How threats to Maasai Mara are hurting villagers

Dwindling wildebeest migration is depriving locals of business

In Summary

- Over the years, the Maasai Mara ecosystem has been pulling a huge number of tourists to witness the wildebeest migration.
- However, it is faced with challenges such as huge number of livestock, climate change, all threatening the gem and livelihoods.

Women sells their beadwork at Sekenani gate, Maasai Mara. Image: EZEKIEL AMING'A.

As our 4x4 vehicles pull over at Sekenani gate, Maasai Mara, Naisula Rakwa could not hide her joy.

Every vehicle here means a business opportunity for her to put food on the table for her family. With time, however, the business has declined.

In Sekenani, Rakwa makes earrings, bracelets and bangles, with Olboma village as her work station, a stone's throw away from the gate to the park. Beadwork earns her a living.

The village, we are told, has a population of 300 people who, apart from keeping livestock, specialise in artwork, such as beadwork.

Rakwa, 60, says the market for this gem has declined unlike before, when the fortunes were good.

“We used to make good money from selling our beadwork. However, the business has significantly gone down,” she says.

During the high season, when guests are thronging the park, Rakwa could make more than Sh20,000 per day.

Rakwa nowadays sells two to five pieces of beadwork. She says at times, she does not sell anything in a month.

She is among the thousands of victims of the slow collapse of the iconic wildebeest migration, deemed the biggest animal show on earth. In 2006, the phenomenon was named the 7th Wonder of the New World in a poll of experts conducted by ABC Television's Good Morning America.

It is also one of Unesco's Wonders of the World.

But from roughly 1.3 million wildebeests crossing annually from the Serengeti Park in Tanzania to the Maasai Mara in 1970s, that number dropped to 157,000 in 2016. This is according to Joseph Ogutu, a senior statistician at the University of Hohenheim, Germany, who analysed trends in East Africa's five remaining migratory wildebeest populations in 2019.

Ogutu and his colleagues used aerial survey monitoring data collected over almost 60 years (from 1957 to 2016) in Kenya and Tanzania.

"We found that four migrations have virtually collapsed," Ogutu says. "The remaining Serengeti-Masai Mara route is now under threat and fewer animals are crossing every year.

"Their dispersal areas and migratory corridors are being lost due to high human population densities, increasing urbanisation, expanding agriculture and fences," the Nairobi-based UN Environment Programme says.

Nomesho Karasi displays her beardwork at Olboma Village. Image: EZIKIEL AMING'A.

FOREST DESTRUCTION

Masai Mara sits in Kajiado county and in a good year brings the county government about Sh2.25 billion in levies, says Governor Samuel Tunai.

The park – and the community conservancies around it – directly supports more than 100,000 people through employment in camps, tour companies and through selling indigenous artefacts to tourists.

At Sekenani, we also meet Nomesho Karasi, 38, who tells us that things have gone south as they no longer earn what they used to.

Karasi says she has been in beadwork for the last 15 years.

She says working on big necklaces can take her between one and two weeks. Karasi says she nowadays makes a gross income of between Sh 1,000 and Sh 2,000 a day.

Sometimes, she returns to her Manyatta empty-handed.

Daniel Lempoyio has been a tour guide here since 2002 while he was in high school.

Lempoyio says wildlife have over time reduced due to varied factors.

He cites forest destruction within Mau Forest Complex as well as fences that have dotted the ecosystem.

Lempoyio says water levels have been affected, a move that has affected wildebeest migration and their breeding circles.

“Wildebeest does not cross on shallow water they have to cross on deep water. The dwindling rains have really affected the Mara,” he says.

Lempoyio says they expect that the ongoing rains will boost the number of wildlife within the ecosystem.

“We thank the government for moving those who had settled in Mau forest because we have seen increased rainfalls,” he says.

The government embarked on the first evictions of squatters from Mau in July and August 2018 and affected 2,400 settlers in Nkoben and Kass Fm areas.

Some 11,119.725 acres (4,500 ha) were recovered.

Lempoyio says fences sprouting in Maasai Mara should be removed as they are killing wildlife.

“Some people have erected electric fences in their properties,” he says, urging the government to remove fences to eradicate these fences, especially along the corridors.

Already, a conservation organisation known as Maasai Mara Wildlife Conservancies Association, has started engaging landowners with a view to de-fencing to secure wildlife corridors.

The association was formed in 2013 to serve as a membership organisation for current and future wildlife conservancies in the Greater Maasai Mara.

Some of the beardwork at Olboma village, Maasai Mara. Image:EZEKIEL AMING'A.

CORRECTIVE MEASURES

Lempoyio says the outbreak of Covid-19 also worsened matters as it not only affected the number of tourists but has also saw some lodges shut.

He says some camps had also blocked wildlife corridors. A case in point is a tented camp that had been erected at the banks of the Mara River in the Maasai Mara National Reserve, blocking the migration of wildebeest.

In 2016, East Africa Wildlife Society was commissioned by Narok county to conduct a comprehensive and independent audit of all tourist facilities in the Maasai Mara National Reserve.

The audit revealed some cases of non-compliance with laws, policies and regulations, especially those that relate to tourist facilities' statutory requirements with regard to business registration, ownership and environmental management.

The audit established that as of 2016, the reserve had 31 permanent tourist facilities, including 29 lodges and two camps, with a total bed capacity of 1,382.

EAWLS said it noted that in some facilities, the bed capacity limit was breached during the peak seasons.

"The extent of that breach could not be established during the audit. Not only did this audit contribute to the development of the reserve management plan, which is yet to be gazetted, but it also presented some key recommendations."

On September 8, Tourism CS Najib Balala said he had discussed the camp built beside the Mara River with Narok Governor Samuel Tunai.

Balala said the camp was blocking the wildebeest crossing.

"It's very disturbing and we expect the governor to take action and have the camp removed!" Balala said.

Corrective measures have, however, been instituted.

Nicholas Murero, chairman of Narok County Natural Resources Network, says fencing within Mara should be discouraged at all costs as they encourage poaching.

Murero, who is also the coordinator for Mara Serengeti ecosystem, says the community should be sensitised to keep livestock that has some value at the expense of huge herds that offer little.

"Tourists don't come to see livestock and when they find some inside the park, the park losses value."

Murero says mushrooming camps along the river must be checked as they block wildlife corridors and dispersal areas.

"The county must desist from burning grass. It should instead harvest and give it to the community for them to value the park," he says.

Murero says 60 to 70 per cent of all jobs within the Mara should benefit locals so that they appreciate the jewel.

HUMAN ACTIVITIES

Researchers have already documented the challenges facing the jewel.

For instance, on March 29, 2019, the massive threats were highlighted in a research published in the Science Journal, showing how human activities such as farming, erecting fences and settlements are proliferating around the borders of the core protected areas.

This is putting huge pressure on the area's environment, natural resources and wildlife.

The 40,000 sq km Serengeti-Mara plain that straddles the border of Kenya and Tanzania is famous for its abundant and diverse wildlife.

Despite the allure, the study shows that the once attractive -jewel is no more.

A large team of scientists from seven countries pooled together various lines of evidence — like ground vegetation monitoring, aerial surveys of animals and GPS tracked animals — to show the impact of human activity on the Serengeti-Mara.

The study, led by the University of Groningen and with collaborators at 11 institutions around the world, has data covering 40 years.

Daniel Lempoyio explains the woes facing Maasai Mara. Image: EZEKIEL AMING'A.

The research indicated the activities of people have caused extreme changes to the habitat.

It has significantly reduced the amount of grass and, because of farms, settlements and fences, the landscape has become fragmented. This means animals can't move freely to find resources or mate.

Key ecological functions have also changed.

Some 62 aerial surveys were used, from 1977 to 2016, to examine changes to wildlife, livestock and settlements around the area.

To determine the growth of the human population, data was collected by researchers from the Kenyan and Tanzanian governments.

The researchers found out that there were 26 per cent more people within a 60km radius of the core protected area boundary.

There was an increase from 4.6 million to 5.8 million people in 13 years, with the population growth rate even higher within a 15km radius.

The study pointed out that as the human population increased, there was more livestock, settlements and fences.

For instance, the number of fenced plots had increased by more than 20 per cent since 2010 outside of the core protected area, in the Mara Region of Kenya, a move that has resulted in blockage of wildlife dispersal areas and corridors.

INCREASED SETTLEMENTS

The researchers also found that there was a high density of bomas (settlements), and the number was rising in parts of the Mara by up to three new bomas per square kilometre per year.

They also found out that the number of sheep and goats had substantially increased — by 276.2 per cent.

The number of cattle within the Narok region had slightly decreased by 9.4 per cent. However, the livestock did not just stay on the boundaries of the protected areas. They were going into the protected areas, dealing a major blow to the wildlife. Researchers found out that the livestock paths were prevalent and visible up to 5km, often even further, inside.

For instance, the researchers found out that, from 1977 to 2016, illegal incursions into the Maasai Mara national reserve by cattle increased by 1,053 per cent and by sheep and goats by 1,174 per cent.

They also found out that the number of resident wildlife species had declined by between 40 per cent and 87 per cent. In addition, 63.5 per cent fewer migratory wildebeests used the reserve.

Agricultural activities around the area bothered the researchers.

Over 34 years, the amount of agriculture happening around the border went up by 17 per cent.

It now covers 54 per cent of the land around the protected area and has destroyed large natural habitats close by.

Coupled with high livestock densities, this has intensified the pressure to graze livestock inside protected areas.

The biggest impact has been on migratory animals – like wildebeest.

Using data gathered from GPS radio-collared wildebeest, researchers found out that they were coming together in dense groups at specific locations inside core protected areas, as opposed to ranging widely inside and outside.

This reduces the amount of grass each animal has to eat and, because of over-grazing, weakens the capacity of soil to store nutrients and carbon.

This means the land is less productive and it increases the area's sensitivity to weather changes.

PROPOSED SOLUTIONS

In May 2021, an international team of 92 scientists and conservationists joined forces to create the first-ever global atlas of ungulate (hoofed mammal) migrations, working in partnership with the Convention on the Conservation of Migratory Species of Wild Animals, a UN treaty.

The detailed maps of the seasonal movements of herds worldwide seek to help governments, indigenous people and local communities, planners, and wildlife managers to identify current and future threats to migrations, and advance conservation measures to sustain them in the face of an expanding human footprint.

The Global Initiative on Ungulate Migration was launched with the publication of a commentary titled "Mapping out a future for ungulate migrations," in the May 7 issue of the journal Science.

"A global migration atlas is urgently needed because there has never been a worldwide inventory of these phenomenal seasonal movements," said lead author Matthew Kauffman, a wildlife biologist with the U.S. Geological Survey.

"As landscapes become more difficult to traverse, the maps can help conservationists pinpoint threats, identify stakeholders, and work together to find solutions."

UNDER THREAT: *Wildebeest migration in Kenya's Maasai Mara.*

Year after year, migratory ungulates must pound their hooves across vast areas of the planet to find food, escape harsh conditions, and breed.

Migratory ungulates are an essential part of natural ecosystems and provide much of the prey for the world's carnivores.

The migrations also contribute to local and regional economies through harvest and tourism and are woven into the culture of numerous communities.

Unfortunately, many ungulate migrations are in steep decline due to human disturbances like roads, fences, and other types of development.

The new atlas will help decision-makers plan and implement additional infrastructure projects to mitigate or eliminate their barrier effects.

Migratory animals depend on different habitats to feed, breed, and rest.

If their movements are restricted, the survival of entire populations is at stake.

This is what is currently happening with the wildebeests.