventions requires navigating funding constraints, as well as capacity issues since covid-19 has a huge impact on government support just like any other protected areas, which makes lack of support a risky undertaking for rhino security and survival.

WWF launched the Mkomazi Rhino Project, to first ensure rhinos are secure through provision of fuel support increased patrols and fresh water supply to all the rhino sanctuaries for rhino and rhino staff. By supplying over 15,000 litres of fuel and other necessary equipment WWF has helped to protect the endangered rhinos from exposure to potential poaching risks and motivate rhino rangers to effectively discharge their duties. WWF also constructed two charcoal dams to provide all year round water for wildlife to minimize conflicts with the adjacent local communities.



Two out of the six rhinos introduced in the new tourism rhino sanctuary in July 2021 already mating after three months.

The Mkomazi Rhino Project is designed to put rhino and the adjacent community priorities at the center of ensuring increased community goodwill and support to the park management. WWF partners with TANAPA, and together, they identify the core needs of the project for urgent support. For instance, in ensuring long-term water availability, WWF and the park administration, developed the de-silting of the existing dams — to capture rain water surface run off that will also reduce erosion and flood risk. This addresses retention of most elephants in the park, now numbering over 1,200 in the ecosystem, as well as reduced conflicts, retaliatory attacks on elephants, poverty and enhanced tourism for the park.

Emanuel explained to WWF that the park aimed to “really begin to build up community support through the new rhino sanctuary as the first line of defense against poaching.”



Emanuel Moirana, Assistant Conservation Commissioner for Mkomazi National Park with the Minister, MNRT during the launch of the new Rhino Tourism Sanctuary.

From Crisis Management to Crisis Prevention

Forming relationships with Mkomazi chief and local authorities has been critical to the sustainability of the Mkomazi Rhino Project, since the threats facing rhinos require integrated approach and stakeholder involvement. The project has drawn the attention of key stakeholders, especially tourism investors, to the urgency to start thinking about more infrastructural investments to handle the high tourism potential that has already shown signs of increasing. Protection of habitats is one sure way of mitigating climate change.

The Mkomazi will be a significant test of whether the sanctuary and community approach being tried can be replicated through a larger scale government-led process. It also has implications beyond Mkomazi, since more rhino sanctuaries have been proposed including Tarangire, Selous, Nyerere, Arusha, Burigi Chato, etc, representing a huge, mostly-where rhinos are now locally extinct due to poaching and illegal trade in rhino horn.

"When you come to Mkomazi, the people who live around the park are naturally conservationists in their own rights," explains Emanuel, an Assistant Conservation Commissioner. "Having grown and worked in Serengeti I think the assumption is normally, if you're working with local people, they don't have ideas," said Emanuel. However, today, the park management is bringing about a fundamental shift in embracing local communities in park management through *Rafiki wa Faru* initiative. This was the key message during the World Rhino Day, on 22nd September, 2021 that was held in Mkomazi where community members had a chance to visit Mkomazi rhino tourism sanctuary which they have not seen for many years or not all.

The example from Mkomazi is a wake-up call to the world to the imminent peril faced by many species including human. Only eight years are left to almost halve greenhouse gas [emissions](#) in order to stand a chance of limiting global warming to 1.5 degrees Celsius - entailing making of the plans, putting in place the policies, implementing them and ultimately deliver the cuts. Action must be taken swiftly.

By Noah Sitati, WWF Tanzania, Wildlife Species Expert