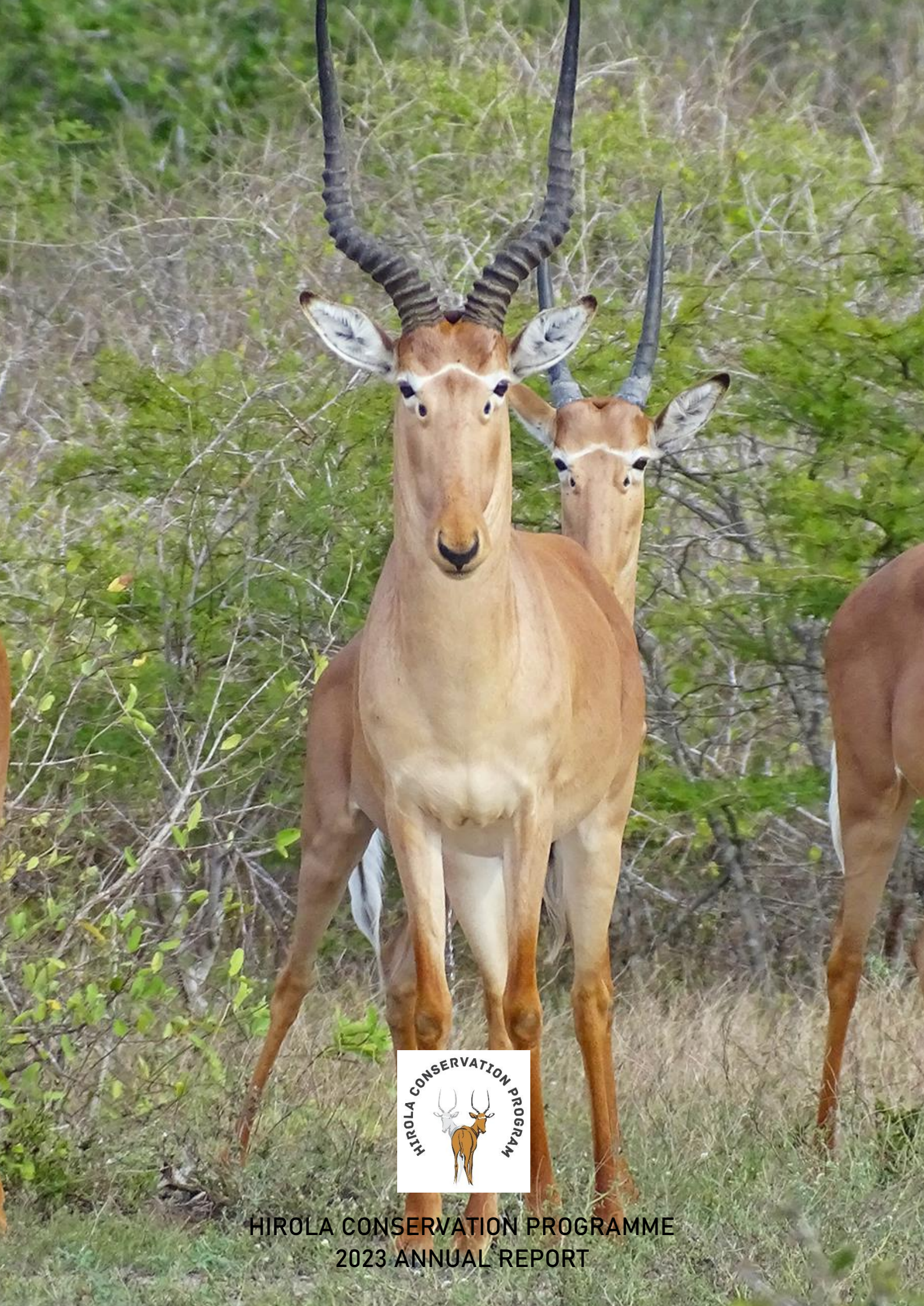




**HIROLA CONSERVATION PROGRAMME
2023 ANNUAL REPORT**

HIROLA CONSERVATION PROGRAM

HCP is an indigenous Non-profit organization based in Garissa, Kenya. The project is primarily dedicated to promoting the conservation of the Hirola antelope and other endangered wildlife in eastern Kenya. Some of our key species include the hirola antelope, reticulated giraffe, grevy's zebra and northeast African cheetah.

HCP started as a small CBO in 2008 with specific focus on the hirola antelope (*Beatragus hunteri*). HCP started as a result of the global concern about the declining hirola antelope populations and the lack of local capacity to spearhead conservation in the volatile region along the Kenya-Somalia border and was formally registered as a non-profit in 2014 with our conservation activities targeting endangered wildlife in eastern Kenya.

Our mission is to sustain a conservation program that will make lasting contributions to the future of endangered wildlife and of the local communities within the hirola's geographical range. Our approach to conservation is multi-faceted and involves:

- Research
- Environmental education
- Community engagement
- Protected area establishment
- Anti-poaching efforts



THE HIROLA ANTELOPE

Common name: Hirola

Local name (Somali): Arawla

Scientific name: Beatragus hunteri

IUCN classification: Critically Endangered

Hirola Geographic Range: Eastern Kenya between Bura, Ijara and Galmagala locations in Garissa county, Kenya

Ex-situ population: There is also a small translocated population in Tsavo East National Park which was translocated from Garissa as insurance for the in-situ population.

DIRECTOR'S NOTE

In 2023 we made significant strides in habitat restoration by clearing 2,000 hectares of invasive trees and re-seeding 1,000 hectares with native grass species. Our community engagement efforts expanded, establishing two nature-based enterprises and educating over 1,920 school children including through the new Hirola Wildlife Education Centre.

Anti-poaching efforts saw remarkable success, with 289 snares destroyed, 21 poachers arrested, and 10 rangers trained. Our patrols covered an impressive 43,680 km. Scientifically, we published two papers on niche modeling for grass species and the Hirola's seasonal diet.

We strengthened collaborations, notably with the Somali Region of Ethiopia, and participated in national and international conservation conferences. Our emergency interventions included rescuing a cheetah cub and distributing food aid to over 1,000 households affected by drought.

A major highlight was the integration of our Hirola Habitat Restoration Program into the National Ecosystem Restoration Strategy, aligning our efforts with national conservation goals. We remain committed to preserving the Hirola antelope and appreciate your continued support.

Abdullahi H. Ali, Ph.D.
Founder & Director





HIROLA HABITAT RESTORATION

This is part of a 10-year project that seeks to contribute towards long term recovery of hirola population by addressing the primary threats facing them. The hirola habitat restoration project's main goal is to restore 10,000 acres with native grasses so as to significantly increase available habitat for hirola and improve their chances of survival.



RANGELAND RESTORATION PROJECT

The primary threat facing hirola is habitat degradation. The hirola antelope is a grassland dependent species preferring habitats with less than 30% tree cover. In the last three decades, hirola habitat saw 250% tree cover increase which translated to a 75% decline in grasslands, this shift posed a major threat to the remaining hirola population as it meant a lack of food and space..

In 2023, we capitalized on the heavy rains in our region to revitalized our habitat restoration program that was previously suppressed by a two-year drought. We successfully manually cleared 2,000 hectares of invasive tree species including *Acacia reficiens* and *Prosopis juliflora*.

We reseeded 1,000 hectares of land with native grass species predominantly *Cenchrus ciliaris*, *Enteropogon macrostachyus* and *Eragrostis superba*. These two grass species are not only easy to harvest(seeds) but are also highly adaptable to the hirola range and preferred by the hirola. We have established 72 native grass islands across Fafi and Ijara areas.

Further, we have established two seasonal locally supported grazing plans for Bura East Community Conservancy and grazing lands bordering Arawale National Reserve from the Ijara side. The grazing plans aim to reduce the overgrazing and degradation of the hirola habitat by cattle, while also ensuring the livelihoods and well-being of the pastoralists. The grazing plan have been approved and backed by elders from both conservancies and is being implemented and monitored for six months and has shown positive results in terms of reducing the conflict and competition between cattle and hirola for pasture, as well as improving the condition and availability of pasture. These grazing plans have helped improve the quality of the hirola habitat.



ANTIPOACHING

Hirola rangers arrested 17 poachers, foiled 59 poaching attempts, and confiscated and destroyed 289 snares, making a significant impact on the illegal wildlife trade.

In 2023, We bolstered our anti-poaching efforts by building the capacity of our anti-poaching team. In a collaborative effort with the Kenya Wildlife Service, Garissa station, we facilitated advanced training for 10 rangers, equipping them with essential skills tailored to optimize their efficiency and effectiveness in the field. The training encompassed bush skills, survival tactics, security drills and data collection techniques to help monitor hirola herds and curb poaching within the hirola’s geographic range.

We further conducted 4 internal refresher training for the rangers as an adaptive measure to curb emerging anti-poaching challenges. To complement the training, we upgraded our equipment inventory to include state-of-the-art bush tracking tools and camping amenities such as hand-held GPS units, range finders, binoculars, and tents. This strategic enhancement has yielded remarkable results; our rangers have patrolled an impressive 40,000 km in the past year alone - a notable increase from the 35,875 km covered in 2022.



A photograph of a group of giraffes in a savanna environment. Five giraffes are visible, standing in front of a dense line of green trees. The giraffes have brown and white patterned coats. The image is used as a background for a text overlay.

A NEW PROTECTED AREA FOR GIRAFFES AND ELEPHANTS

This year we proudly founded the Siqley Community Conservancy in Garissa. The conservancy, which is situated at the northern tip of Garissa County, serves as a vital habitat for giraffes as well as a critically elephant migratory corridor. The conservancy is governed by a 20-member board complimented by 15 rangers drawn from the local community who unanimously decided to establish the conservancy with the aim of safeguarding wildlife. Our efforts have been instrumental in the conservancy's official registration with the Kenya Wildlife Conservancies Association, guaranteeing that it receives national acknowledgment and inclusion in capacity-building initiatives for conservancies.

THE INAUGURAL HIROLA WILDLIFE EDUCATION CENTER ESTABLISHED

In 2023, we established the Hirola Wildlife Education Centre in Garissa to bolster our conservation education program. This groundbreaking facility, the first of its kind in Garissa, aims to educate and inspire locals about the importance of wildlife conservation and raise awareness on the plight of the Critically Endangered Hirola Antelope. As a pioneering institution in our region, the Hirola Wildlife Conservation Education Centre has already made notable impact. Through the center we hosted 720 school children and conducted 12 school visits where we educated 1,200 school children. We engaged the students through wildlife films, educative brochures and practical field activities.

PROMOTING NATURE BASED ENTERPRISES: HIROLA BRIQUETTES ENTERPRISE

Last year, our community enterprise focused on charcoal production as a raw material to briquette production that we initially were to implement. We trained 5 staff members, 50 elders and other 100 locals (women and youth) on three community enterprises: charcoal production, briquette production, marketing and sale. These enterprises are based on harnessing the by-products from our habitat restoration program, such as invasive tree species and grass seeds. Our training program yielded remarkable results. We established three Hirola Charcoal and Briquette Production Associations in Fafi and Ijara, with diverse representation from elders, youth, and women. To launch our charcoal production enterprise, we installed a modern kiln at Bura East for a five-month pilot phase. The kiln produced high-quality (80%+ carbonized) charcoal that burns slower and more evenly than traditional charcoal or raw wood, making it more economical and preferable. The kiln's output was 20 bags of charcoal per 24 hours, thrice as much as the traditional method. After the pilot phase, we have produced 400 bags monthly and sold them to homesteads and schools, generating income for the associations. Currently, we are supplying two commercial briquettes companies in Garissa and Nairobi with the charcoal as raw material for their briquettes production as we anticipate to set up our own briquette production infrastructure.

HIROLA WILDLIFE EDUCATION CENTER ESTABLISHED

The Hirola Wildlife Education Centre is an initiative of the Hirola Conservation Program that addresses the urgent need for on-the-ground education programs that engage local communities in the conservation of endangered wildlife and their habitat in eastern Kenya.



SAVING GIRAFFES FROM SNARES

In our conservation area, the most prevalent poaching method employed by notorious poachers is the use of snares. These wire snares, often hidden in thick bushes, entangle giraffes mostly on their necks and limbs leading to fatal injuries or severe trauma. Over the past year, our collaboration with the Kenya Wildlife Service Mobile Vet Unit has proven crucial in addressing this issue. In the last 12 months, we have rescued 15 giraffes from these deadly snares, providing them with the care they need to recover. Further, our rangers conducted foot patrols in poaching hotspots and managed to confiscate and destroy 120 snares.





SCIENTIFIC IMPACTS

From our Habitat restoration efforts and research, we were able to write 2 papers that demonstrate our evidence-based conservation model in the conservation of the Hirola Antelope

SCIENTIFIC IMPACTS

NICHE MODELLING FOR PRIORITY GRASS SPECIES TO INFORM LANDSCAPE LEVEL RANGELAND RESTORATION FOR HIROLA ANTELOPE

In this manuscript, we modeled 17 grass species (*nine genera*) using Maximum Entropy for ecological niche modeling. We used bioclimatic variables, soil data and presence data to model suitable areas for island planting and restoration sites across the hirola geographic range.

SEASONAL DIET SELECTION AND NUTRIENT REQUIREMENTS OF THE HIROLA ANTELOPE IN EASTERN KENYA.

In this manuscript, we focused on the hirola antelope's diet chemistry in two areas with different management regimes: We found that hirola feeds on variety of diets that were significantly different in plant species composition and nutrient content and based on the season. Grasses were the most consumed plant form, with higher intake during wet seasons. Macronutrient analysis showed differences in nutrient content among consumed species, while micronutrient analysis revealed seasonal variations. The findings underscored the importance of maintaining diverse plant communities for hirola conservation highlight the need for habitat management and long-term monitoring for this endangered species.

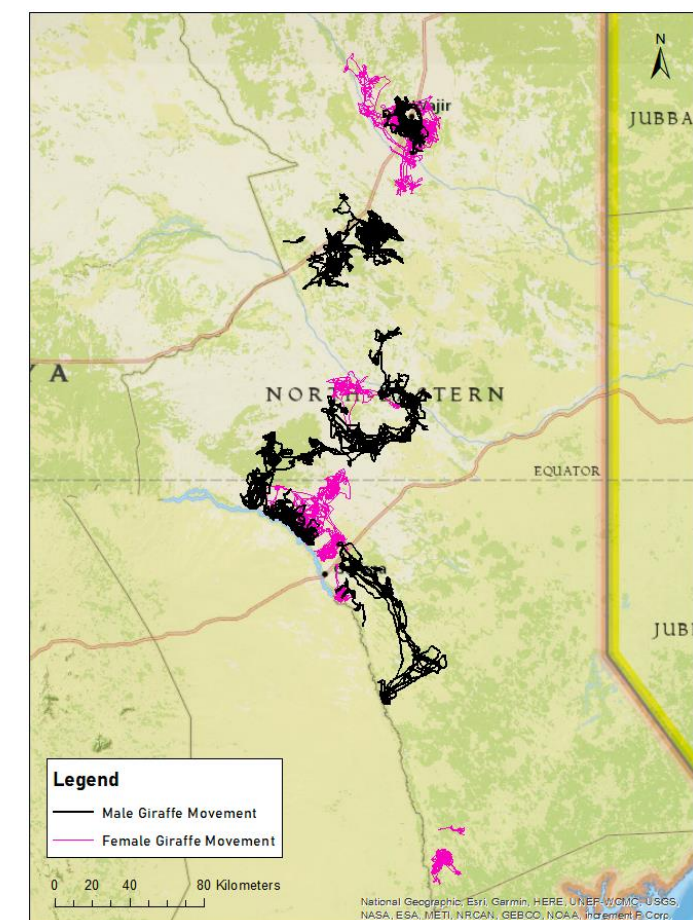
PRELIMINARY FINDINGS FROM ONE YEAR OF TRACKING RETICULATED GIRAFFES

We collared 29 reticulated giraffes across various locations in Garissa and Wajir counties between November 2022 and January 2023. We collared 16 giraffes in Garissa County and 14 in Wajir county consisting of 17 females and 12 males. This project is an ongoing collaborative initiative with the Kenya Wildlife Service (KWS) and aims to enhance the monitoring of reticulated giraffes to inform targeted management interventions and address the increasing threats to this endangered species.



GIRAFFE MOVEMENT DATA

The 29 collared reticulated giraffes had travelled a combined distance of 36,350.4438km. Males travelled approximately 16,084.872Km, and females travelled approximately 20,301.5718Km. While males are typically known to roam widely, the cumulative distance covered by females is more by 4,216.6998km.



Movement data shows clustering in specific conservancies and high-use areas, which appear to provide essential resources such as food and water and protection from poachers. Some giraffes exhibited relatively confined movement patterns, likely due to localized resource abundance or the presence of stable social groups. Some core habitats with high giraffe activity observed include Sankuri Community Conservancy, Garissa Giraffe Sanctuary and proposed Wajir Community Wildlife Conservancy (Map below).

GIRAFFE TAGS

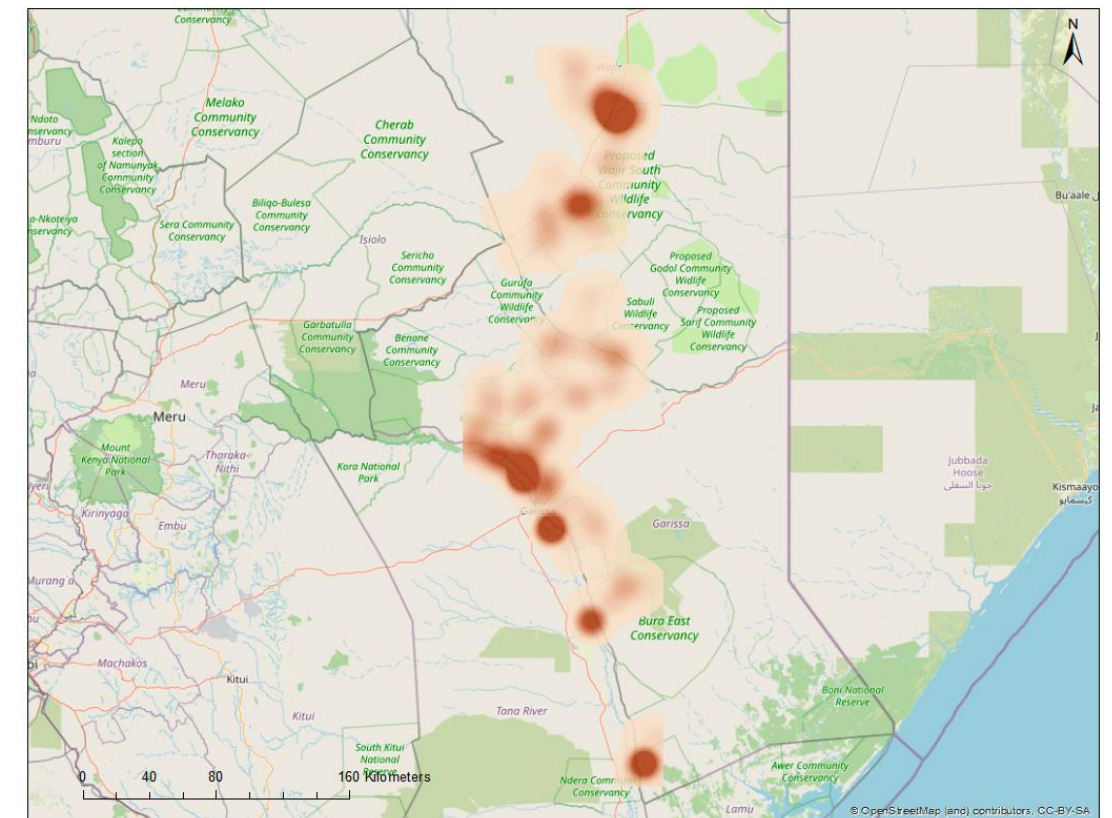
We are using a recently introduced, innovative tracking system that involves fitting a small, solar powered, tracking device to the giraffe's tail.





GIRAFFE TAGGING EXERCISE

The tagging procedure was carried out in a humane manner while adhering to The Kenya Wildlife Service's Protocol for Immobilization and Translocation of Giraffes.



The GPS data shows several well-defined movement corridors that link core areas and allow giraffes to move across fragmented landscapes. A major corridor is the Bura East Conservancy-Kamuthe Community Conservancy-Garissa Giraffe Sanctuary-Sankuri Community Wildlife Conservancy-Bora'ana Wildlife Conservancy-Sabuli Wildlife Conservancy.

Home ranges varied significantly, with larger home ranges observed in males compared to females. Home range size appears to correlate with the availability of resources, such as forage and water, and the giraffes' proximity to wetland areas. Seasonal variation significantly influences the home range sizes and movement patterns of reticulated giraffes. During the wet season, there is a notable expansion in the home ranges of many collared giraffes.

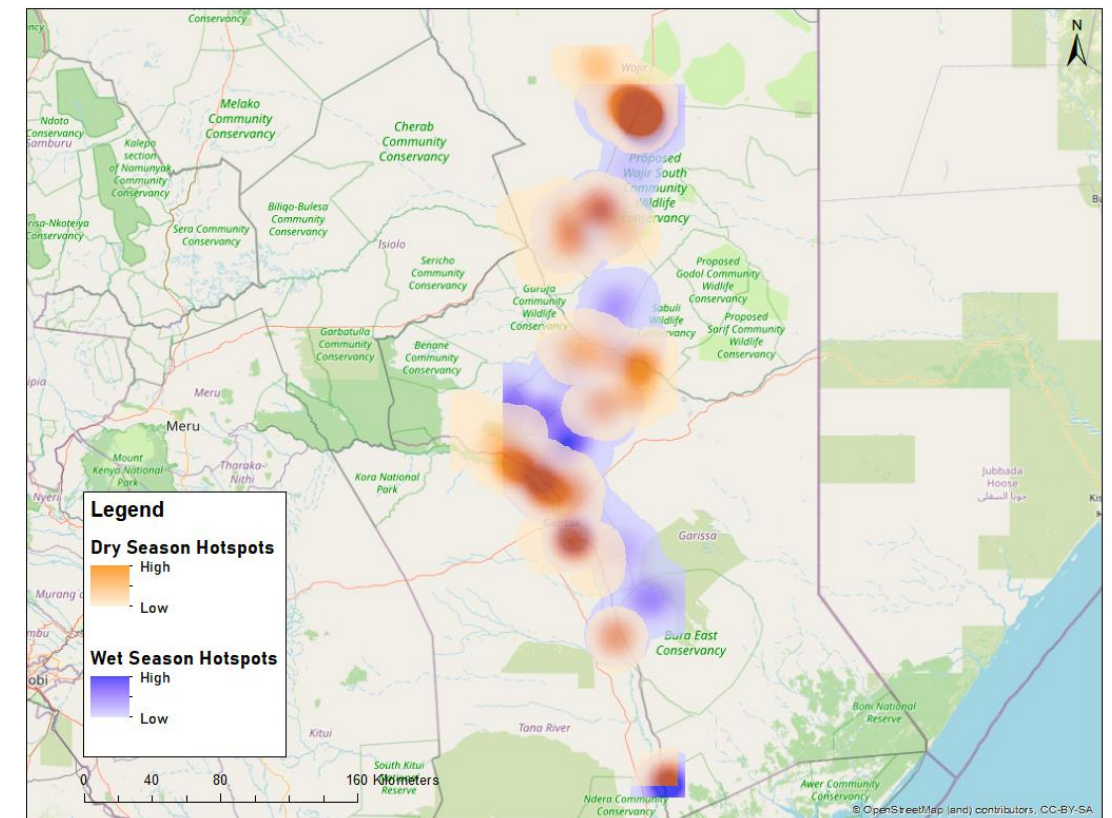
Somalia-Masai Acacia-Commiphora deciduous bushland and thicket is the most preferred habitat for the collared reticulated giraffes, where they spent approximately 74.39% of their time. The second most frequented habitat is the Acacia-Commiphora stunted bushland, where the giraffes spent about 15.39% of their time.



GIRAFFE TAGGING TEAM

This is part of the team that successfully tagged 29 giraffes in Garissa and Wajir counties of Kenya.

Analysis of giraffe movement patterns reveals notable seasonal variations in habitat utilization between the dry and wet seasons. While these findings provide an initial analysis, further research will be conducted as the collaring project progresses.



During the dry season, high-density areas (shown in orange) are concentrated in specific zones within Garissa and Wajir counties. Giraffes are likely congregating around limited water sources and more robust vegetation cover to cope with the scarcity of resources typical of the dry season. These areas act as critical dry-season refuges for the giraffes.

In the wet season, giraffes exhibit a broader range of movement, with high-density zones (indicated in blue) scattered over a wider area. The wet season hotspots indicate temporary resource-rich zones, reducing the giraffes' dependency on specific locations and promoting movement across more habitats.

There is limited overlap between dry and wet season hotspots, suggesting that giraffes shift their core areas of activity based on seasonal resource distribution. This spatial shift underscores the importance of preserving connectivity across diverse habitats to support giraffe movement and access to essential resources year-round.

While these findings provide an initial analysis, further research will be conducted as the collaring project progresses.



CAPACITY BUILDING AND NETWORKING

By participating in key conferences and forming strategic alliances, we are better equipped to address the challenges facing wildlife and their habitats.

CAPACITY BUILDING AND NETWORKING

KII CONFERENCE

Our director had the privilege of participating as a panelist at the Kenya International Investment (KII) Conference, 2023. He enlightened the audience about the immense investment potential in community protected areas, with a particular focus on the North Eastern Region of Kenya. By advocating for investment in community protected areas, he showcased the potential for collaboration between stakeholders in the conservation and corporate sectors. Through these efforts, we can ensure the long-term preservation of Kenya's natural heritage for the benefit of present and future generations.

THE NATIONAL WILDLIFE RESEARCH AGENDA CONFERENCE

Our Director and Founder, Dr. Ali, participated in the inauguration of the National Research Agenda Conference for the years 2023-2027. The event organized and hosted by the Wildlife Research and Training Institute at their headquarters in Naivasha. During the conference, the stakeholders emphasized the significance of research in conservation as a means to promote evidence-based conservation initiatives.



WORLD HIROLA DAY

On World Hirola Day which is celebrated alongside the World Elephant Day, we celebrated our continued partnership with the local community. Given that the entire Hirola population thrives within community land, our local communities play a pivotal role in the protection of the Critically Endangered Hirola Antelope and its habitat. Our director and founder, Dr. Ali, extended his gratitude to the community for their unwavering commitment and support to conserving the Hirola antelope.



World Rangers Day 2023



WORLD RANGERS DAY

We celebrated this day on 31st July, 2023.

CELEBRATING WORLD RANGERS' DAY

We marked the 2023 World Ranger Day by celebrating and honoring the Hirola Rangers who are dedicated to protecting wildlife and their habitats within the Hirola range. Recognizing and appreciating the efforts of these rangers is crucial in motivating them to continue their challenging work. During the celebrations, we reflected on the achievements of our rangers, and showed our appreciation by gifting them with rewards and providing additional equipment. It is essential to support these brave individuals who are on the frontlines of conservation efforts.

Furthermore, the event provided an opportunity to remember and celebrate the life and lasting impact of the late ranger, Mr. Khalif Ahmed. For more than two decades, he wholeheartedly dedicated himself to the protection of the Critically Endangered Hirola Antelope. Our heartfelt condolences and admiration go out to the Bura East Conservancy rangers and the broader Bura community as they joined in honoring this remarkable hero.

NEW PARTNERSHIP WITH SOMALI REGION OF ETHIOPIA ON CONSERVATION

HCP at the invitation of the Somali Regional State: Environmental Protection and Rural Land Administration Bureau, Department of Biodiversity Conservation and Wildlife Management, conducted a 2-day seminar on species recovery and conservation planning for the Somali region of Ethiopia. We also discussed possible collaboration on setting up protected areas for the region and initiating baseline biodiversity surveys targeting key species like the Dibatag, silver dik dik, Soemmerring and speke's gazelles among others in the region.



CAPACITY BUILDING AND NETWORKING

By sharing our expertise and engaging with diverse stakeholders, we strive to ensure the long-term preservation of biodiversity and the natural heritage within the Horn of Africa.

AFRICAN LINEAR INFRASTRUCTURE AND ECOLOGY CONFERENCE

HCP was delighted to join the African Conference for Linear Infrastructure and Ecology, to discuss the impacts and opportunities of linear infrastructure development on ecology and biodiversity in Africa. Dr. Abdullahi Ali, led our presentations on landscape fragmentation and wildlife road kill patterns along the LAPSSET corridor. He also attended and presented at the first ever wildlife management scientific conference, which was hosted by the Wildlife Research Institute. He made two presentations on human-giraffe conflict in Garissa and roadkill patterns along the LAPSSET corridor.

WCN EXPO

WCN Expo brings together some of the world's leading conservationists to connect, share stories, and make life-long friendships. The Expos give people a chance to dive deeper into their love for wildlife, to learn what conservationists are doing to protect endangered animals, and become inspired to make a difference. Dr Ali attended the 2023 WCN EXPO, his first in-person WCN EXPO in San Francisco, California, where he spoke about the root causes of human-giraffe conflict in Garissa Farms.

HCP PARTNERS WITH SOMALI REGION OF ETHIOPIA ON CONSERVATION

HCP at the invitation of the Somali Regional State: Environmental Protection and Rural Land Administration Bureau, Department of Biodiversity Conservation and Wildlife Management, conducted a 2-day seminar on species recovery and conservation planning for the Somali region of Ethiopia. We also discussed possible collaboration on setting up protected areas for the region and initiating baseline biodiversity surveys targeting key species like the Dibatag, silver dik dik, Soemmerring and speke's gazelles among others in the region.

CHEETAH CONSERVATION: COMBATING ILLEGAL WILDLIFE TRAFFICKING IN THE HORN OF AFRICA

The IUCN lists the cheetah (*Acinonyx jubatus*) as vulnerable and illegal trade in live cheetahs as likely to have the greatest negative impact on wild populations. With only 7,000 wild cheetahs remaining in Africa, there are documented 1,880 cases (4,000 cheetah) of seized or marketed live cheetah and parts between 2010-2019. Of these, 3,517 were live cheetah, mostly cubs, likely removed from the Horn of Africa, and destined for countries in the Arabian Peninsula. Furthermore, 2020-2021 unpublished data suggests that illegal cheetah trade has worsened with an average annual increase of nearly 80% compared to the annual average of the previous 10 years.

We were honored and delighted involved in a study that aims to combat illegal cheetah trafficking within our region (Horn of Africa). The study integrates the strengths and principles of adaptive management (AM) and evidence-based conservation (EBC) to monitor free-living cheetah populations, strengthen capacities of government wildlife departments and in-country conservation teams to develop cheetah management and conservation strategies, improve our understanding of anthropogenic drivers of cheetah and other wildlife poaching, develop strategic public outreach activities and solutions to human/wildlife conflicts, and reduce illegal trafficking.

ILLEGAL LIVE CHEETAH TRADE

International Union for Conservation of Nature (IUCN) Red List assessment states that illegal trade in live cheetahs is likely to have the greatest negative impact on wild populations in East Africa.



ANIMAL WELFARE AND REHABILITATION TRAINING

HCP partnered with the Humane Society International to conduct an animal welfare and rehabilitation training for our animal rescue and rehabilitation team. The training took place at our camp from 4th to 8th October and covered topics such as animal handling techniques, feeding and enrichment methods, and animal health and welfare standards. The training was very practical and useful as it enhanced our team's skills and confidence to handle our rescued animals, especially during this period when we anticipate a lot of animal displacement due to the flooding from the El Nino rains. The training also strengthened our partnership with the Humane Society International, which is a global organization that works to protect animals from cruelty and suffering. We are grateful for their support and expertise in helping us improve the lives of our rescued animals.

HIROLA HABITAT RESTORATION PROGRAM GETS INTEGRATED INTO THE NATIONAL ECOSYSTEM RESTORATION STRATEGY

In 2023, we were thrilled to have our habitat restoration program integrated into the National Ecosystem Restoration Strategy that was rolled out by the government in September 2023. Our habitat restoration team had the privilege of participating in the inaugural National Ecosystem Restoration Strategy workshop. The workshop was aimed at identifying and integrating various ecosystem restoration approaches and programs, involving both state and non-state actors into the national strategy. The workshop was hosted by the Ministry of Environment in Naivasha and was inaugurated by Eng. Festus Ng'eno, the Principal Secretary of the State Department for Environment and Climate Change. During the conference our team had the privilege of presenting our October-November short-rain grass seeding and tree planting targets. We aim to re-seed 100 hectares of land within the Hirola core area as well as distribute and plant 12,000 fruit trees in farms along river Tana and schools.



PARTNERSHIPS AND TRAININGS

The partnerships and trainings, such as the collaboration with Humane Society International for animal welfare and rehabilitation, not only enhance our team's capabilities but also strengthen our network of support.

Restoring Acacia Tortilis; Giraffes Dominant Food Plant

In 2023, we successfully planted 2,500 *Acacia tortilis* trees in key giraffe habitats within Garissa, covering areas such as Bour-Algy, Sankuri, Raya, Balambala, and Dertu. This initiative was part of our giraffe habitat restoration program and contributed to Kenya's ambitious 15 billion tree planting initiative, launched by the national government, in which SGP is a proud partner.

Our achievement was made possible through the organization of three major tree planting events held on World Giraffe Day, World Rangers Day, and World Wildlife Day. These events saw enthusiastic participation from our valued partners, including the Kenya Wildlife Service, community conservancies, the Kenya Forest Service, and local school children. Together, we made significant strides in restoring giraffe habitats and promote coexistence between giraffes and the local communities.



EMERGENCY INTERVENTIONS

RESCUED CHEETAH CUB

In mid-December, we received a call from a local informing us of a cheetah that had fled the wrath of the locals and left behind a cub. We rescued the cub from some of the locals who wanted to kill it and he is currently hosted at our Wildlife Rescue Center. This is part of our animal rescue, care-giving and re-wilding program that provides the necessary care to abandoned, orphaned and injured wildlife. This is similar to a case we had in 2021 where we rescued 2 cheetah cubs. History repeats itself!

DISTRIBUTING FOOD AID TO COMMUNITIES

HCP has partnered with the Lions Club of Nairobi to distribute assorted food items to over 1000 households in Southern Garissa and around our conservation areas to cushion communities impacted by the drought in the Horn of Africa. This intervention is a crucial step towards ensuring that communities can sustain their daily nutritional needs, especially as they fast and observe the Holy month of Ramadan.

EMERGENCY INTERVENTIONS

We provide emergency assistance to endangered species (including the critically endangered hirola antelope), livestock and local communities in Eastern Kenya during periods of crises that threatens their survival.





Thank You!

Your overwhelming support and generosity has enabled us to incredibly expand and strengthen our conservation efforts in 2023. 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.

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