

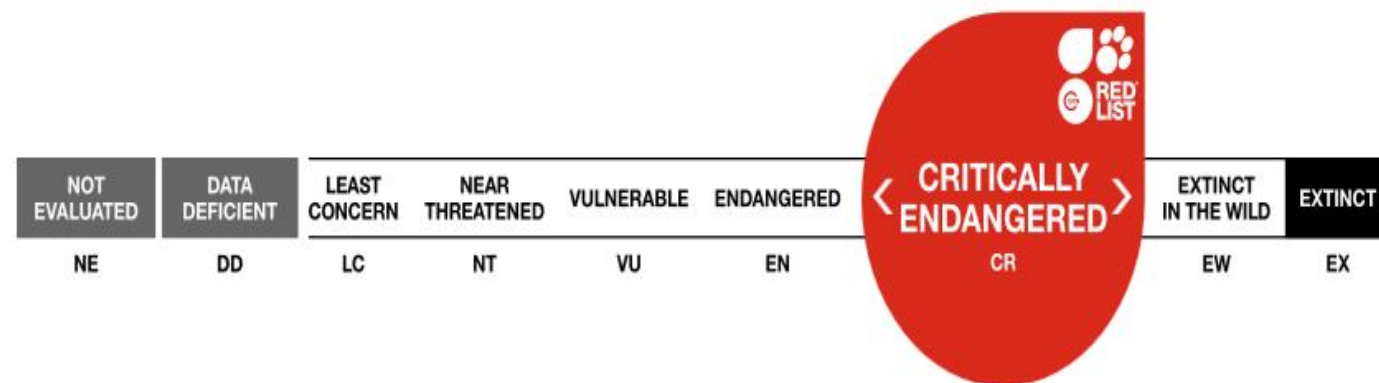


**HIROLA CONSERVATION PROGRAMME
2017-2018 ANNUAL REPORT**

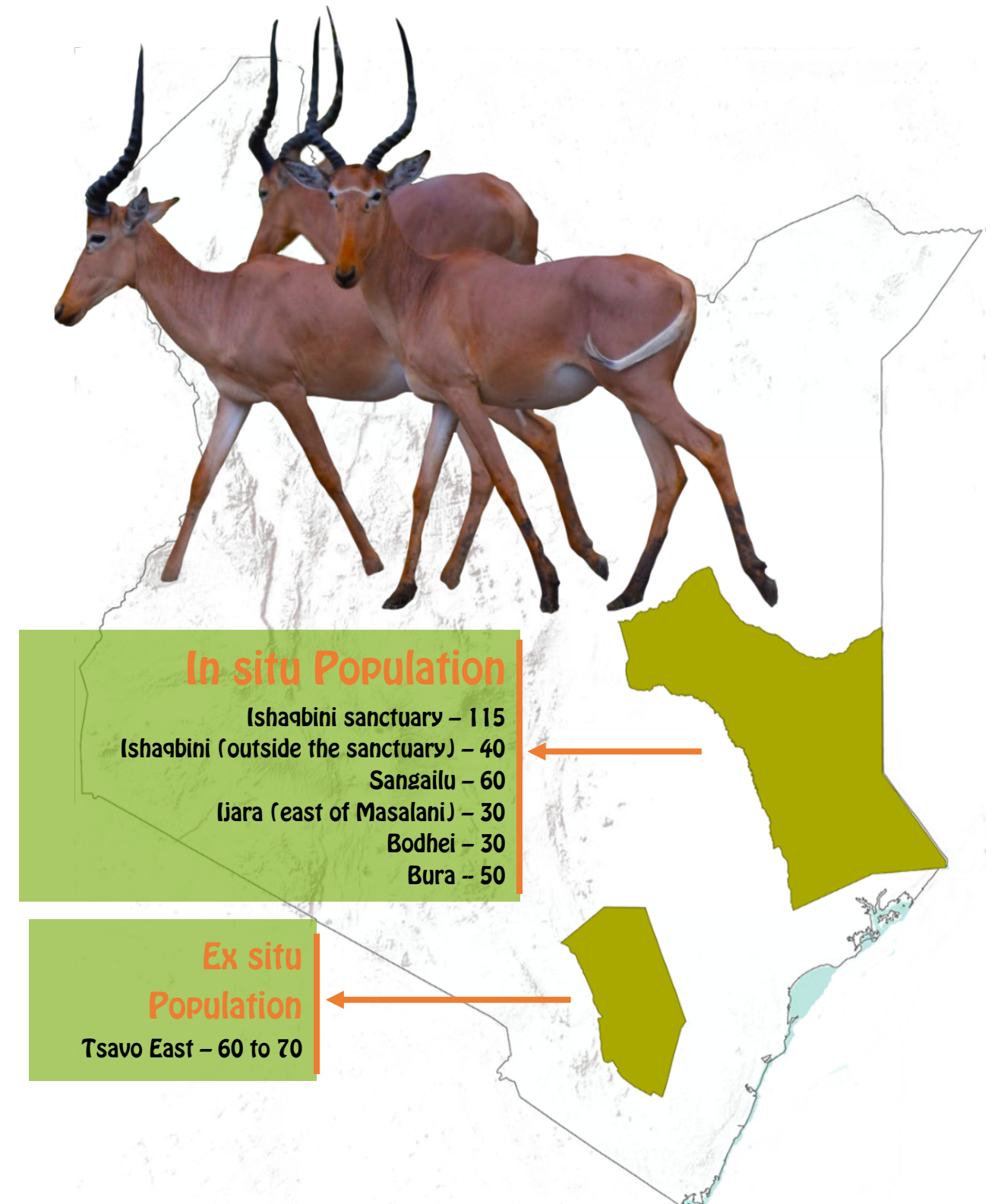


The hirola

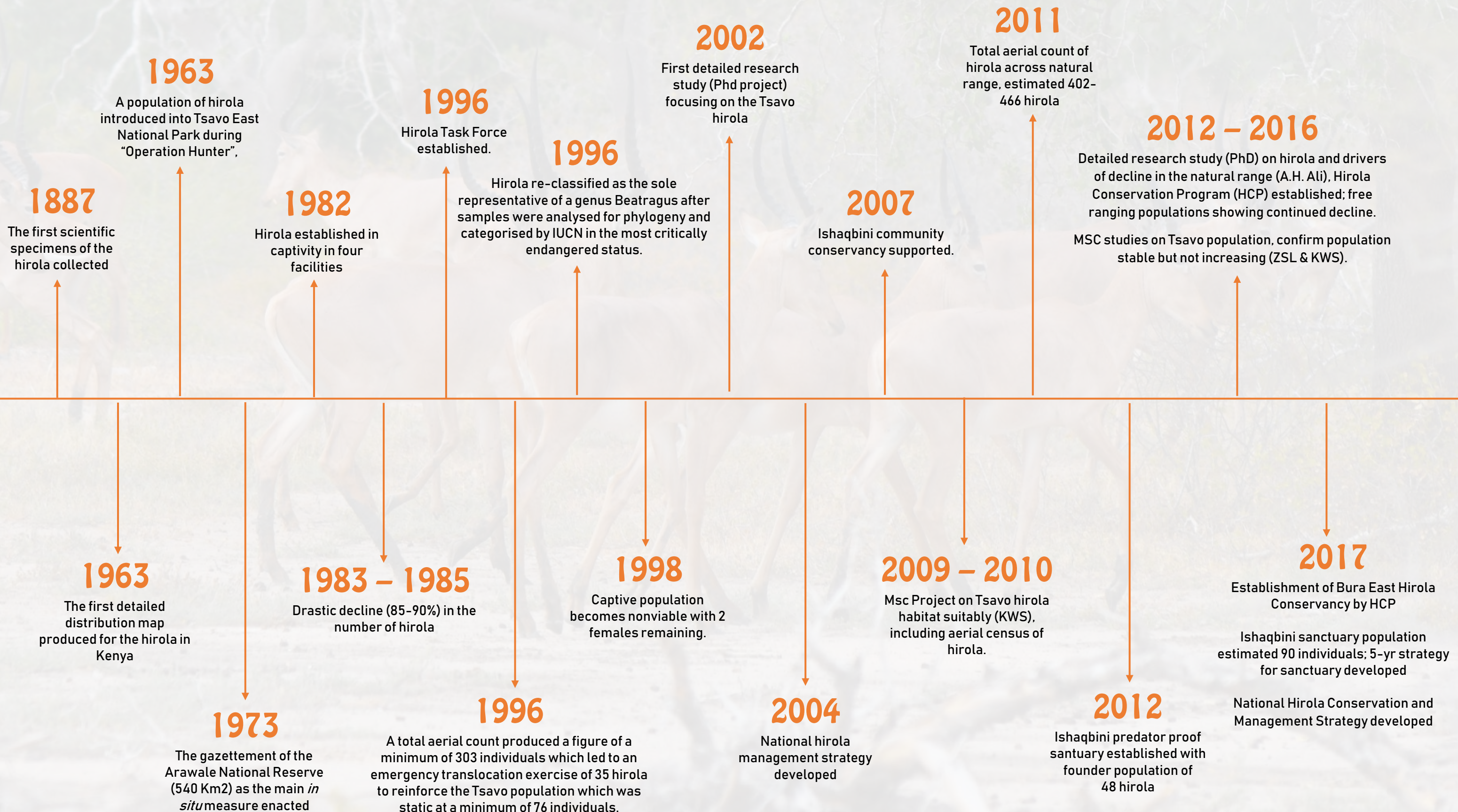
The hirola (*beatragus hunteri*) is the world's most endangered antelope and the sole survivor of the genus *beatragus*. With a global population of <500, the hirola is listed as critically endangered by the IUCN. Hirola population has declined by > 95% in the last 4 decades and is restricted to <5% of its native range on communal lands along the Kenya-Somalia border.



The initial decline of hirola was linked to a rinderpest epidemic in the 1980s and although this was eradicated few years later, it did not lead to the recovery in hirola numbers. More recent findings identify rangeland degradation as the ultimate driver of hirola declines.



The hirola's story

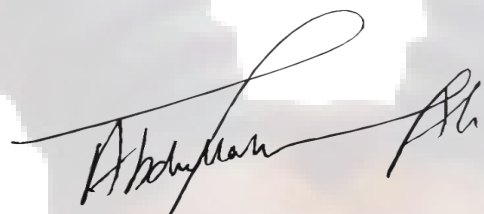


Directors' note

We have made very good progress in securing a sustainable future for hirola in the years 2017 and 2018. Both years had their challenges including drought, insecurity and overgrazing, but through perseverance and continued support from the locals and our committed partners, we made big strides towards the recovery of hirola. With the establishment of new community conservancies, intensive anti-poaching efforts, sustained community engagements and continued field research, we are moving closer to our long-term goal of doubling hirola numbers in the next one decade. Additionally, we located new hirola concentration areas and discovered the now famous snow-white giraffes that have lifted the profile of our conservation sites. Further, we continued to curb the primary threat facing hirola (habitat loss) by increasing grass cover, reducing tree while promoting elephant conservation in communal areas. We also responded to emergency situations within the hirola's range that included the prolonged drought of 2017 and the floods of 2018 that resulted in the outbreak of infectious diseases. In addition, and in partnership with the Kenya Wildlife Service, we have established a veterinary emergency response for sick animals. We are also glad to have established a new community based reticulated giraffe initiative that will cater for giraffes in areas along the Kenya-Somalia border. We attribute all these advances and successes to the very cooperative local communities and our very supportive partners. Your continued support will enable us to ultimately save hirola from extinction. Together we can save the world's most endangered antelope, protect many other endangered wildlife and improved local livelihoods!

Abdullahi H. Ali, Ph. D

Founder & Director



Conservation Impacts

Rangeland Restoration Project

Habitat degradation remains the ultimate threat to hirola survival. With the support of international partners, we have been addressing this major threat facing hirola by restoring grasslands within selected core hirola areas. Our activities have included manual removal of invasive trees, seeding of native grasses and increased protection of elephants. Elephants facilitate tree removal thereby providing higher chances of hirola survival.





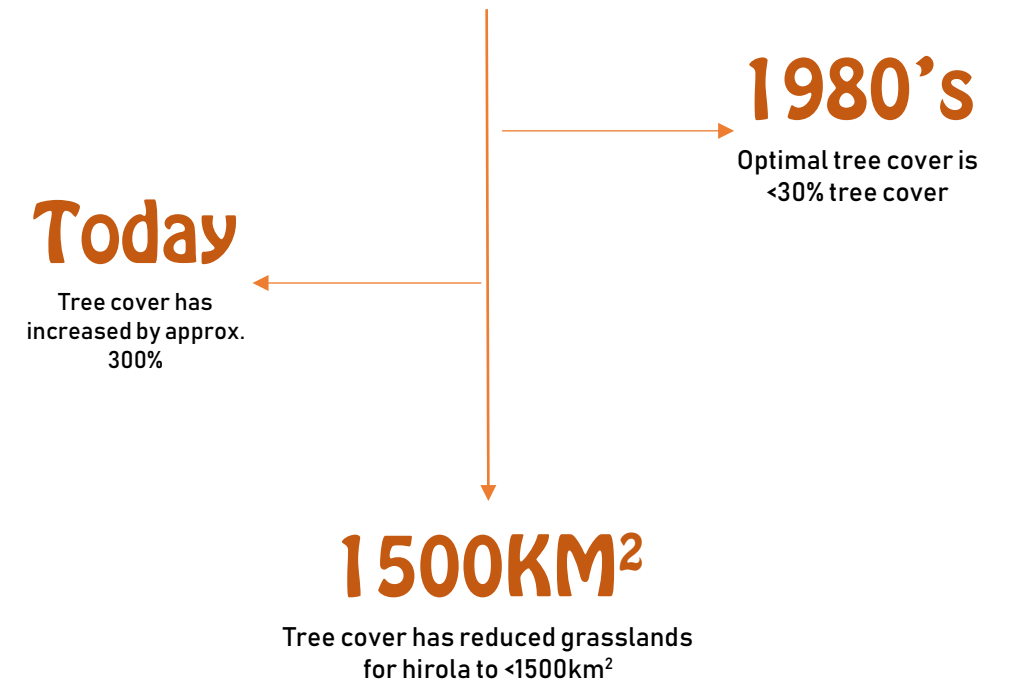
To reduce tree cover, we are manually clearing invasive trees within the hirola's range. We have employed over 100 locals who are fully participating in the project. They are trained, provided with the necessary manual tools and assigned areas close to their villages for the actual manual removal of invasive trees. With the overall project target of clearing 5000ha of invasive trees, we cleared 248ha in 2017 and in 2018 as well.



Reducing tree cover

Optimal hirola habitat

The optimal habitat for hirola is largely grasslands with only <30% tree cover. However, tree cover has increased by nearly 300% in the last 27 years while grass cover has declined by about 75%. Tree encroachment has led to a reduction in the hirola's range to no more than 1,500 km².







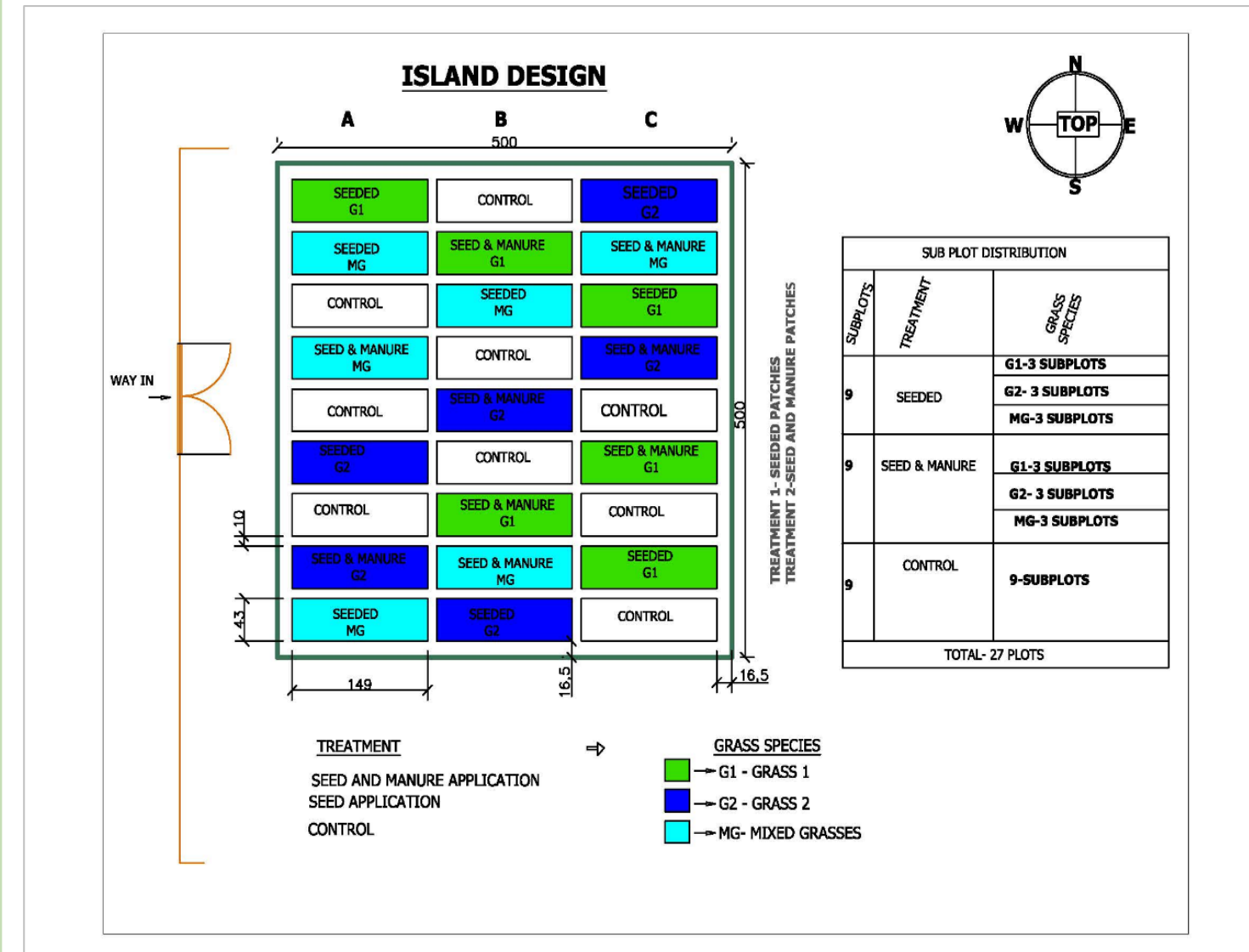
Increasing grass cover

We set up experimental plots to determine the ideal conditions necessary to increase grass growth. We tested the response of four native grass species to four different restoration approaches (tilling, manure application + seeding, seeding, no treatment) in four experimental plots. Amongst our findings was that grass cover was higher in the seeded treatment than the seeding + manure treatment. Both tilling and no treatment did not result in any significant above ground biomass.

The experimental plots are currently our source of native seeds and are also used in training the locals involved in our range restoration project.

Establishing self-sustaining grass Islands

We set up 6 grass restoration islands within core hirola areas with each island measuring 25ha. We are aiming to restore up to 40 islands with the hope of bolstering hirola vital rates affected by habitat restoration.



Our Islands Design





Anti-Poaching

Rangers

We recruited 10 rangers from the local communities in 2017 and 2018. Amongst them are 5 rangers dedicated to the conservation of the threatened reticulated giraffes. All of the scouts were well trained prior to deployment and are currently on active service within the hirola's historical range.

Patrols

Our rangers conducted 2605 patrols, covered a combined distance of 12435km and clocked 11636 hours. As a result of their dedication through daily patrols, poaching incidents within the hirola's range has reduced by 15%. In 2018, 19 incidents of poaching occurred down from an average of 25 incidents annually. After we recruited an additional 5 rangers in May 2018, poaching incidents reduced considerably, and only 3 poaching incidents were reported between May and December.



However, snares still persist as the major threat to wildlife within this region. In 2018, we discovered and confiscated 87 snares. Amongst other actions we are taking to reduce this, we are targeting to recruit and train an additional 15 rangers by December 2020. We have also introduced night patrols and have setup 19 camera traps to help us in identifying the individuals who are using the snares.

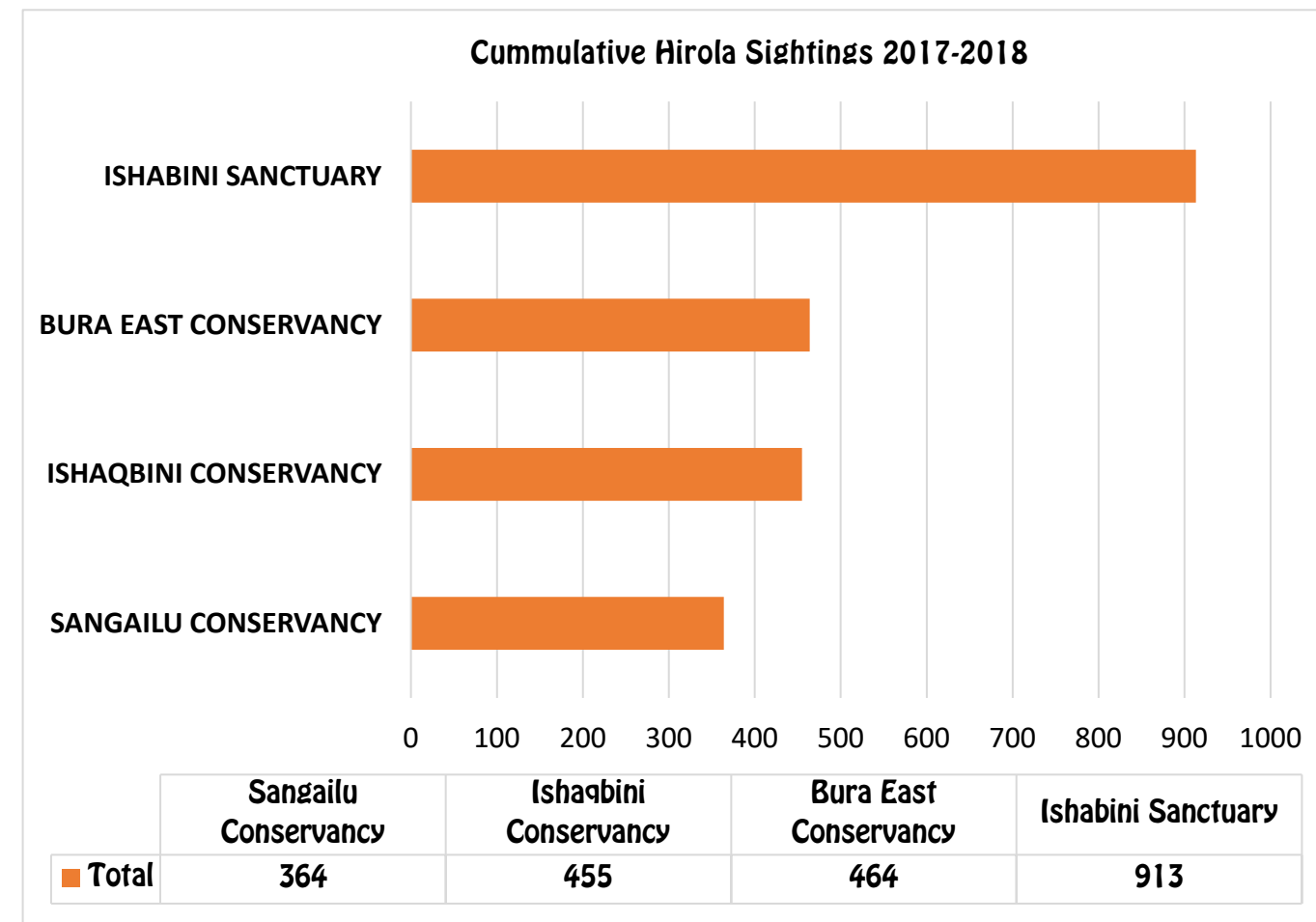


Monitoring

Hirola sightings

Hirola may occur in groups of 5 to 40 individuals with a mean group size of 7 to 9 individuals. In Sangailu, which is closer to Boni forest, the group sizes are fairly large. These large group sizes are common in bushy areas where hirola huddle for safety.

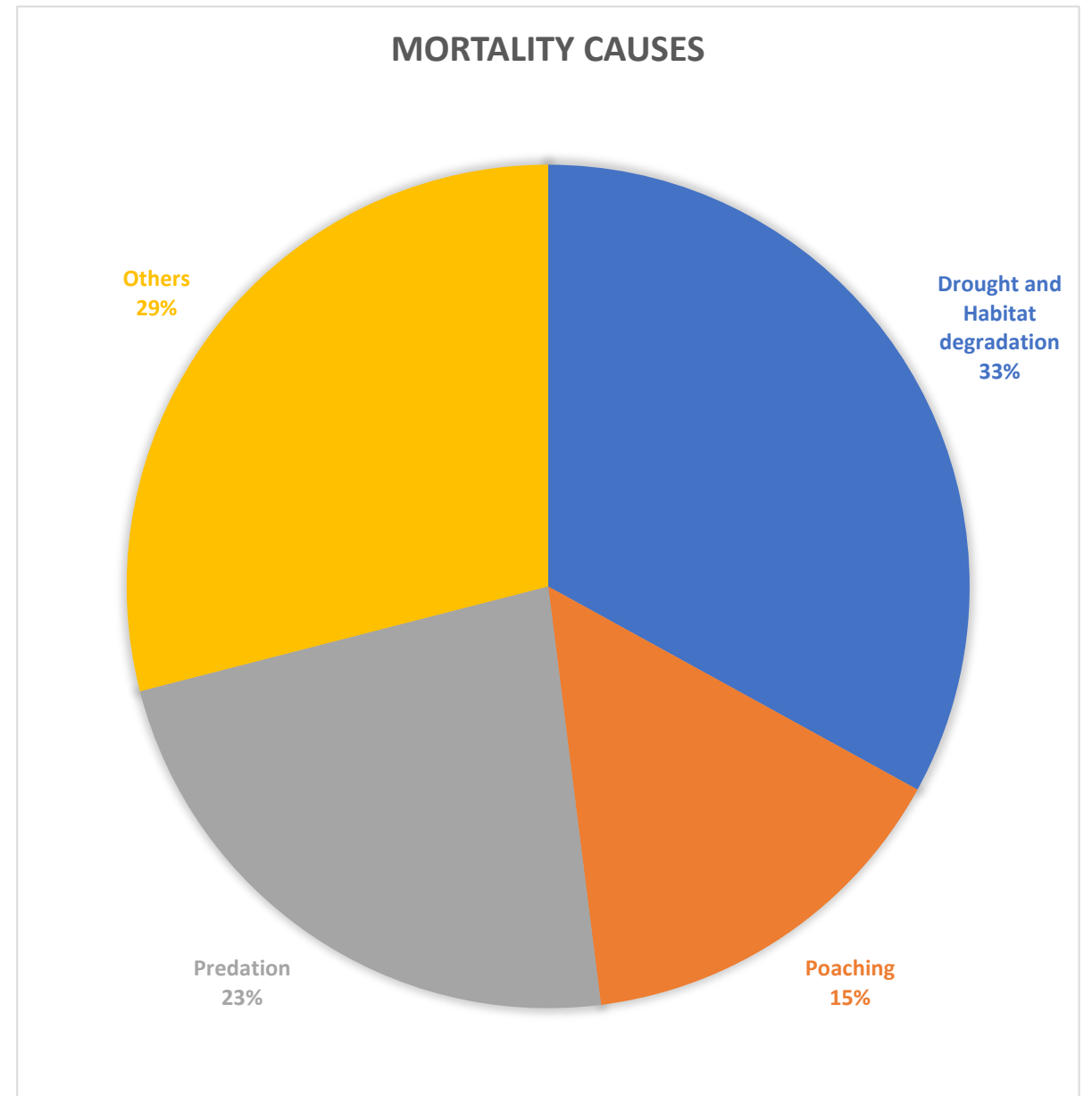
Conservation Area	Smallest group size	Largest group size	Mean group size	SE
Bura East Conservancy	3	15	10.8	2.00
Ishaqbini Sanctuary	2	17	6.7	2.61
Ishaqbini Conservancy	3	17	7.5	3.40
Sangailu Conservancy	4	35	7.3	4.50





Monitoring

Hirola mortalities as reported by a network of Somali hirola rangers.







Conservation Impacts

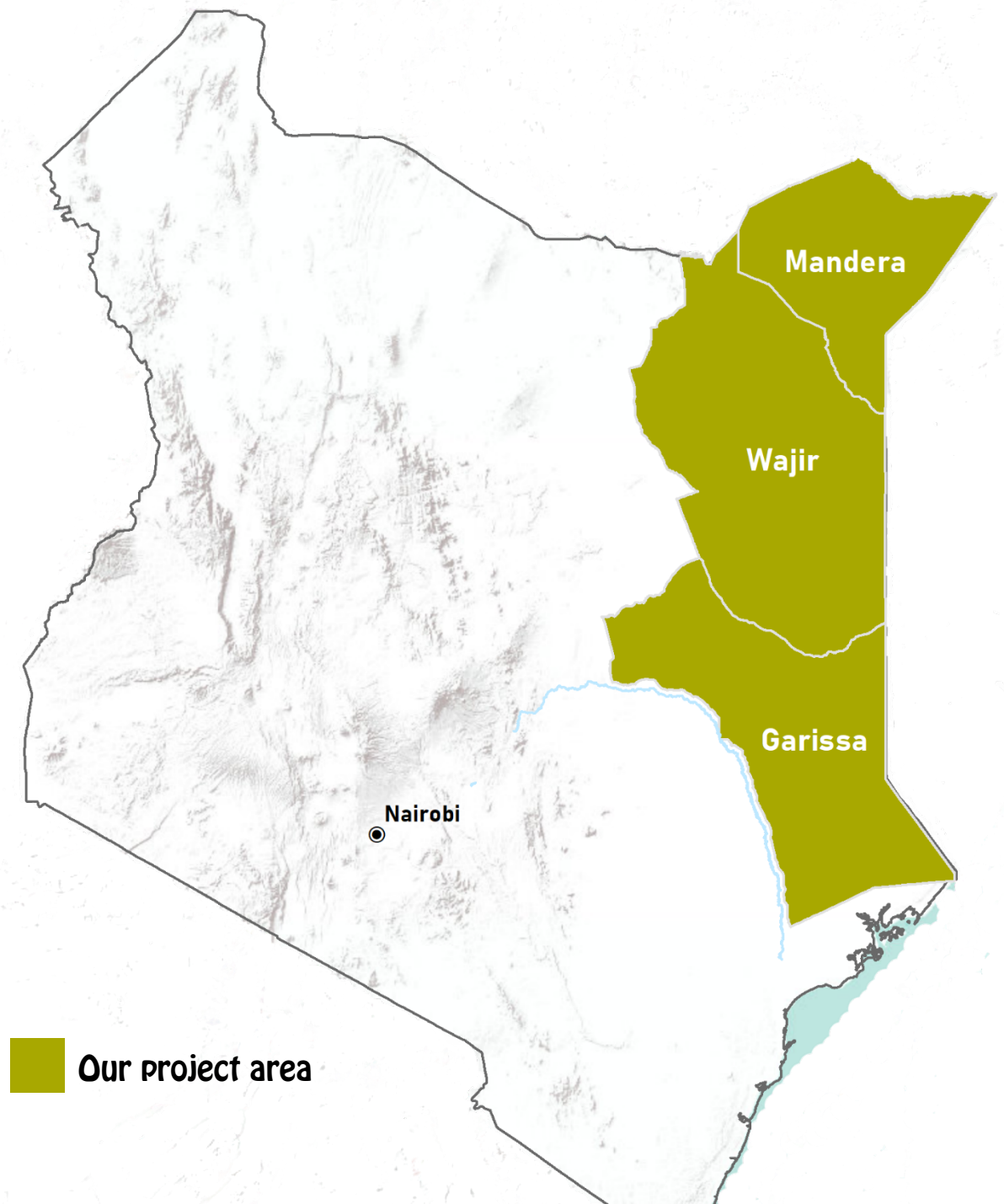
Somali giraffe project

We initiated a Somali giraffe project in 2018 that is solely dedicated to the conservation of reticulated giraffes. The reticulated giraffe (*Giraffa camelopardalis reticulata*), also known as the Somali giraffe, is one of the nine giraffe subspecies.



We work closely with indigenous communities in Eastern Kenya (Mandera, Wajir and Garissa Counties) and Somalia regions close to the Kenyan border, to monitor reticulated giraffes, their population, reduce human giraffe conflicts and promote conservation practices that ensure a sustainable future for the reticulated giraffes. Historically, northern Kenya hosted an estimated 18,200 including an estimated 11,740 Somali giraffes in the Garissa. However, the Somali giraffes have experienced 80% population decline and are currently listed as 'Endangered' by the IUCN.

Historical distribution of Somali giraffes in Kenya & our project area



Our project area

The Somali giraffes have experienced a population decline of 80% and are currently listed as endangered.





White Giraffes

In 2017, we discovered 2 rare white giraffes in Ishaqbi Conservancy. The 2 leucistic giraffes, mother and child, are the second known sighting worldwide.

We have been closely monitoring the snow-white giraffes since their first sighting in 2017, providing the protection that they need and excitedly observing the calf grow into a young, majestic sub adult. The reticulations on the young adult seem to be fading upwards, and towards the neck. The young adult might become as white as the mother if the fading continues.



Both the snow whites are in great health with confirmed reports from our rangers that the mother is pregnant. This is definitely great news and we will be eagerly monitoring the mother giraffe to find out whether leucism will still persist in the newborn calf.





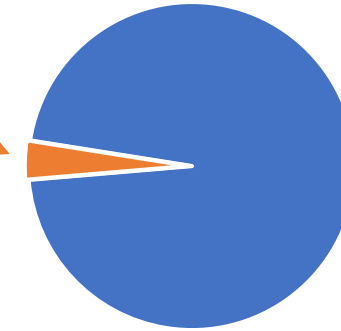
%

New hirola concentration areas

In 2017, we found new hirola concentration areas within the periphery of the hirola's range. This population has about 90 individuals that account for approximately 18% of the global population.

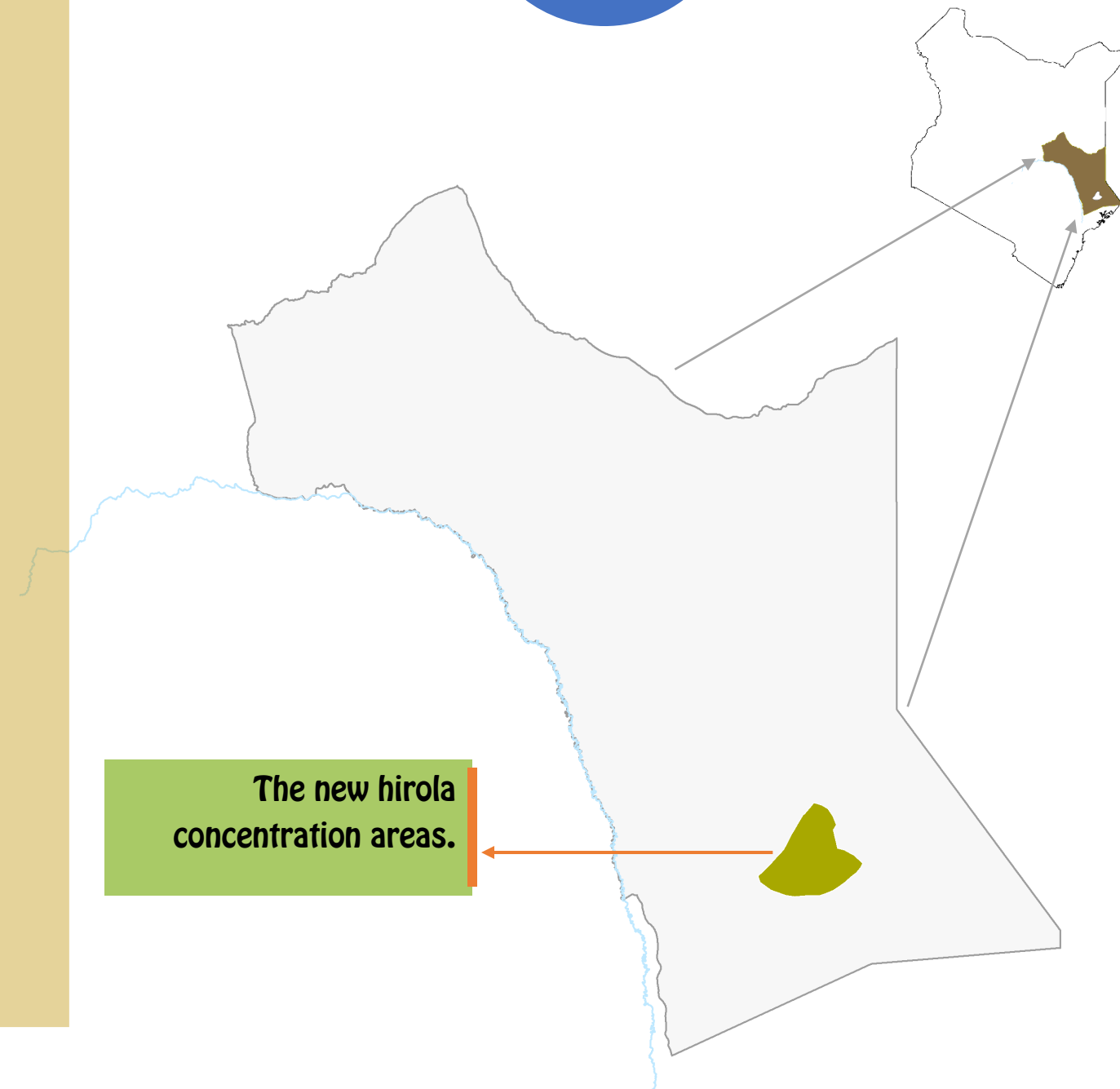
18%

New hirola concentration areas



~500

Population of existing hirola herds



The new hirola concentration areas.



Scientific Impacts

We have successfully published in top ecological journals and also popular press in various articles.

Links to the publications:

<https://esajournals.onlinelibrary.wiley.com/doi/pdf/10.1002/eap.1664>

<https://zslpublications.onlinelibrary.wiley.com/doi/abs/10.1111/acv.12446>

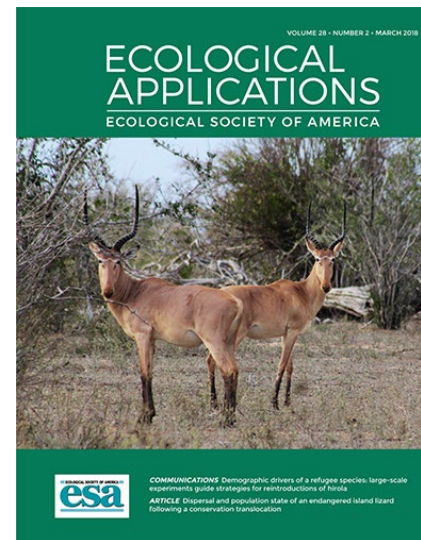
<https://besjournals.onlinelibrary.wiley.com/doi/abs/10.1111/1365-2664.12856>

We have also initiated four new hirola studies that are currently underway:

- 1) Rangelands Restoration study using multisite experiments
- 2) Hirola diet selection study across hirola's geographic range
- 3) Comparative anti-predator response of naïve and experienced hirola
- 4) Conservation genetics of hirola

Other associated features and media coverage include:

- 1) [The Applied Ecologist's blog](#)
- 2) [UW Researchers](#)
- 3) [The Houston Zoo Blog](#)
- 4) [The Conservation](#)
- 5) [African Conservation Telegraph](#)





Community Education & Outreach

We visited 35 schools in our school outreach program and established a greenhouse for Fafi Girls Secondary School.

We also sponsored 2 local youths to study wildlife conservation in college

Women groups

In building capacity and diversify income of the locals, we successfully trained 4 women groups in alternative livelihoods

Herders for hirola

We trained and recruited 35 local pastoralists into our 'herders for hirola program'.

Internship

We recruited 2 local students for internship who are currently getting hands-on experience on wildlife conservation in our sites.

World hirola day

We successfully celebrated 2 world hirola days in villages within the hirola's range in 2017 and 2018, August 12th.

Rangers' capacity building

We held 8 training sessions for our rangers to build their capacity and step up our anti-poaching efforts.

Refresher training

We held 2 refresher trainings for our rangers

Stakeholders' development

We successfully held and attended 12 wildlife stakeholders' meetings for the conservation of hirola, giraffes and other wildlife.

Conservancies' board training

We have successfully conducted 3 training workshops for the Bura East conservancy board members



Emergency Interventions

Drought

In 2017, the hirola's range was hard hit with the failure of three rainy seasons in a row that resulted in the worst drought ever recorded. In a period of 12 months we had lost 23 hirola individuals amongst other wildlife and livestock.

With the support of our international partners, we initiated emergency intervention measures that included replenishing water holes, providing Lucerne and hay to hirola and other wildlife, enhancing community awareness on drought mitigation and developing better drought cycle management plans for the larger hirola's geographical region.

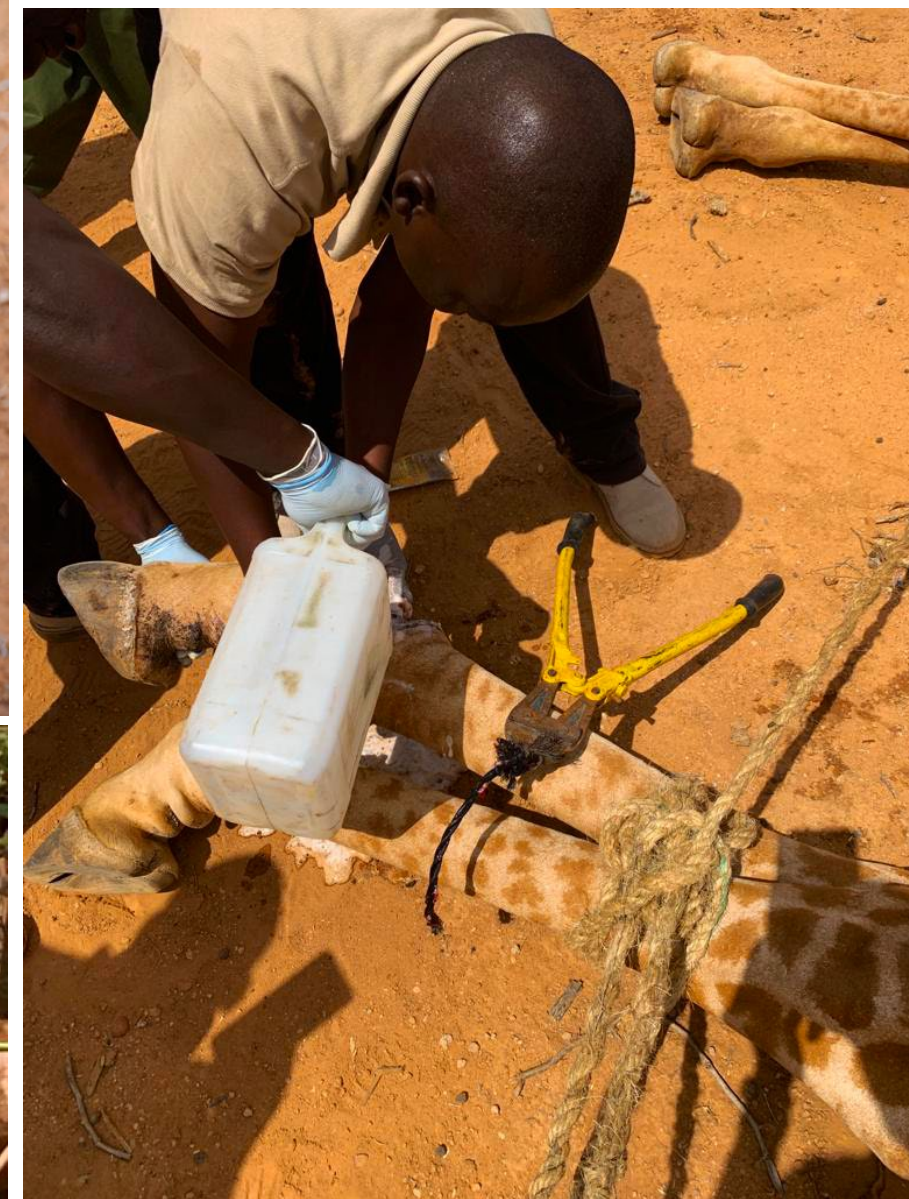
Livestock vaccinations

In 2018, heavy rains led to Tana river bursting its banks and flooding most villages within the hirola's region. This led to the outbreak of the infectious diseases that include the deadly Rift Valley Fever (RVF) in livestock. These diseases have the potential of extending to wildlife and it was urgent that we conduct an emergency vaccination exercise targeting livestock within the hirola's range.

Rescue operations

We successfully conducted 4 operations in conjunction with KWS in identifying and treating over 8 injured and sick reticulated giraffes







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Thank You!



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Your overwhelming support and generosity has enabled us to incredibly expand and strengthen our conservation efforts in 2018. We rely on this support to keep our operations running and to help us realize our vision of documenting the struggles of the world's most endangered antelope. We are humbled and very grateful to all the donors, individuals and institutions who support us.



ASSOCIATION OF ZOOS & AQUARIUMS



Hirola Conservation Programme

www.hirolaconservation.org

hcp@hirolaconservation.org



Hirola Conservation Program



@hirola_program

P.O Box 1774 - 70100,

Nairobi, Kenya.

