

ENDANGERED SPECIES

Hirola

Rewilding Grasslands to Restore an Endangered Antelope

Replanting grasslands is a novel approach because ecological restoration has mostly been tried in forest ecosystems, not in African rangelands.

BY KARI MUTU

When Kenyan wildlife biologist Abdullahi Ali won the 2020 Whitley Award, it was a boost to his pioneering conservation project to save the hirola (*Beatragus hunter*), a critically endangered antelope species, from extinction.

Ali was just one of six winners out of 100 global applicants for the award. Born and raised in Garissa, as a teen a visit to the Maasai Mara National Reserve inspired his vision to work with wildlife. He studied wildlife biology at the University of Nairobi and has a PhD in Ecology from the University of Wyoming, USA.

The 2020 award “was incredibly exciting but also humbling as we still have a lot to do to ensure the full recovery of the species,” said Ali, founder of the Hirola Conservation Program (HCP). Every year, the UK-based Whitley Fund for Nature supports grassroots conservation leaders around the world championing effective conservation solutions with limited resources.

The light-brown hirola antelopes with distinctively long faces and lyre-shaped horns live in the semi-desert regions of Kenya and Somalia. The name hirola is derived from the Somali name ‘*arwala*’ and they are the only living members of the genus *Beatragus*. In the 1970s hirola numbers plummeted from around 15,000 to less than 500 in the wild, a decline of over 95 per cent. The crash was linked to habitat loss but livestock overgrazing, drought, predation by carnivores,

occasional poaching and rinderpest in the 1980s also contributed.

Hirola are listed as critically endangered on the IUCN Red List of Threatened Species. Today, they occur only on a narrow strip of land in Garissa County along the Kenya-Somali border, a fraction of their original rangeland. Five individuals live in the Ishaqbini Hirola Sanctuary of Garissa while a small population was translocated to Tsavo East National Park in 1963 and 1996. However, hirolas outside their natural habitat are thought to be declining in Tsavo.

Hirolas feed almost entirely on grass and the dwindling of grasslands coincide with the elephant poaching crisis in the 1970s and 80s. “Because of the porousness of the Somali border and the closeness to the Arabian Peninsula, all the elephants in that area, approximated to be 5,000, were eliminated,” explained Ali.

Elephants maintain savannah grasslands by bringing down trees and opening up the vegetation. Says Ali, “once you eliminate these large herbivores, nothing else will do that.” Subsequently, much of the hirola habitat gradually changed from grasslands to woodlands. Ali adds that hirola are now a refugee species, “living in sub-optimal





Ali's mission is to grow hirola numbers by restoring degraded habitats to increase food availability and boost "the survival rates for calves to sub-adults to adults giving birth."

habitats and unable to access the full potential of food they need for food, shelter or other resources."

This also affects the biological cycle of the species with females calving at the wrong time, while the closed habitats increase the risk of predation. Other grazing animals such as the Coastal topi, Desert warthogs, buffaloes and Beisa oryx have also declined over time.

Ali's mission is to grow hirola numbers by restoring degraded habitats to increase food availability and boost "the survival rates for calves to sub-adults to adults giving birth." What started as a PhD project has grown into an organisation of 10 technical people and more than 30 community rangers working in anti-poaching and hirola protection. Somalis generally do not hunt for bushmeat but newcomers from other parts of Kenya

have brought in different cultural practices, including hunting with snares.

Since 2016, HCP has been clearing excess trees and planting new grass in experimental fenced plots, sites chosen for their favourable soils and other biotic conditions. The annual replanting exercises are done in partnership with local communities as part of capacity building and applying home-grown solutions compatible with local cultures. Says Ali, "It's also enhancing livestock productivity, and they get employment from this."

Garissa is occupied by nomadic pastoral Somali communities. Proximity to the Somalia border makes the area susceptible to banditry, while historic mistrust of outsiders means conservation efforts are more likely to succeed if fronted by an ethnic person. HCP's community outreach extends to field excursions for schoolchildren or making impromptu village visits to show conservation works for everybody, including the elderly.

< 500

Estimated current population of hirola with less than 250 mature individuals.



“We are inspiring a multi-generational group to see the impact that we need in the long-term,” said Ali.

Research literature dating to the 1970s and indigenous community knowledge has informed the choice of grass species for rewilding. As the local soil seed bank had been decimated from overgrazing, native grass seeds were obtained from Baringo County in western Kenya. “Livestock eat the grass and young shoots so they don’t mature and drop the seeds in the soil,” said Ali.

This semi-arid region has highly variable weather and the rains failed in between 2016 and 2017, so grass seeds did not sprout. But HCP did not give up and good rains since 2018 have resulted in the successful growth of new grass. Ali says that camera trap footage shows hirolas seem very interested in the new grass plots. He hopes to gradually improve the soil’s seed bank so that natural pollination and seeds dropping happens without human intervention.

Replanting grasslands is a novel approach because ecological restoration has mostly been tried in forest ecosystems, not in African rangelands. Ali says his approach is “based on evidence over the last three decades of how the system was, how the species was doing and what we can do to reverse it.” Last year HCP extended replanting into wider areas of the Garissa landscape and they plan to restore 1,000 hectares of wilderness. Ali envisions

this as a long-term project of at least 10 years. They would also like to understand more of antelopes’ physiological conditions and how this highly degraded environment has affected them.

Now with financial support from the Whitley Fund Award, HCP can work towards expanding rangeland rehabilitation, strengthening conservation awareness in the local communities, enhance anti-poaching work and re-establish the Arawale National Reserve of Garissa, once a hirola home range.

Restrictions on movement and social gatherings in 2020 due to the Covid-19 pandemic curtailed much of HCP’s fieldwork and community interactions. But Ali is determined to continue with the replanting work because of the strong support he is getting from pastoralists who have suffered from years of environmental degradation. ●

To learn more about HCP, visit: <https://www.hirolaconservation.org/>

For more on the hirola see ‘Saving the Most Endangered Antelope in the World’ (Swara April-June 2020).



KARI MUTU is an independent writer for various newspapers and magazines.