



# CONSERVING LION CONNECTIONS

in northwest Namibia

By Namibian Lion Trust  
Images by Namibian Lion Trust





The Lion Rangers' work includes monitoring lions, assisting with livestock management and spending time out on patrol.

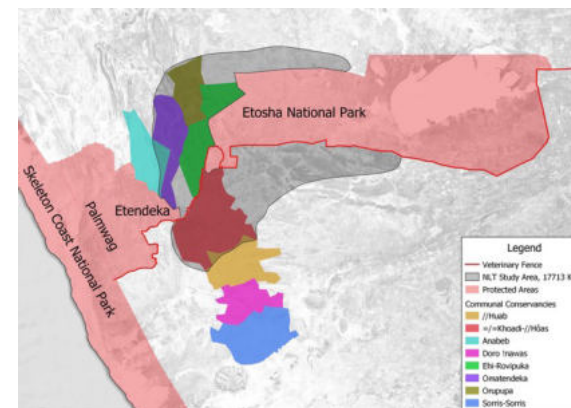
The long-term survival of lions living in Namibia's arid northwest depends on their ability to connect with each other by moving through areas where people live and farm with livestock. If the connection between the Etosha and Skeleton Coast National Parks is cut off entirely, the desert-adapted lion population will ultimately die out.

A recent collaborative genetics study, conducted by lion researchers in Namibia including the Namibian Lion Trust, revealed that the area directly to the west and south of Etosha provides a critical genetic connection for lion populations in the northwest. While there are some barriers to movement, lions from Etosha mix with lions in these border areas. In turn, these lions may disperse further south and west to find other lions. In this way, the genetic integrity of lions living in the far western desert areas is maintained by those coming from populations near and in Etosha National Park.

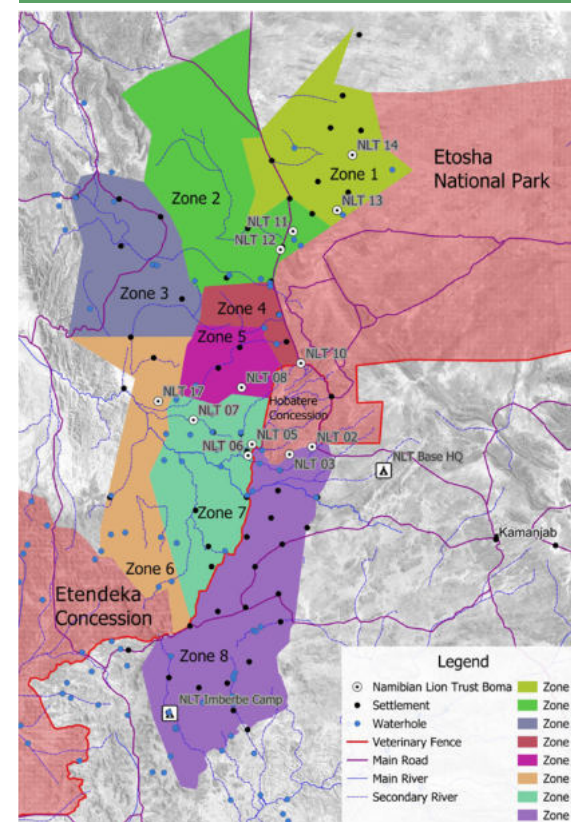
The Namibian Lion Trust (NLT) works closely with the Ministry of Environment, Forestry and Tourism (MEFT) to conserve the key connecting population between protected areas. Our target area includes freehold land and communal land that falls mostly under four communal conservancies – Anabeb, Ehi-rovipuka, †Khoadi-†Hôas and Omatendeka. Eleven communal conservancies between the western border of Etosha National Park and the Skeleton Coast, the Ugab and Kunene rivers, are within desert-adapted lion range.

Conservancies in Namibia were established by local communities who wished to benefit from the wildlife living in those areas. The financial and infrastructural benefits to the community, ideally generated by photographic and hunting tourism as well as major international donations, are often outweighed by the costs to individual households when livestock is lost to large carnivores – including lions. When added to losses suffered from drought and theft, lion predation can deal a devastating blow to local livelihoods.

In response to the threat of lion predation, some farmers illegally poison carcasses meant to kill lions (this often kills many other scavenging species such as vultures, and it is a danger to human passers-by who may remove pieces of a carcass for consumption), others shoot them. Conservancy committees may request specific lions to be declared as Problem-Causing Animals (PCA), to be killed or translocated with MEFT permission. Deaths related to farmer-lion conflict are the biggest threat to the long-term conservation of lions living outside national parks in Namibia, and elsewhere in Africa.



The lion population between Etosha and Skeleton Coast National Parks covers several communal conservancies. NLT's study area includes four of these conservancies and surrounding areas outside Etosha.



The 12 NLT Lion Rangers cover eight zones, which they patrol regularly to monitor lions and engage with communities.





NLT has built a classroom for a remote rural school as a tangible benefit of living with lions.



NLT's Lion Rangers are part of the communities where they work.



LionRangers being recognised for their hard work at an annual award ceremony. 2nd from Left, Rinoveni Tjauri, 1st from Right, Jackson Kavetu

Conserving lions in these circumstances must therefore focus on reducing livestock losses and encouraging co-existence in a common landscape, by working alongside the farmers who share this habitat. Since 2010, the Namibian Lion Trust has built more than 30 communal, predator-proof livestock enclosures (kraals or bomas), most of them equipped with "lion lights" that flash at night, to protect animals in areas identified as conflict hotspots. Farmers who use these bomas as a rule, especially when lions and spotted hyaenas are in the area, can virtually eliminate their losses to large carnivores. But it also requires herding cattle and small livestock daily, which costs time and money. Herdsmen need to be given payment and food, increasing the costs that most communal farmers cannot afford.

The situation is worsened during drought years, when the only grazing and browse left in this arid landscape is far from the safety of permanent kraals. We therefore supply shade cloth and wooden poles to participating farmers to construct temporary or mobile bomas in areas closer to the grazing lands. This material can be moved by donkey cart or vehicle and be assembled relatively quickly. Another advantage of such mobile structures is that livestock hooves chip away at the hard soil and fertilise it with their manure, rendering it more fertile for grass seed germination once the rains fall.

Since lions generally move vast distances during the cooler mornings and evenings and at night, cattle are not exposed to the same level of danger all the time (although spotted hyaena may still pose a threat in the absence of lion). The extra effort needed to fully protect domestic stock – cattle, goats, sheep, horses and donkeys – by herding during the day and protecting them at night, is therefore best spent when lions are in the immediate vicinity. This is where the Lion Rangers come to the rescue of farmers and lions.

While the Namibian Lion Trust has employed community members as Lion Guards for the past fourteen years, integrating our 12 Lion Guards into the Lion Ranger Programme (November 2020) has greatly improved skills all round, inspiring individuals to strive for greater achievements. Lion Rangers gather valuable data on lion movement and behaviour, locate uncollared individuals, record bushmeat-poaching incidents and identify conflict hotspots. By sharing information and offering support, the Lion Rangers motivate farmers to improve their livestock management, thereby encouraging co-existence. On their routine foot patrols they cover many kilometres of rugged mountainous terrain, often in temperatures of over 40 degrees Celsius.

When lion activity is detected close to homesteads and known conflict hotspots, the Lion Rangers form Rapid Response Units, accompanied by First Responders in dedicated 4x4 vehicles. Each vehicle is equipped with a GPS-Satellite communications modem (better known as a 'Rover') for efficient communications with the base of operations. When the Lion Rangers arrive on the scene, they alert local farmers and help them secure their livestock. They keep patrolling the immediate area throughout the night.

Besides this response system, Early Warning towers have been erected in critical conflict areas. They set off an alarm when collared lions approach, thus giving people some time to react.



The Response Units use a combination of real time, 2-hourly locations of GPS-collared lions, geo-fence alerts sent via SMS to the conflict managers and regular logistical updates provided by the Namibian Lion Trust office. These collaborative efforts involving all stakeholders in the region have dramatically improved lion conservation efforts in Namibia's northwest.

As respected members of the communities they liaise with, the Lion Rangers provide a key communication link between people living with lions and the organisations seeking to conserve them – including the Namibian Lion Trust, conservancies and MEFT. These relationships are key to reducing human-lion conflict, as the farmers can discuss their challenges with people who know what it is like to live with lions.

Since our Lion Rangers are trained in the use of the SMART (Spatial Monitoring and Reporting Tool) to record their observations, our ability to collect and evaluate information on lion whereabouts, livestock management as well as lion and livestock mortalities has greatly improved. Lion Rangers in the field record each sighting and incident on their mobile phones, which upload data once a network connection is available. Over time, data compiled on lion movements and conflict incidents will indicate where we need to focus our efforts for maximum efficacy.

The SMART system also reveals each Lion Ranger's patrol distance, monitoring overall performance which is linked to a monthly bonus. In recognition of outstanding achievement in the field during 2023, Rinoveni Tjauri, one of the Namibian Lion Trust's most loyal Lion Guards, won the accolade for *Top Performing Lion Ranger*, competing against 49 of his colleagues. Over 11 months, Rinoveni covered a total of 4,887 km on foot and spent 1,297 active hours on 290 patrols in 2023 and 2024. These impressive statistics serve to illustrate his passion for the work and his desire to see his community find ways to co-exist with lions. The Namibian Lion Trust's First Responder, Jackson Kavetu, won *Top Performing Rapid Response Member* for responding to 90% of the conflict notifications that he received. In 2024, Rinoveni covered 5796 km, clocking 1684 active hours on 326 patrols.



Despite our commitment to this extensive, internationally funded programme, we are acutely aware that the desert-adapted lion population is under major threat. Essentially, we must ask ourselves whether the continued survival of lions outside national parks and the concept of coexistence is at all possible.

Measuring the success of the large-scale effort by Lion Rangers and researchers over a period of 12 years required a reliable estimate of the Kunene lion population. The Namibian Lion Trust therefore participated in the lion population survey during 2022-2023 alongside other collaborators working in the region. The outcome was as anticipated after the prolonged drought (2012 to date) and the high rate of persecution: approximately 45-60% lower than previous estimates – an estimated total of 57-60 adult lions and 14 cubs under one year of age. The Kunene lion density of 0.11 lion per 100 km<sup>2</sup>, the lowest recorded for free-ranging lion populations in Africa, is highlighting the need for continued conservation efforts.

This is the journey that the Namibian Lion Trust has been on since 1997, with the highs and lows that are to be expected when walking the tightrope between people and lions. Prolonged drought conditions with insufficient drought-relief and a high post-COVID unemployment rate have pushed this relationship to the limits, as livestock farmers, lions and their prey compete more intensely for scarce resources.

Nonetheless we have cause for cautious optimism. The investment of human resources, technology and strategic coordination in the Lion Ranger Programme enables greater efficiency and quick responses to lion-related incidents, while farmers are learning to trust us and adopt our livestock-protection methods. Our hope extends to future generations. We work with schools, establishing Environmental Clubs to help young people understand the value of the lions for the local economy and the natural ecosystem. As a result of these combined efforts, we see attitudes towards lions improving over time, which is essential to paving the way to long-term coexistence. 🐾