

VOL 18

# ANIMAL WELFARE

## MAGAZINE

JANUARY- JUNE 2024

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### PROTECTING ENDANGERED BARINGO GIRAFFE

in the African Arid and Semi-Arid Regions

### ONE HEALTH, ONE WELFARE:

*A Realistic Goal or an African Mirage?*

### VULTURES:

The Unseen Hero

### THE CAMEL:

The Hero of Deserts and Highlands

### A REVIEW OF AFRICAN GEOLOGICAL LANDFORMS

in Arid and Semi-Arid Landscapes



## Welcome Aboard!



# HAVE YOU JOINED THE ANAW NETWORK ?

To join or if you need further information kindly contact us on:  
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### Objectives of ANAW Network Partners Program

1. Promote animal welfare awareness in society through knowledge, skills and attitude change.
2. Nurture ambassadors with the aim of working towards having a continent where people show compassion, protection, and care for all animals.
3. Foster beneficial public participation in animal welfare programs, activities and events across the continent.
4. Pursue a common agenda that will nurture a culture of advocating for good animal welfare practices.
5. Promote and coordinate information sharing on animal welfare among the partners.

### Benefits to ANAW Network Partners

1. Access to a platform to voice common animal welfare and conservation interests.
2. Opportunities to participate in animal welfare and conservation activities/ campaigns such as anti-rabies, anti-poaching, desnaring and animal rescues.
3. Opportunities to participate in animal welfare and conservation workshops, webinars as well as the annual international Africa Animal Welfare Conferences <https://www.aawconference.org/>
4. Opportunities to participate in experiential learning trips and excursions.
5. Access to a platform of sharing information, networking, and collaborations.
6. Opportunity to participate in meetings organized by United Nations Environment Programme (UNEP), United Nations Environment Assembly (UNEA), United Nations Economic and Social Council (ECOSOC).
7. Publicity on ANAW's Website and social media pages, where agreed on.
8. Where appropriate, certificates and/or plaques may be issued.

As a partner, you will work with other partners across the continent to become animal welfare ambassadors and animal welfare champions in advocating for the welfare of animals in your countries, organizations, institutions and/or other spheres of influence. You will also initiate, coordinate and collaborate with other partners in planning and implementing animal welfare field activities in their countries, organizations and/ or other spheres of influence.



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- Civil Society Group
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"Explore the pages of our past issues and delve into a world of captivating narratives, impactful initiatives, and heartwarming encounters with wildlife. Each issue is a testament to our commitment to animal welfare and conservation, offering valuable insights, expert perspectives, and inspiring stories that resonate with readers of all ages.

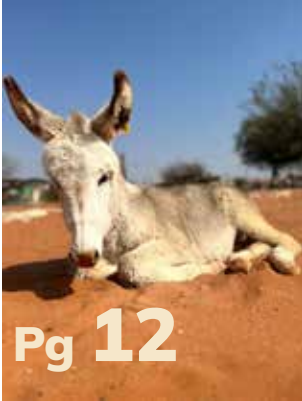
Happy Reading!"



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*Annemarie van Zijl narrates the life of the donkey in Arid and Semi-Arid Africa and deliberates on care given to donkeys in Botswana, Morocco, Nigeria, The Gambia, and Zimbabwe. She gives an analysis of the effect of the extreme weather conditions, devastating crisis and climate change on donkeys and the communities they live with, and the challenges they face. She asserts the mindset and which humankind must behold in order to pursue and meet the grand goal that One Health and One Welfare calls on.*



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## **Five Giant Milestones**

### **in Animal Welfare Law, Policy and Campaigns in Africa**

*The article walks on the corridors of justice, the halls of international negotiation and the streets where Africa's citizens walk to uphold animal welfare values. We learn of and review the status of the biggest campaigns that presented the greatest challenges in in the continent during the previous years and give a glimpse on what to look for in upcoming years.*



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The article informs readers on what is required to ensure that animals survive through tough devastating times. We see how animals' welfare before a crisis aids in its survival during emergencies. An expert speaks through how crisis is experienced by an animal and why it is important that the animals are safeguarded. The expert discussed the challenges faced in disaster management in Africa and expounds on the recommendations to curb the challenges.



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## **Advocating for Change**

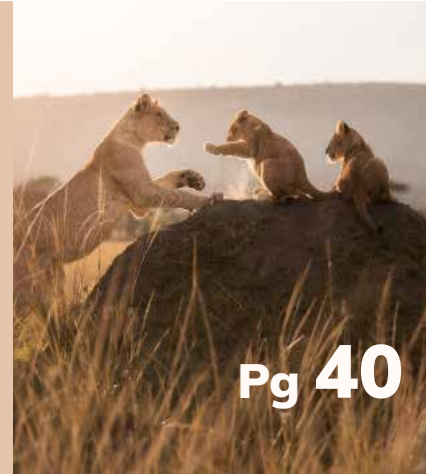
### **for Neurodivergent Individuals and Animals in Our Planet**

Meet Laur Elizabeth Charleston, a charming, compassionate and thoughtful zoologist and veterinarian, who is passionate about neurodivergence in animal care and protection across the world. She takes readers through her experience living and working with animals, her love for animals, her journey in her career and education and what she hopes the future would hold. She gives meaningful insights gained through lessons learnt along the way.



## Nature's Tapestry of Resilience, Indigenous Wisdom and Sustainable Co-Existence in Arid and Semi-Arid Lands in Africa

*Felix Musyoka delves into the intricate dynamics of human and animal life in arid and semi-arid lands in Africa, exploring the interplay between unique landforms, wildlife, nomadic communities, and the challenges they face. He outlays how an understanding the environment presents remarkable way of life such as the use of elevated vantage points, interpreting weather patterns, navigational knowledge, and how a deep connection with the landscapes fosters identity and belonging. In the article, the reader meets Kenyan communities and the land they live in.*



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## The Vulture: The Unseen Hero

The writer, Heather Theuri, presents a fascinating outlook of how vultures play a role in curbing pollution, a major contributor to climate change. She dispels misconceptions and speaks on their true nature. We learn more about the cultural beliefs about the vulture, the different types of species, their behavioural traits, the danger that threatens their survival, their role in the ecosystem and why it is absolutely essential to protect the raptor. She expounds on their bizarre habits and urges the readers to view the bird in positive light as they are integral in ensuring a balanced ecosystem.



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## Experts Weigh in on Animal Welfare Challenges During Disaster Situations in Africa

We venture out to Rwanda and speak to experts on the welfare of animals during disasters. Here we get a glimpse of animal welfare in the land of 1000 hills, and delve into the challenges faced by animals in crisis. The article outlines the challenges that require attention, relays the solutions that need to be pursued and the next steps that should be taken in ensuring good animal welfare during disaster management. It speaks on the proactive responses that Rwanda employs and applauds great efforts undertaken across Africa.



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## Local and International Animal Welfare News

This section highlights articles that cover activities, programs and initiatives that take place across the world. The Animal Welfare Magazine brings to fore local, regional and global news pieces that demonstrate the status and progress of the field in different parts of the world.

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## COVER PHOTO

A Domesticated Working Camel in the Desert

## DISCLAIMER

Views and opinions expressed herein are not necessarily those of Africa Network for Animal Welfare (ANAW) but of individual writers. ANAW does not endorse or guarantee products and services advertised in the Magazine. Have you felt the need to talk about the important work people are doing in protecting animals? The Africa Network for Animal Welfare provides writers and photographers an opportunity to have their articles, opinions, interviews, profiles and photographs featured in each bi-annual magazine of Animal Welfare. Sharing your work on Animal Welfare will go a long way in enlightening others on the importance of protecting, caring and advocating for animals. If you are interested, you can send your stories and photographs to: [communications@anaw.org](mailto:communications@anaw.org).



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# Editorial Note

**E**xploring arid and semi-arid areas, we acquaint ourselves with a unique landscape, fascinating biodiversity and traditional communities. As we examine the interlinks of animal welfare, environment and sustainable development in working to protect people, animals, landscape ecosystems and wild biodiversity, we must remind ourselves of the past, acknowledge and accept the present and work towards a hopeful future.



We are tasked to examine who we are as human beings, our role in the larger ecosystem, review the mistakes we made and formulate the solutions to the challenges we caused. In this issue, we look at the industrial revolution of the 18<sup>th</sup> Century, the rampant effects of the climate change in the present and innovation and indigenous knowledge as solutions in the future. We look back and reach out to ingrain our ancestors' skills and knowledge, understand what of the culture and tradition works in the present for direction to the future. Kenya, and the wider Africa, prides itself in its varied landscapes, valuing every community, and distinct unique biodiversity and celebrating its differences. In Felix Musyoka's articles, we travel through the vast arid and semi-arid areas of Kenya, visit its geological landforms, learn about animals that live in these areas, and meet the communities to learn and understand how every aspect of their way of life is interspersed in harmony with the animals and environment around them.

We listen in as experts talk about how people, communities and leaders come together, develop systems and strategies to rescue animals in times of disasters in East Africa. Veterinary scientists in Rwanda talk to us about the challenges faced by animals in crisis, the solutions that need to be pursued and the next steps that should be taken. We get a chance to review the milestones gained in animal welfare law, policy and campaigns in Africa. In this issue we delve into the biggest challenges the continent faces in ensuring good animal welfare. We look to 2024 as a year as to see that the efforts to have heaps of animal welfare laws to be passed and enacted. It is hoped that the laws will protect, care for and foster humane welfare to domestic, wildlife, farm animals, working animals, animals in laboratories and animals in entertainment. Events have been highlighted where animal welfare, environment and sustainable development issues will be deliberated on in the year.

Organizations take strides in demonstrating impact in achieving animal welfare. Healthier Hens has worked to build capacity among veterinary professionals on chicken welfare in Kenya. They experienced a high positive response to knowledge on identifying normal and natural behaviors of hens indicated adequate basal knowledge of good hen welfare indicators. They venture into little discussed topics such as initial limited knowledge of the freedoms of animal welfare and existing animal welfare legislation in Kenya. Read more, understand and learn about these rarely ventured on fascinating animal welfare topics. Recommendations and individual take aways have been cited to give a practical implementable knowledge anyone can adopt in their day-to-day life.

Happy Reading!

*Catherine Chumo*

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## *Letters to the Editor*

***“ Amazing work. Keep up the good work. Can't wait to collaborate on more articles.”***

*- Felix Kioko*

***“ Thank you so much - what a great edition! Congrats with all of the hard work you've put into making it a reality.:) ”***

*- Lukas Jasiūnas*

***“ I'm very impressed for this wonderful work you are doing. So amazing! RAWO would like to acknowledge and greatly appreciate our collaboration and [highlighting] RAWO [Rwanda Animal Welfare Organization} work in this very interesting magazine. I personally liked the written story.... All the best in your work! ”***

*- Dr Jean Claude Masengesho*

***“ I would like to thank you for the current edition of the Animal Welfare Magazine. I can see how much work goes into the editing and layout design of the magazine and enjoyed reading it a lot!”***

*- Carolin Breitenbach*

*Please write to us and let us know your thoughts, comments, questions, and what issues you would want covered to [communications@anaw.org](mailto:communications@anaw.org) and [kate@anaw.org](mailto:kate@anaw.org)*

# Coming Up:

## Animal Welfare and Conservation Events

### The 8th Africa Animal Welfare Conference - Action 2024

**Theme:** Partnership Actions to Improve Animal Welfare for Environmental Sustainability

**Date:** September 30 - October 2, 2024

**Venue:** UN Complex, Nairobi, Kenya

The Africa Animal Welfare Conference (AAWC), now gaining into its 8th year, has gradually established its presence as the premier continental forum and convening point of annual discussions on animal welfare, environmental and wildlife conservation, human health and sustainable development. It is an annual conference co-hosted by Africa Network for Animal Welfare (ANAW) in collaboration with United Nations Environment Programme (UNEP), African Union InterAfrican Bureau for Animal Resources (AU-IBAR) and the Government of the Country on which the conference is held, for professionals and practitioners, coming together to discuss issues that cut across animal welfare, wildlife and environmental conservation.

The conference aims to be the premier platform for animal welfare stakeholders in Africa to engage in



dialogue, learning and strategy development to address circumstances and developments in animal welfare. The conference sets to bring together animal welfare stakeholders to deliberate on critical issues affecting animals, their value and their contribution to socio- economic, environmental, humane and sustainable development in Africa. The overall goal of the conference is to stimulate policy development, review and planning for the realization of animal welfare. review and planning for the realization of animal welfare.

## UN Biodiversity Conference (CBD COP16)



**Date:** 21 October – 1 November

**Venue:** Colombia, South America

**Delegates:** Parties to the UN Convention on Biological Diversity and relevant stakeholders including Indigenous Peoples and local

**communities, youth, women, NGOs, sub-national actors, and the business community.**

A year on from the 15th Convention on Biological Diversity (CBD COP15) where world leaders agreed to the historic Global Biodiversity Framework to protect 30% of lands, oceans, coastal areas and inland waters by 2030, the 16th meeting will review the Parties' alignment of their National Biodiversity Strategies and Action Plans. COP16 will also advance work to develop monitoring processes and resource mobilisation, to further the achievement of the aims of the Framework, with the protection of marine biodiversity being a key area of development.



## 2024 UN Ocean Decade Conference

**Date:** 10-12 April

**Venue:** Barcelona, Spain



**T**he UN Ocean Decade Conference will bring together the Ocean Decade community and partners to celebrate achievements three years after the start of the UN Decade of Ocean Science for Sustainable Development (2021-2030).

The Government of Spain is hosting the event, which is co-organized with the Intergovernmental Oceanographic Commission of the UN Educational, Scientific and Cultural Organization (IOC-UNESCO). Additional event partners include the Government of Catalonia and the Barcelona City Council through the Barcelona Capital Náutica Foundation, and the Spanish National Ocean Decade Committee, which is led by the Ministry of Science and Innovation through the Spanish Research Council (CSIC).

The UN Decade of Ocean Science for Sustainable Development (2021-2030) aims to bring together ocean stakeholders globally to ensure that ocean science supports countries in achieving SDG 14 (life below water). The Decade will also encourage science and data that support efforts to reverse declines in ocean health and contribute to achieving the vision of the “science we need for the ocean we want”. The UN General Assembly (UNGA) mandated the IOC with coordinating the preparatory process for the Decade.

## Universities Federation for Animal Welfare (UFAW)

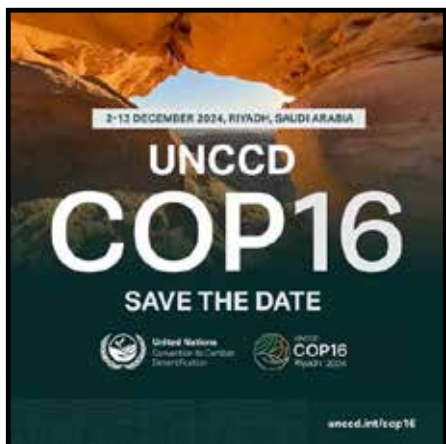


**Date:** 10 – 11 July 2024

**Venue :** Instituto de Ciências Biomédicas de Abel Salazar (ICBAS), University of Porto, Portugal

**A** fundamental element of UFAW’s mission is the dissemination of evidence-based animal welfare information, so we are delighted to be holding our annual conference on 10 – 11 July 2024 in Porto, Portugal. This conference will serve as a platform for a diverse array of presentations encompassing all areas of animal welfare science and feature both talks and posters. Hosting the conference in-person will facilitate valuable networking and collaboration opportunities, however we acknowledge that logistical constraints may prevent some of our colleagues from attending in person. To ensure that the latest developments in animal welfare science are open to all, we will also be making the talks and poster presentations available online.

## UNCCD Conference of Parties 16th Session (COP16)



**Date:** 2–13 December, 2024  
**Venue:** Riyadh, Saudi Arabia

Not to be confused with the UN Biodiversity Conference, COP16 will see world leaders convene for action on drylands under the United Nations Convention to Combat Desertification (UNCCD). This will be the world's largest summit on land challenges since the last UNCCD Conference of Parties in Abidjan, Ivory Coast, in May 2022.

## The Summit of the Future

**Date:** 22–24 Sept., 2024  
**Venue:** UN Headquarters, New York, NY, USA



The Summit of the Future is a high-level event bringing world leaders together to forge a new international consensus on how we deliver a better present and safeguard the future. The Summit has two main aims: to accelerate efforts to meet our existing international commitments and take concrete steps to respond to emerging challenges and opportunities. This will be achieved through an action-oriented outcome document called the Pact for the Future, which will be negotiated, and endorsed by countries in the lead-up to and during the Summit.

## Climate Week NYC 2024



**Date:** 22–28 September 2024  
**Venue:** New York, NY, United States, and online

During the same week as the Summit of the Future, the annual Climate Week NYC will organize over 500 in-person, hybrid and online events and activities across the City of New York.

During the same week as the Summit of the Future,

## UN Climate Change Conference

**Date:** 11-22 November  
**Venue:** Abseron, Azerbaijan

**Delegates:** Parties to UN Framework Convention on Climate Change, intergovernmental organisations, NGOs and relevant stakeholders



Whilst not covering just the issues facing our oceans, the UN Climate Change Conference (COP29) brings together world leaders and stakeholders to measure progress and negotiate multilateral responses to climate change. COP creates global milestones for the climate movement whilst accelerating action and setting globally recognised standards for climate progress. The role the ocean plays in regulating our climate is beginning to gain attention and all eyes will be on this year's COP to support ocean conservation as a critical solution to the climate crisis.



# One Health, One Welfare: A Realistic Goal or an African Mirage?

By Annemarie van Zijl



*GHANA- The Donkey Sanctuary and Action Aid established boreholes for community water. IMAGE-TDS*

**D**onkeys evolved from the wild asses of arid and semi-arid regions of Africa and were first domesticated in North Africa and Egypt. They are particularly suited to hot, and dry conditions. They are browsers and grazers, thriving on high fibre intake, are often the last animals seen surviving on denuded landscapes - and are then wrongly blamed for causing the devastation.

Donkeys are not classified as production animals. They are the “workhorses” of the continent. Thousands of communities, particularly in arid and semi-arid areas, depend on their donkeys for survival. They function as draught and pack animals, are used for agricultural activities such as ploughing and distributing crops and provide transport for people and goods in regions not only where motorized transport is impractical or scarce, but in urban

areas as well.

Because donkeys are not production animals their welfare is often neglected in favor of other livestock such as cattle, sheep and goats. Their stoic nature also results in neglect as they are slow to show signs of illness or pain. A veterinary student in Nigeria commented, “As veterinarian students, we observed that only a few donkeys are brought to the clinic for check-ups and treatments. The common perception is that all donkeys tend to look dull or quiet and hence this and other cultural beliefs might influence people's perception which could lead to negligence by donkey owners, leading to poor welfare practices.”

Times are tough when food and water are scarce. Competition for resources develops between animal species and humans. Donkeys for Africa receives regular

Global temperatures set a new 12-month record from November 2022 to October 2023, exceeding 1.3 degrees Celsius above previously measured levels, according to new international data released by Climate Central.

This marks the hottest year-long period in recorded history, since 1850.

According to the information, 44 African countries experienced heat waves in this time with Rwanda being the worst affected.

Refer to <https://www.climatecentral.org/climate-matters/earths-hottest-12-month-streak-2023> at <https://www.climatecentral.org/>

reports of areas where other vegetation in grazing fields dies off, the animals get weaker, and nature takes its harsh course.

### Anecdotal Reports

In Botswana where rain is very seasonal, a donkey foal became separated from its mother, dehydrated and sadly was found too late. The mother was located and given feed, water and care but also died. In the same area a weak, dehydrated jenny aborted her foal. These cases occurred on days with temperatures of over 40°C and are just two examples that were brought to Okavango Animal Welfare Trust (OAWT) for help. Such losses of potential working and breeding animals markedly affect households.

When one hears of the Okavango one may think of the species-rich delta and assume the area may not be markedly affected by climate change. But even a decrease in seasonal rainfall has had negative impacts on the animals. OAWT is based at Samochima Village on the panhandle to the delta, 30 km from the Caprivi border to Namibia. The

seasonal rainfall has been scant since 2020. The area is severely over-grazed and overpopulated with livestock of all kinds. Though some of the animals are kept in protective enclosures, most roam free. Few are dewormed or vaccinated. In dry periods, the animals have to walk up to 10 km to find grazing or to drink from the river. Donkeys experience poor condition as there is a lack of food and are exhausted. They easily fall prey to crocodiles.

From Zimbabwe, Matabeleland Animal Rescue & Equine Sanctuary (MARES) reports that “If ever there was a difficult year in Zimbabwe, it would be 2023! Although our rains started very well, they abruptly ended on 5 February this year.” They go on to say that “We have started fodder schemes with Moringa trees to supplement the pregnant and elderly donkeys through the winter months.

Over the past five years, the statistics on foal abortion and stillborn foals have risen to 70%. We are certain this is a direct result of the mares not receiving enough

**“If ever there was a difficult year in Zimbabwe, it would be 2023! Although our rains started very well, they abruptly ended on 5 February this year.”**

nutrition during their gestation stage through the winter months.”

The Gambia Horse and Donkey Trust reports that, “The combined effects of the Covid-19 pandemic, climate shocks and conflicts such as the war in Ukraine are causing huge food shortages across West Africa with a devastating effect on both people and animals.”

The organization is seeing an increase in the number of completely emaciated animals being brought to them for care, because their owners have been unable to source enough food for



NAMIBIA-Foals have a hard time surviving the first weeks in the arid area. IMAGE-NAWA

**“Our first goal now is to get the donkeys through the acute crisis. We must carry out emergency operations in 40 villages in the region to save 3,000 animals from certain death.”**





**BOTSWANA- Water for thirsty donkeys at the Samochima cattle post. IMAGE-OAWT**

their animals. Often, they are too far gone for them to be able to save which is heart-breaking for all involved. If their animal becomes malnourished and unable to work, then the family lose their ability to earn an income and a vicious cycle of poverty is created.

All such realities increase the burden on organizations supporting the animals' welfare, and negatively affect the livelihoods of the people relying on their animals.

Welttierschutzgesellschaft (WTG e.V.) reported on conditions in Tanzania: "The call for help from Tanzania is urgent: for months, hardly a drop of rain has fallen here - food and water for the animals are scarce, countless donkey lives are in immense danger." WTG appeals for food, water and strengthening minerals for the weakened donkeys,

and additional mobile clinics for emergency operations. "Our first goal now is to get the donkeys through the acute crisis. We must carry out emergency operations in 40 villages in the region to save 3,000 animals from certain death."

During November 2023 torrential rains ravaged several parts of the Arusha region in Tanzania, resulting in the loss of lives, property and livestock.

It is increasingly important for those involved in animal welfare to plan for widely fluctuating weather conditions. They need to be able to survive climate disasters, physically and financially, to fulfil their mandate of helping others.

A catastrophic earthquake occurred recently in Morocco. Most donkeys, mules, and horses

are working animals, used to remove refuse, transport goods, and assist tourists in the country. The serious earthquake struck the ancient section of Marrakech and devastated several remote settlements in the Atlas Mountains late on Friday September 8, 2023.

A large number of charitable organizations established Morocco Earthquake appealed to provide urgent veterinary treatment to injured and abandoned animals. Working alongside such charities as SPANA, WTG e.V. and Network for Animals, Jarjeer Refuge provided care for animals affected by the earthquake. They also assisted in distributing animal food where it was needed most.

When such environmental challenges require responses from animal welfare organizations, their resources are diverted to address emergency appeals. This reduces their capacity to deal with routine needs such as on-going veterinary support, education and monitoring of animal welfare.

Human intervention also creates environmental challenges which present lessons for Africa.

A study by the International Livestock Research Institute (ILRI), Kenya, and The Donkey Sanctuary, UK, examined the changes in donkey and mule populations in areas of India. A significant decrease in these populations was recorded. The price of donkeys had risen accordingly, adding to the difficulty of owning and working with them.

The reduced utilization of donkeys in various sectors in India was due to urbanization, social development, mechanization and lack of grazing land. India lost 31% (5.65 million hectares) of its grassland area within a decade, largely due to overgrazing, poor management

**“The call for help from Tanzania is urgent: for months, hardly a drop of rain has fallen here - food and water for the animals are scarce, countless donkey lives are in immense danger.”**

**Donkeys act as draught and pack animals and are not dependent on road infrastructure. Their manure is good quality fertilizer and are protective of their territories and consequently of livestock they cohabit with.**

and deforestation. Again, the worst affected households were in the underprivileged communities.

Returning our focus to Africa, Dr Peta Jones of Donkey Power, in South Africa, records the following in the paper, "How Donkeys May Help Farmers Adapt to Climate Change" delivered at the conference on 'Strengthening Local Agricultural Innovations to Adapt to Climate Change' held in Tanzania in 2009:

Donkeys have a range of attributes which make them the most suitable animal for African farmers facing global changes. Expertise in their use is being developed in environments and countries in eastern and southern Africa.

Donkeys act as draught and pack animals and are not dependent on road infrastructure. Their manure is good quality fertilizer and are

protective of their territories and consequently of livestock they cohabit with. They can work productively for a few decades if well cared for and are low maintenance regarding food and water. They are easily managed by women and children who are often responsible for agricultural activities. However, the erroneous perception that donkeys require hardly any care can significantly impact their well-being.

The answer to mitigating the effects of environmental challenges lies in adaptation and education. Creating solutions first implies recognition of problems.

#### **Do affected communities see their situation as a problem?**

It is a circular process. Creating awareness of alternatives may bring recognition of problems, and recognizing problems creates

awareness to seek better options.

There is always a case for practical solutions, such as the project undertaken by The Donkey Sanctuary (UK) with Action Aid in Sissala, northern Ghana. New boreholes were drilled in strategic locations and the water collection reservoirs were reconstructed. Consequently, less time is spent collecting water.

This results in better hydration for the donkeys as well as improved collection and domestic use of water. A further aim of the project is to offer good donkey welfare and veterinary training to help women provide their animals with good nutrition, care, proper hydration and disease control.

If the mitigating actions require a more long-term commitment from communities, care must be taken not to arrive with a clipboard and instruct on new ways of doing things. It is critical for one to first focus on the positive to engage owners, recognize their challenges and ask for the reasons for current practices. One must make sure that the new ways proposed are realistic, achievable, understood and sustainable. One should identify leaders in the communities



*MOROCCO-Abandoned donkey in Zagora, Morocco. The donkey was later rescued. IMAGE-Jarjeer Mule & Donkey Trust*



**In essence, until humankind recognizes the interrelation between all forms of life on earth, understands the domino effect of every action undertaken, and accepts responsibility of past actions, the dream of One Health leading to One Welfare will remain just that: a dream.**

and solicit their “buy-in” to act as examples of better practices.

To address overgrazing and poor animal health practices, owners will have to understand the benefits of One Health and One Welfare. Engagement, education and training within the community are the keys to ensure success.

The animals could be better cared for when livestock is limited to lower numbers, delivering better work or better meat, milk or other products. The impact on the environment would also be reduced. It would take considerable negotiation skills to move the owners to a reduction in animal numbers.

This would entail control of the number of animals, possibly by slaughter or castration of many male animals. To enable this humanely and safely, regular veterinary interventions would have to be arranged, totally dependent on the confidence and trust of livestock owners.

A further factor that should be addressed is the recognition of the sentience of animals. This

may be a tough one if attitudes are deeply ingrained. Humane Education, particularly for youngsters, is a critical factor. It requires commitment, perseverance and investment of time and resources. If effective, the results could be long-lasting and could change the beliefs of a community over time.

In essence, until humankind recognizes the interrelation between all forms of life on earth, understands the domino effect of every action undertaken, and accepts responsibility of past actions, the dream of One Health leading to One Welfare will remain just that: a dream. Embracing the core values of passion and compassion will lead humans to realize key global objectives such as food security, sustainability, and the reduction of suffering in all forms of life.

Every person can act and make a small difference.

Let us be mindful of the extract from the poem by Warsan Shire:

*I held an atlas in my lap, ran my fingers across the whole world and whispered, where does it hurt?  
it answered, everywhere, everywhere, everywhere.*



**Annemarie van Zijl,**  
*Founder and Editor of Donkeys for Africa.*

After attending a Donkey Welfare Workshop for the Africa region, with delegates from 25 animal welfare organizations, Annemarie realized the importance of communication between organisations with a common goal – the improvement of donkey welfare across the continent. This led to the establishment of Donkeys for Africa in 2017.

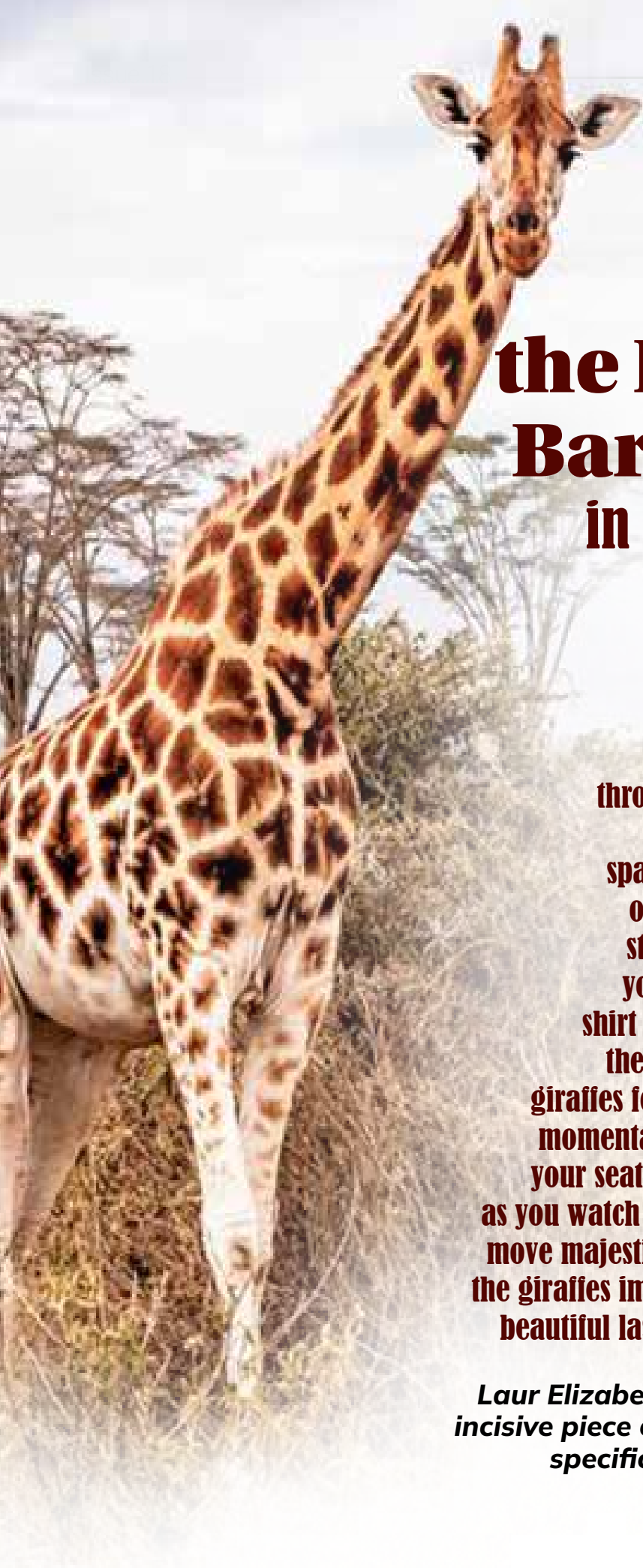
Donkeys for Africa now has numerous contacts in 22 African countries and many more across the globe. We publish a bi-monthly newsletter covering topics such as current welfare issues, profiles of animal welfare organizations working in Africa, veterinary matters, reports on conferences, motivational content, and guidance on organizational matters such as sustainability, governance and funding appeals.

The newsletters aim to inform and educate animal welfare practitioners, academics, community leaders, government representatives, legal practitioners, journalists and the general public on the importance of promoting One Health, One Welfare with particular reference to donkeys and the communities they serve. We welcome submissions for consideration for publication. [www.donkeysforafrica.org](http://www.donkeysforafrica.org) [contact@donkeysforafrica.org](mailto:contact@donkeysforafrica.org)









# Protecting the Endangered Baringo Giraffe in the African Arid and Semi-Arid Regions

By Laur Elizabeth Charleston

**Holding your hat when you pop up through the roof of a moving land cruiser making its way through a game park sparks an exhilarating feeling. The burst of excitement heightens as you feel the strong connection to the nature around you. Donned in your khaki green safari shirt and matching shorts, squinting across the savannah, you spot a giraffe or three giraffes feeding cheerfully on Acacia trees. You momentarily forget the heat, the sunscreen on your seat, and the bottle of water in your hand as you watch the expert gardeners of the savannah move majestically in their home. Having seen you, the giraffes impassively glance at you beneath their beautiful lashes as they leisurely chew their food.**

*Laur Elizabeth Charleston leads us through an incisive piece examining the fascinating species, specifically the Baringo Giraffe, in Africa.*

**T**he sub-species of the Northern Giraffe - the Baringo Giraffes, otherwise known as the 'Rothschild Giraffe' (*giraffa camelopardis camelopardis*) are some of the most charismatic megafaunas in the world, that have been listed as an endangered species by the International Union for the Conservation of Nature (IUCN) since 2010 (Ramsauer 2016).

The species, found solely in African arid and semi-arid regions inhabiting woodlands, savannahs and grasslands, are faced with several threats that are sustained from human activities in the wild. Habitat loss or destruction, a major threat, is largely driven by climate change, resulting in degradation and fragmentation.

Several other human factors threaten the species such as agricultural land use, human population growth, and hunting. Baringo Giraffes additionally face predatory threats from hyenas, lions and

crocodiles. All these factors have negative implications on giraffe populations, with an estimated total of a 2,098 species remaining in the world, in accordance with figures provided by the IUCN. In 2018,

Baringo Giraffes had faced a 30% population decline (Muller 2018) alongside a distribution reduction, with most giraffes restricted to enclosed populations throughout Kenya and Uganda, despite once also being found in Southern Sudan. Today, 60% of Baringo Giraffes reside in Kenya, including one population who were introduced to the Great Rift Valley in 2002.

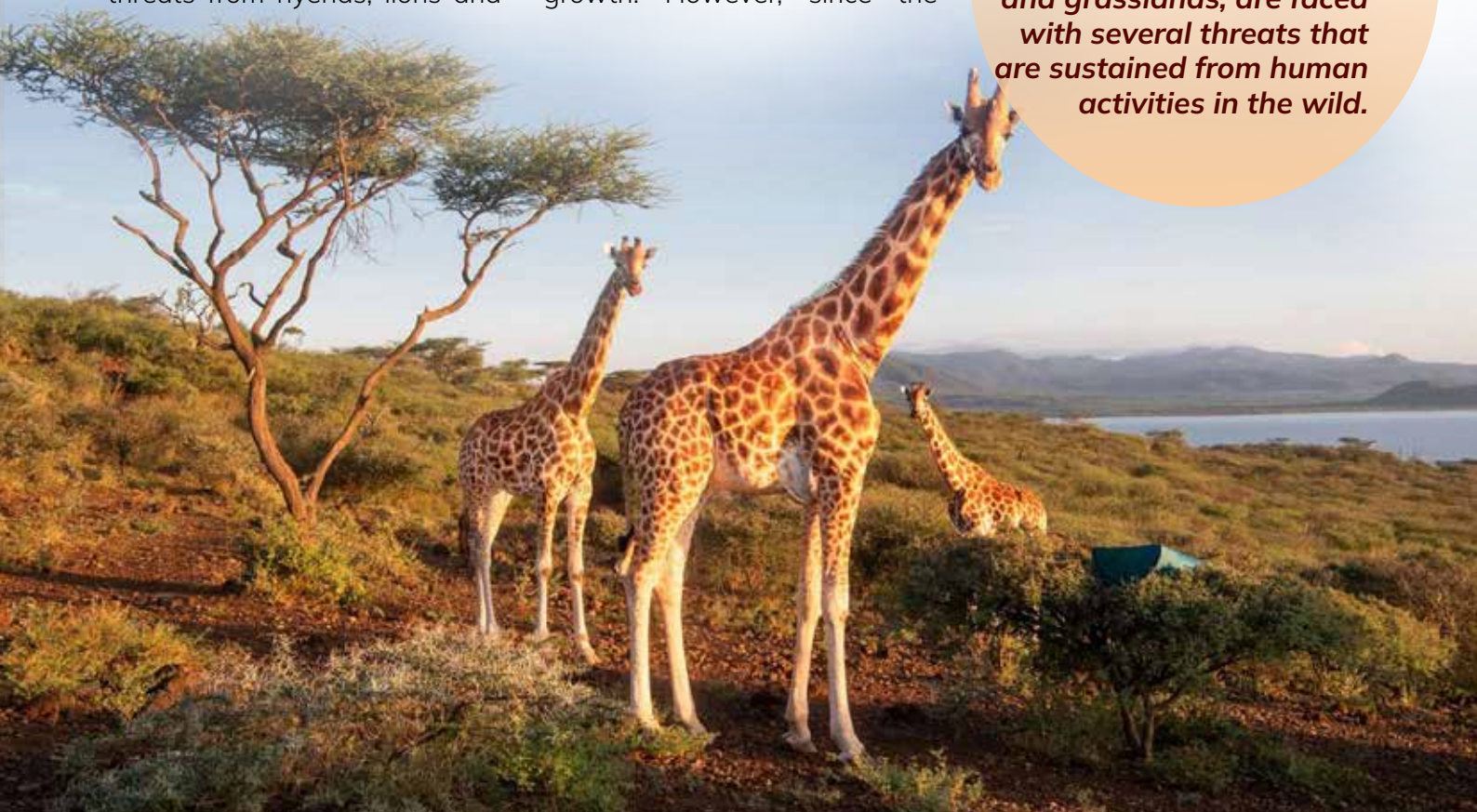
Despite a recent increase in the overall population, Baringo Giraffes are still in trouble and require support, action, and change to remain a valued, integral part of our world and ecosystems of which giraffes contribute to significantly (Becker et al, 2019) by dispersing seeds, pollinating plants and stimulating forage growth. However, since the

populations are isolated from each other, this reduces the likelihood of breeding and, ultimately, contributing to population growth.

There are several initiatives that we ought to be supporting to enhance the aims, missions and objectives that align with giraffe conservation. A recommendation for securing the future of wild giraffe populations in Africa is to establish viable satellite populations to support the translocation of populations in order to reduce the prospect of catastrophic risk, to aid species recovery and to refine genetic heterogeneity.

Other beneficial measures extend to working towards

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educating individuals on the importance of protecting and conserving giraffes and how this may be achieved. The purpose of working closely with local communities may support the reduction of hunting and poaching for trophies and meat. While, simultaneously, reducing conflict, building trust and awareness. Moreover, it is also vital that tighter laws are enforced, to combat illegal hunting.

Additional threats are embedded within ecological change, which influences food quality and availability throughout Africa as a result of deforestation, charcoal production, mining activity and road and pipeline

building. To supplement this, mining, roads and pipelines have been proven to impact wildlife movement patterns which, thereby, encourages smaller and more isolated populations and heightens the risks of extinction.

At present, conservationists are promoting sustainable forestry, new cooking techniques and building wildlife crossings into roads and pipelines to work towards protecting giraffes, and other species.

Murchison Falls National Park in Uganda hosts the largest population of the Baringo Giraffe, with an estimated total of 1,550 adults in the

park. The Giraffe Conservation Foundation (GCF) are working closely with Uganda Wildlife Authority (UWA) to monitor giraffe numbers and to provide de-snaring support, since wire traps are a leading cause of collateral damage in giraffes.

The GCF is the only NGO in the world that concentrates solely on the conservation and management on giraffes in the wild throughout Africa. The organisation is currently supporting giraffe conservation initiatives in 20 African countries. Their work includes technical support and hands-on conservation actions including anti-poaching support. The Giraffe Conservation Foundation have also implemented The Giraffe Action Fund, Giraffe Conservation Strategies and Twiga Tracker. The Twiga Tracker is the largest GPs satellite tracking study to be conducted on giraffes.

### Ways That You Can Help

- 1) Supporting Giraffe Conservation Charities. Organisations such as The Giraffe Conservation Foundation have a number of initiatives to support giraffe conservation. This requires funding, primarily through public donations. This may also extend to fundraising, donating and volunteering.
- 2) Raising awareness and spreading the message. Many people are unaware of how threatened giraffes remain at present. If more people were aware, this could encourage a conversation which would be a starting point in combating the issue. This can include signing, sharing and creating petitions around issues that concern giraffes.
- 3) Supporting sustainable agriculture and settlement practices near giraffe habitats.
- 4) Reforest areas with Acacia trees, which are giraffes' primary food source.

### References:

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Miller Z (2018) Rothschild's giraffe *Giraffa camelopardis rothschildi* (Linnaeus, 1758) in East Africa: A review of population trends, taxonomy and conservation status.

Ramsauer J (2016) *Conservation of the Rothschild's Giraffe (giraffa camelopardis rothschildi) and a case study on the local acceptance of Kigio Wildlife Conservancy.*

# Building Chicken Welfare Capacity Among Veterinary Professionals

by Lukas Jasiūnas, Ph.D.

*Healthier Hens (HH) recently conducted a comprehensive two-day workshop in Kenya, in collaboration with the University of Nairobi, targeting veterinary professionals to enhance their understanding of egg-laying hen welfare and keel bone damage (KBD). The workshop, attended by 18 selected participants including veterinarians and para-veterinarians, focused on equipping attendees with both theoretical and practical skills - knowledge crucial for on-farm welfare assessments.*



This in-person training comprised diverse modules covering topics from animal welfare principles to hands-on KBD assessment techniques, delivered through a blend of facilitator presentations, live webinars, laboratory sessions, and an on-farm visit. By adopting this multifaceted approach, the workshop aimed to provide participants with a comprehensive understanding of hen welfare and bone health, essential for effective veterinary practice and improved welfare outcomes for

the hens. Data collection involved pre-, post-, and follow-up workshop surveys, offering insights into participants' baseline and endline knowledge, perceptions, motivations, and the impact of the workshop. Additionally, a key informant interview was administered six weeks later to two participants, eliciting valuable feedback on the practical application of newly acquired skills in their professional settings.

## Increasing knowledge and slight confusion

Participants demonstrated a consistently increasing absorption and retention of knowledge from pre to post and post-post-test after the workshop. The initial limited knowledge of the freedoms of animal welfare and existing animal welfare legislation in Kenya indicated that these topics are not generally discussed enough. The high positive response to knowledge on identifying normal and natural behaviours of hens indicated adequate basal knowledge of good hen welfare indicators. The marginal increases in the knowledge of hen welfare behaviour asserted that learning from the workshop was absorbed by the participants.

However, the variations in participants' responses with regard to which practices are considered good or bad for hen welfare indicated that some trainees did not have clarity on the welfare impacts of some practices. These variations were consistent across the pre, post, and post-post survey responses. The practices which some respondents maintained



were good included the use of 'Hormones/stimulants,' 'Debeaking,' and 'Declawing.' For many years, some researchers and practitioners recommended the use of hormones to enhance productivity (Williams, 2005; Long et al., 2017) and debeaking and declawing to minimize cannibalism and injuries (Bonzer & Hart, 1953; Fisinin, 2016). Although these practices have historically been influenced and encouraged by a combination of cultural, economic, and practical factors, they have since been discredited and demonstrated to be both inhumane and detrimental to hen health. Nevertheless, many practitioners in livestock farming still believe debeaking and declawing to be a necessity in both caged and cage-free egg production systems.

Learning adoption and behavioural change are influenced by capability, opportunity, and motivation (Mitchie et al., 2011). This training addressed the participants' capability in practice; however, sustainable change cannot be immediate unless convincing alternatives are proffered and readily available. This indicates a need to incorporate modules

addressing outdated practices and misconceptions into any subsequent workshops and offering information on sustainable and welfare-friendly alternatives. It also indicates a need to update the university-level curricula to reflect comprehensive teaching on animal welfare and clarity on good welfare-enhanced farm management practices.

In terms of participant preference for welfare-driven housing systems, there was a demonstrated increase from post to post-post test, seeing that battery cage was indicated as a preferred housing system less frequently, coupled with a decrease in the preference of the deep litter system, and a considerable increase in the preference for the free-range system.

In assessing the change in knowledge for KBD, there were varying levels of demonstration of knowledge comparing the pre- and post-test. There was a decline in the respondents' belief in if bone fractures cause pain and suffering for hens. In the number of correct scorings to the keel bones presented, there was a demonstrated increase in

knowledge comparing the post-test and post-post test.

Researchers studying ways palpation – a commonly used non-invasive technique to evaluate the status of keel bones - accuracy can be improved emphasize that all assessors should possess knowledge and understanding of how the keel is shaped and what its biological function is. Besides this theoretical knowledge, they should also have ongoing opportunities to palpate keels of various damage severity scores, ranging from healthy all the way to severely deviated and fractured. Finally, palpation scoring among vet professionals should be practiced via visual assessment during dissection. A vital part of educational activities is also peer-to-peer discussion, where consensus among multiple assessors can be attained, especially when it comes to the overall score and possible sources of error for specific keels (Casey-Trott et al., 2015).

#### **Excited to continue learning**

Generally, participants showed enthusiasm and acceptance of the training modules and presentations as all modules



*This training addressed the participants' capability in practice; however, sustainable change cannot be immediate unless convincing alternatives are proffered and readily available.*



received high scores. Participants indicated their willingness to learn more about keel bone examination, the linkage between hen welfare and productivity, humane handling of birds during vaccination and transportation, the different hen welfare assessment indicators, and promoting awareness of hen welfare and KBD to the public.

Some specific feedback on how the training can be improved included the timing of the training to be during weekdays, the duration of the training to be extended to 3 days or more, the need for more hands-on practical sessions, consideration for providing accommodation for all participants, and the need for a quieter location. Furthermore, it was great to see that most of the participants indicated that they would utilize the lessons learned from the training at every farm visit, and, likewise, the vast majority claimed that they would recommend the training to their colleagues. To utilize the lessons learned successfully, participants indicated that they would need additional support with access to learning materials such as keel bone models and demonstration materials, and financial assistance for organizing further workshops and extension programs with farmers.

### **Recommendations and conclusion**

While the training provided valuable opportunities for learning and education on related topics of animal welfare, hen welfare, and keel bone damage evaluations in hens, there were varying degrees of uptake and retention of learning modules among participants. This varied from a considerable increase and uptake in knowledge, especially in topics of animal welfare, with general satisfaction in training modules and organization of the workshop, to differing demonstrations of understanding of topics around hen welfare and keel bone damages.

The following recommendations are proposed to improve teaching and learning among participants in similar training programs:

- Allocating resources to research sustainable alternatives for hormone use and practices like debeaking/declawing and making them readily available could not only foster the adoption of better hen welfare practices but also ensure the long-term effectiveness of workshop learnings.
- Supporting the creation of context-specific learning modules that debunk prevalent myths and misconceptions surrounding poultry management. Such a targeted educational approach could contribute to broader industry awareness and adoption of humane practices.
- Extending the duration of training might allow for a more comprehensive exploration of topics and increased depth in hands-on practical sessions. Such an extension could enhance participants' skill acquisition and implementation.
- The increased availability of keel bone demonstration models and manuals could support practitioners in better assimilating new knowledge and applying learned techniques in real-world scenarios.
- Ensuring a more thorough post-workshop test is implemented to accurately evaluate retention of learning from the workshop and demonstration of the application of learnings in the field.



# How Donkey Theft Re-Emergence Has Affected Farmers' Economy

By Isabella Maua



*Africa is one of the world's continents where equines and primarily donkeys are great contributors to the region's economy, especially because they are direct generators of income.*

**M**t. Elgon Sub County is a very remote area located in Bungoma County at the boundary of Kenya and Uganda to the west. It is vastly hilly with rugged terrain, which poses a grievous danger to travellers either using motorcycles or vehicles in parts of the region. The area boasts of bumper vegetables, onions, and maize harvests, making it one of the country's bread baskets.

It then raises the question of how these farm products are delivered to Kenya's second largest open market, popularly known as Chwele Market, located about 50 kilometers

away from Kipsigon, Chesito, Cheptais, or Chwele Ndogo areas where these crops are grown.

Florence Chematui is a potato and cabbage farmer, and she explains how helpful a donkey can be when it comes to transporting their farm produce from the farms to the market. "Since I was born, I have never seen a tarmacked road or even a simple good road here in Chepkurkur where farmers can use to transport their harvest to their homes and leave alone to the markets after sorting them out. Donkeys have been God-sent in this area, and we love

them," said Chematui. Christine Chebet grows onions and maize, though at times she ventures into the donkey hiring business, where she earns a living by renting out her donkeys. The two donkey owners, however, share the same agony after their donkeys were stolen, leaving them helpless and counting losses. According to Chematui, "My male donkey called Tumbo was stolen about two months ago after someone untied it and took off, leaving the rope behind." She adds that even after reporting the matter to Kopsiro Police Station, efforts to find Tumbo were futile.

“Not only did Tumbo assist us in transporting our farm produce to Chwele market every Monday, but it also helped us in transporting water for home use about 10 kilometers away every day,” Chematui recalled, trying to hide her evidently teary eyes. Chebet recalls how she was aghast when she woke up one morning only to find an empty space at Simba’s sleeping area.

Simba is her one and only male donkey whom she entrusted to aid in paying school fees for her orphaned grandson, who is a Form Three student. “I am physically challenged, so I cannot perform some tasks like other people; however, Simba has been of great help because I can rent him out to carry water, firewood, livestock feed, and constructing materials for people, and then I get money to take my grandson to school,” she agonized.

Her grandson, Polymers Kipkemboi, confirms that Simba was their only hope remaining after his mother passed away, leaving him in the custody of his grandmother. “As we are speaking right now, I have been

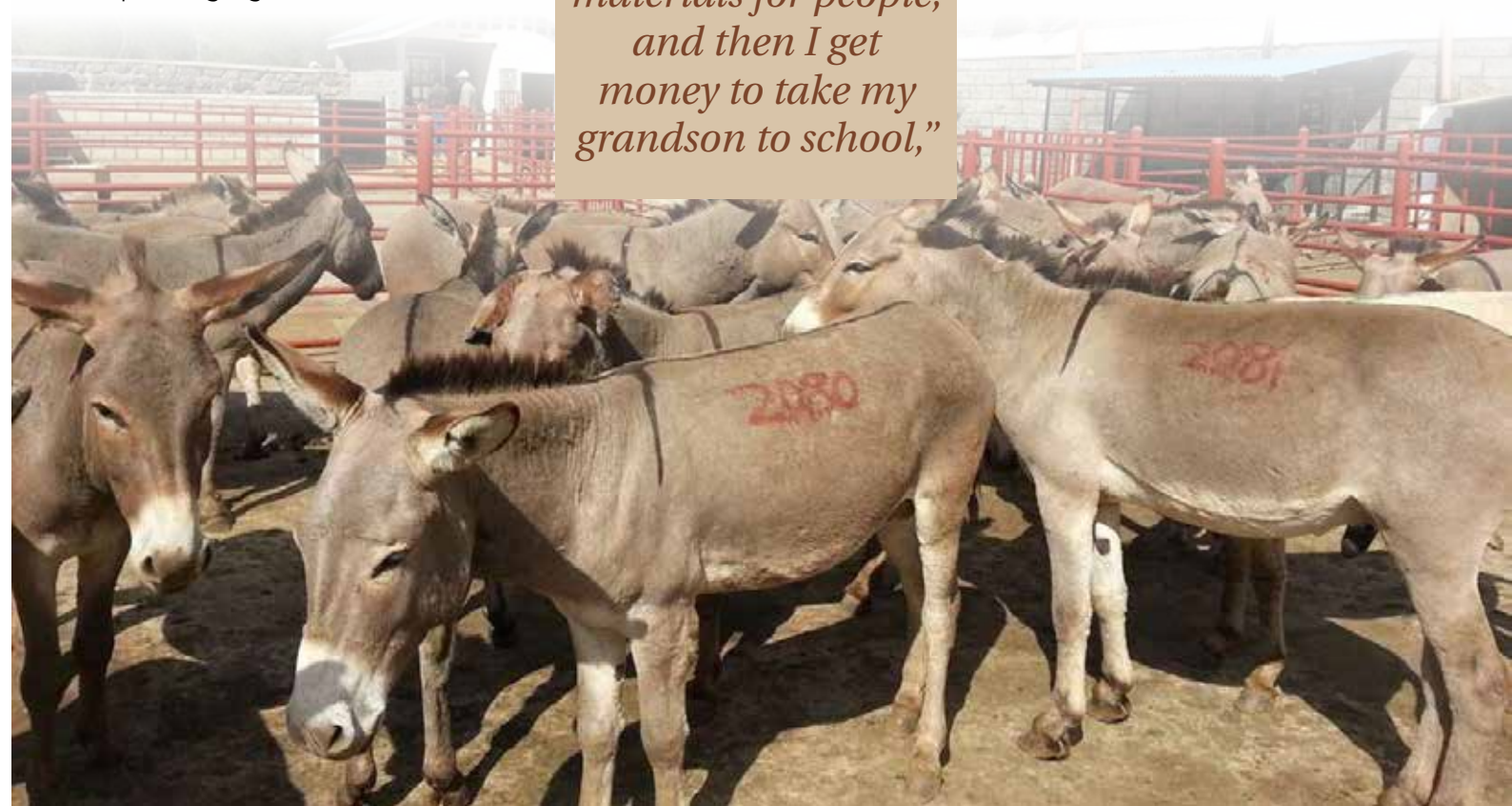
sent for school fees, though I know I have nowhere to put my hope since Simba is gone. We look forward to recovering our lovely Simba very soon,” bemoaned Kipkemboi. This is just a typical example of how donkeys have been of great help in building the economies of not only Mt. Elgon but also Kenya and even Africa in general.

Donkeys have greatly reduced the domestic transport burden of many rural women, creating

*“I am physically challenged, so I cannot perform some tasks like other people; however, Simba has been of great help because I can rent him out to carry water, firewood, livestock feed, and constructing materials for people, and then I get money to take my grandson to school,”*

employment opportunities and income-generating opportunities for many people. In Kenya, the livestock sector contributes approximately 12 percent to the national gross domestic product and a whopping 42 percent to agricultural GDP. Donkey theft has not only affected the economic aspect of donkey owners, but the looks on their faces depict distress and emotional torture.

Donkey owners and keepers are no doubt very key to Kenya’s economy and, as such, should be cushioned from the rampant donkey theft. Drudgery has also been one of the most threatening factors to donkeys and their owners, but thanks to the African Union Summit for approving the ban on donkey slaughter in February 2024, their welfare is well taken care of. The remaining plea of donkey owners and users is that policymakers and administrators act accordingly whenever a case of theft is reported and the perpetrators are apprehended.







# The Camel: The Hero of Deserts and Highlands

*She walked kilometers across the sandy and stony path or the semi-arid Samburu country in Northern Kenyan. Though Sepina was parched and tired from the long matatu drive from the city, the swishing long beige grass, the shrubs, the numerous acacia trees, and the quiet winding brown paths was incredibly stunning. This was home. After a night under the wide expansive starry night sky by the fire and a well-deserved nights rest with her family, she made her way to the River Ewaso Ngi'ro.*

She passed by the neighbor's homestead but stopped when she saw Kerikeri who excitedly called her over. Kerikeri was in the large camel pen. She watched in awe as a calf was born at the side of the bush. She had seen it so many times before but it was always spellbinding to be in the presence of such a life-changing moment. Nature by PBS mentions that after a gestation period of 12 to 14 months, the female camel gives birth to one or rarely two newborns. This was an incredible moment.

Camels were integral for her community. They were a security against drought, disease and other crises that affect herds of cattle and other livestock. 17 African countries have camels within their boundaries with

totals of as few as 6000 animals in Senegal and Burkina Faso to as many as 5.5 million in Somalia according to the statistical evidence (FAO, 1984a). The paper, Past, Present and Future Research on The One-Humped Camel in Africa by R.T. Wilson and D. Bourzat, cites that many of these countries have official programmes (i.e., carried out by national research organizations or in formal programmes at universities) on the camel.

Early in the year, the Food and Agriculture Organization (FAO) announced and declared 2024 as the UN International Year of the Camelid. Camelids including Bactrian, Dromedary and wild camels, llamas, alpacas, wild vicuñas, and guanacos are considered critical to the ecosystem and



to have economic, social and cultural importance for various countries.

The organization cites that camelids have the potential to support food security and nutrition, reduce levels of extreme poverty and support sustainable livelihoods of those they walk beside. They are transporters, providers and symbols of cultural heritage, especially for indigenous peoples. The organization highlighted that it was time to recognize their value. The year would recognize the contributions made by camelids to people in local communities and indigenous peoples.

According to the Encyclopedia Britannica, the camel is any of three species of large ruminating hoofed mammals of arid Africa and Asia known for their ability to go for long periods without drinking. The Arabian camel, or dromedary (*Camelus dromedarius*), has one back hump, while the domesticated Bactrian camel (*C. bactrianus*) and the wild Bactrian camel (*C. ferus*) have two.

It has been documented that in more than 3,000 years ago, camels have been domesticated and were used by humans most often for travel across arid climates.

***It has been documented that in more than 3,000 years ago, camels have been domesticated and were used by humans most often for travel across arid climates***

Their physique enables them to adapt to arid and semi-arid landscapes. Nature by PBS cites that camels have tough but flexible lips that enable them to break off and eat vegetation, such as thorns or salty plants that other mammals may avoid. Camels store fat in their humps, which can be used for energy when food and water are scarce. The length of time that a camel can survive on this stored fat depends on the climate and the animal's activity level. The hump changes size depending on the amount of food that the animal eats. Camels have thick eyebrows to protect their eyes, thick footpads to traverse the desert and nostrils that close to keep the sand out.

Nomad communities in Africa's Saharan region rely on camels for milk, wool, and transportation to sustain their way of life. PBS further states that the dromedary was domesticated about 3000–2000 BCE in Arabia, the Bactrian camel by 4000 BCE in the steppes of Central Asia as stated in the Britannica. Most of today's 13 million domesticated dromedaries and roughly 97 domesticated breeds are in India and in the Horn of Africa. Wild dromedaries are extinct, although there is a large feral population in interior Australia descended from pack animals imported in the 19th Century. Wild dromedaries originated in North America between 40 million and 45 million years ago

In the wild, Bactrian camels are at critical risk. They are hunted for sport and for their meat. They are also killed due to human conflict, as they compete with domestic camels for grazing and watering spots. Habitat loss is another major threat to the species, as human activities like illegal mining operations spread into their habitat. The Bactrian Camel is listed as Critically Endangered on the IUCN Red List of Threatened Species. There are currently about 650 Bactrian camels in China and about 450 in Mongolia.





In her article at the Britannica Encyclopedia, Kara Rogers mentions that a number of human factors have contributed to the decline of the Wild Bactrian, or two-humped, camels (*Camelus bactrianus*), including hunting for food and sport, as well as nuclear testing and illegal mining activity within their native habitats in Mongolia and China. These human-induced reductions have resulted in an increased risk of further decline of wild Bactrian populations from natural causes, such as climate change and predation.

### *The Welfare of Camels*

Camels in East Africa are dromedaries or one-humped Arabian camels.

When rearing camels, management practices should be employed. There is also little in the way of legislation and supporting regulations and guidelines to ensure camel welfare, which is basically concerned with preventing or minimizing thirst, hunger, distress, disease, pain, injuries, and the inability to express normal behavior. Care should be taken during colostrum feeding for calves where unlimited access to the antibodies, vitamins, proteins rich should be given to calves and easily digestible colostrum within the first 3 to 6 hours.

To protect a camel at night, the pen should be adequate, spacious, clean and keep the cold winds out. Confining a browsing animal that has evolved to wander around and walk for long distances during the day, to a yard and hand feeding it may result in negative impacts.

Good feeding and health should be a priority. Camels should always have access to grass, as they are grazing animals. However, camels are very good at utilizing their fat stores (located in their humps) when a food resource might be low. Knowing what minerals are naturally available in the grasses and branches in the camel's diet is important. If an element is lacking, salt or mineral licks can be used.

Domestic animals are frequently exposed to transport stress which could alter their welfare, since it affects behavioral homeostasis, health, meat quality and antioxidant status. During all stages of the journey, including preparation handling, loading, transport, unloading, new environmental housing and waiting, camel welfare is significantly impacted by the stressors presented in each of those stages.

In order to better manage camels under an intensive husbandry

system, there is need to develop a better understanding of the camels' biological system and the environmental factors that impact on its health and well-being.

The paper, *The Impact of Camel Disease on Human Welfare in East Africa* by P. J. Plummer and J. W. Coatney, notes that zoonotic diseases that may be a cause for concern for human health of individuals in contact with the camels or consuming their products. Control of ticks is of utmost importance. Exposure to foreign items such as plastic bags, hay bale robs, or metal objects may have lethal consequences.

The review of various research studies, reveals a key outcome that highlights opinions stating a need to create a centralized research platform on camels.

The heroes of the deserts and the highlands require specialized care and welfare. To ensure the wellbeing of the species, it is critical that we find ways to understand the biological functions of animals and acknowledge its limitations. Concerted efforts are required to ensure that this happens.







**" CAMELS ARE ONE OF THE MOST IMPORTANT ANIMALS ESPECIALLY IN ARID AND SEMI-ARID LANDS FOR THEIR ADAPTABILITY TO CLIMATE, TRANSPORT, LEISURE, PRODUCTION AND AGRICULTURAL WORK".**



# Five Giant Milestones

## in Animal Welfare Law, Policy and Campaigns in Africa



**L**egal practitioners in Environment and Land Court fighting to stop the construction of infrastructure across animal habitat. Activists walk in protest of the animal killings. Journalists infiltrate ivory cartel circles to gain information for publications. International. Regional add local policy makers and enforcers in halls behind closed doors deliberations to ensure policy is in place to ensure care and welfare for animals. I dare say, animal welfare has brought together professions to see to the advancement of animal welfare law across the world more than ever before.

2024 is a promising year as it is beckoning at the efforts to have heaps of animal welfare laws to be passed and enacted. The laws seek to protect, care for and foster humane welfare to domestic, wildlife, working animals, animals in laboratories and animals in entertainment.

National Geographic reports that in the North, wildlife killing competitions in New York banned, law prohibiting the public from coming into close contact with bears or nonhuman primates, financial boost in alternatives to animal research, ban to produce or sell eggs from

caged hen in place, selling of dogs and cats in pet stores are prohibited in some states among other laws, and the potential of dog meat production and sales being banned in South Korea. There is also pressure from citizens worldwide to strengthen transit laws and ban cruel live animal export, pet lovers in China push to end animal cruelty and pressure on corporates to have establish and abide by animal welfare policies.

What is happening in Africa though?

### Donkey Skin Trade Banned by the African Union

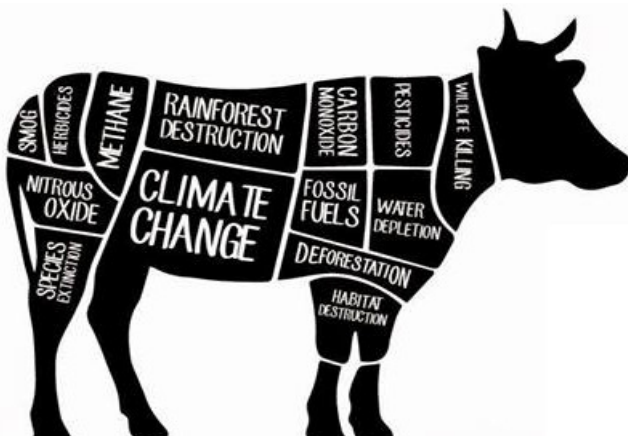


**A** landmark win for donkeys in Africa was a cause for ululations, whistles, claps and dances for men, women and children across the continent. The animal welfare fraternity welcomed an Africa-wide ban on the controversial donkey skin trade. It is now illegal to slaughter donkeys for their skin across the continent. The demand for the animals' skins is fueled by the popularity of an ancient Chinese medicine called ejiao, traditionally made from donkey hides. Ejiao is believed by some to have anti-ageing and health benefits, although this is unproven. Chinese companies that make it used to use skins from donkeys sourced in China. But when the numbers of the animals in the country plummeted, they looked overseas.

African state leaders approved the ban at the conclusion of the African Union summit in Ethiopia on Sunday. The Donkey Sanctuary, called the trade "brutal and unsustainable" and said it had decimated donkey populations around the world, particularly in Africa and South America. "At first our governments saw this as an opportunity, and many legal slaughterhouses opened in Africa," explained Dr Solomon Onyango from the Donkey Sanctuary in Kenya. "But, [here in Kenya], between 2016 and 2019, about half of our donkeys were killed for the trade".

Dr Onyango told BBC News that the ban would "go a long way to safeguarding donkeys and the livelihoods of millions of people who rely on them". About two-thirds of world's estimated population of 53 million donkeys are in Africa. People in the poorest, rural communities use them for transport and to carry water, food and other goods. One recent study in Ethiopia - that set out to measure the economic value of donkeys - showed that owning one could mean the difference between destitution and a modest livelihood.

**Source: BBC**



**I**n a campaign dubbed #EatLessMeat, World Animal Protection notes that rapid population growth has led to an increase in demand for meat globally leading to suffering of animals in farms and climate change. The #Eatlessmeat campaign aims to raise awareness about the negative impacts of high meat consumption amidst rising population, drastic climate changes and poor human health and intensification of animal farming.

“Over 50 billion farm animals are factory farmed every year, with around two in every three animals raised in intensive systems that prioritize production over welfare and health. This approach to farming places a heavy

## Eat Less Meat Campaign Underway

burden on precious resources, such as grain-based feed, water, energy, and medication, and contributes to a range of issues, including environmental pollution, climate change, biodiversity loss, disease, and food insecurity.” Dr, Victor Yamo, the Food systems Campaign Manager at World Animal Protection said.

“Factory farming is not just bad for animals, it’s dangerous, unfair, and dirty, with significant impacts on human health and the environment,” said Dr. Yamo. “By promoting the #EatLessMeat campaign, we are encouraging people to make informed choices about their diet and reduce their demand for factory-farmed animal products.”

To #EatLessMeat, World Animal Protection recommends taking several steps, such as identifying a meat-free day, swapping regular meat dishes with delicious meat-free alternatives, reducing meat portion on your plate and talking to a nutritionist for advice on meat-free protein alternatives. Individuals can also pledge to #EatLessMeat on the campaign page [www.worldanimalprotection.or.ke/EatLessMeat](http://www.worldanimalprotection.or.ke/EatLessMeat) and encourage your family and friends to act too.

**Source: New Business Ethiopia**

## Call to End Captive Breeding of Lions



**G**roups and organizations called for an end to the multimillion-dollar commercial breeding of lions in South Africa. It supplies cubs for tourism, lions for trophy hunts, and bones for traditional medicine. World Animal Protection cited that it has seen evidence of cruelty, squalid conditions and links to the illegal trade in body parts. The organization said unregulated sites were selling lion bones for use in East Asian traditional medicine.

It is reported that there are more than 8,000 lions living in captivity in South Africa. Many are bred for tourists to hunt.

The South African government continues its discussion around voluntary exit options for those engaged in captive lion breeding. A lion task team was set up by the Department of Environment, Forestry and Fisheries (DFFE) in 2023, with the aim of exploring these voluntary exit options. It is

hoped that this ongoing process will be finalized with measures aimed at effectively curbing and halting the captive breeding of lions within the country.

There are about 2,000 wild lions in South Africa and an estimated 20,000 continent-wide. Their numbers have fallen by about half during the past quarter century as habitats have become fragmented and prey animals such as antelopes have become scarcer. Meanwhile, lions are coming into contact with people in rural communities more often, with deadly results for both. And according to Barbara Creecy, the minister of South Africa’s Department of Forestry, Fisheries and the Environment, the legal trade in captive lion parts could increase poaching of wild populations.

**Source: BBC, National Geographic, and Biz Community.**



## Ban Cage-Free Chicken Farming in East Africa



A project by ANAW and the Open Wing Alliance (OWA) was carried out aimed at achieving a ban of battery cages in Kenya and selected countries in Africa (Zimbabwe, Malawi, Senegal and The Gambia) by using various strategies targeting corporates, educating the consumers and public, strengthening the Coalition earlier formed in order to join efforts in the campaign, and finally working with the media to report the immense suffering caged hens undergo as opposed to promoting battery caged chickens as a profitable venture.

Efficient activities including cage free media workshop in Bulawayo, Zimbabwe, where 29 journalists participated, a media workshop on cage-free chicken farming in The Gambia where 35 journalists participated, awareness trainings, veterinary trainings, and poultry welfare lectures were successfully organized.

The East Africa Chicken Cage Free Conference in Tanzania and West Africa Chicken Cage Free Conference in Ghana which were recently organized by ANAW and the Center for Effective Altruism, discussed the status and policy of cage-free farming systems in each region and deliberated on the challenges faced by chickens in caged farming systems, including issues related to welfare, health, and environmental impact. They also explored alternative approaches that prioritize animal welfare while ensuring food security and sustainability.

Other organizations have taken steps to see this through

### Conclusion

Individuals and groups have made moves to be celebrated such as to protect dogs in the continent including Rabies vaccination campaigns, education and awareness, humane treatment of dogs, more pet adoptions, and policy and advocacy, pet rescues, roadside animal rescue by bus and truck drivers, water for wildlife during drought season, and rescue of animals after floods and earthquakes. We encourage all to keep on the steady way to a humane world for all animals.

## Dog Population Control through Spay and Neuter Programs



2023 was a challenging year for the animal welfare fraternity as myriads of cats and dogs in urban and peri-urban areas have suffered tremendously.

Dogs and cats are killed in the masses as a way to control the population on the streets of the cities. Long days were spent by campaigners fighting the city's measure to control the population by shooting stray dogs in greater Tunis. Some of the estimated three million homeless dogs roam the streets in Morocco have been shot or poisoned on the streets of cities in Morocco. The same has been seen in other countries.

Concerted efforts from the communities are taking place in Ethiopia, Kenya, Morocco, Tunisia, Uganda, and South Africa among other countries to pressure governments into stopping these brutal crude ways to control animal populations.

**Source: Various Publications**



# Animal Wellbeing Impacts on Its Resilience During Devastating Crises

*Identification, tracking patterns, control, and implementation of emergency measures to avert the world-scale effects of climate change, conflicts and natural disasters on animals is left to animal welfare experts to ensure survival of the creatures. Mapping out the occurrences through data and statistics and using decades-long frameworks and systems and contextualizing it in the tropical climate of Africa has kept the technical experts in rooms discussing for hours and students speculating in papers as hundreds of animals are rescued and tended to where possible.*

**A**risa\*, 34, had been part of the animal rescue team, established by the organization she worked for, for five years now. She had developed proper working relationships to ensure that she was among the first of the first responders when a disaster occurred. It was critical that she worked alongside humanitarian teams to rescue animals as they rescued people during earthquakes, fires, floods, droughts, volcanic eruptions, and other disasters. She knew

that if not for her and her teams, animal rescue would not be a priority when disasters occurred. She had started her career in working to manage the effect of the poaching crisis in Sub-Saharan Africa which informed her career now as she expanded further afield to tend to companion and domestic animals in the continent. As she lifted one cat after another, out of debris in a flooded village, Arisa had come to find out that the success and effectiveness of rescuing an animal was highly

dependent on the life of the animal before a disaster occurs. The wellbeing of an animal before disaster impacted on their resilience during crisis. This highlighted the importance of consistent and good welfare and husbandry practices by companion animal, working animal and livestock owners.

In 2022, Africa experienced a series of severe weather events such as tropical storms, deadly floods in Nigeria, drought, famine, and heat waves in

*In 2022, Africa experienced a series of severe weather events such as tropical storms, deadly floods in Nigeria, drought, famine, and heat waves in Uganda and Ethiopia. This resulted in fatalities and affected millions of people and animals. This showed that the growing crisis was aggravated by factors such as conflict, insecurity, and underdevelopment.*







*Some regions face challenges such as insecurity which hinder disaster risk reduction and management efforts. Political and institutional involvement are the primary key to solve this.*

Uganda and Ethiopia. This resulted in fatalities and affected millions of people and animals. This showed that the growing crisis was aggravated by factors such as conflict, insecurity, and underdevelopment.

It is critical to protect the animals because they provide livelihoods and eased the period it takes for the families to cope, recover, and rebuild from the disaster. The World Animal Protection estimates that 1.3 billion of the world's poorest people rely on their animals for food, transport, and their livelihoods.

An animal welfare expert gives a glimpse of the welfare of animals in disaster situations at the international platforms, 7th Africa Animal Welfare Conference (AAWC), in Kigali, Rwanda. The Director of Action for Protection of Animals Africa (APAA), Dr Judy Kimaru weighs in on this discourse giving views and experience on how the events take place and emergencies are implemented.

The needs and conditions are dire for animals facing extreme situations. Animals experience starvation, thirst, displacement, disease, stress, injury, and death. The Five Freedoms of Animal Welfare including the freedom from thirst, hunger and malnutrition, freedom from discomfort and exposure, freedom from pain, injury and disease and freedom to express normal behavior are infringed upon.

Crisis can be experienced in form of animal disease emergencies where animals are the emergency or animal disaster emergencies which are scenarios where animals are within the emergency context. The primary focus is on safeguarding animals to prevent adverse outcomes including loss of animals, genetic diversity, suffering of animals and a loss of livelihoods for the animal owners. At these times they require food, water, emergency intervention and medical care.

In addressing some of the consequences of climate change due to extreme weather events, Dr Kimaru highlighted that there have been 4000 deaths with 19 million people having been affected across Africa which is underreported in the media of the Global North. Having it covered in international media is important since Africa's Disaster Risk Reduction (DRR) is mainly funded by donors. Only 4% of the national budget is allocated to DRR creating the need for more funding sources. It was inferred that there is a necessity for Africa's Africanization of DRR thinking and processes, promoting ownership in disaster management actions and acknowledge the role of AU leadership in driving DRR initiatives across various communities.

### **Solutions to the Challenges Faced**

Dr Judy Kimaru believed that the relationship between natural disasters, animal welfare and communities resembled a complex web

*Many programs commit to gender responsiveness and need to look at speciesism, which is defined as different genders being responsible for different species which needs to be incorporated in the various DRR initiatives.*



of interdependency which leads to devastating hazards to both animal populations and communities affecting livelihoods. To deal with the challenges effectively, there is a need to strengthen information access, community capability, and infrastructure.

Some regions face challenges such as insecurity which hinder disaster risk reduction and management efforts. Political and institutional involvement are the primary key to solve this. This is crucial need to augment domestic resources for effective Disaster Risk Reduction (DRR) including national budgets alongside donor driven budgets. However, there has been DRR initiatives in Africa including Urban Resilience (UNDRR) which has been leading efforts in making cities resilient with a focus on African cities. They are engaging animal welfare partners to include animal protection, recognizing the need of protecting animal species in urban and peri-urban areas in Africa.

Many programs commit to gender responsiveness and

need to look at speciesism, which is defined as different genders being responsible for different species which needs to be incorporated in the various DRR initiatives. Other African institutions engage in the challenges of DRR in the context of animal welfare and animal resources like IGAD.

Challenges grappling African institutions in implementing DRR initiatives include a lack of coordinated efforts, inadequate warning signs, limited financial resources, a lack of community participation, poverty, unregulated practices, and pet abandonment. There are other policy challenges as well hindering the implementation of DRR.

### **Disaster Risk Reduction (DRR) and African Farmers**

The animal welfare assessment in Kenya done by APAA in 2021 showed farmers' decisions regarding DRR were influenced by their social and cultural values with poverty and knowledge gaps that hindered DRR efforts. The wellbeing of an animal before disaster impacts on their resilience during crisis highlighting the importance of

consistent and good husbandry practices.

The recommendations are aimed at strengthening DRR strategies and enhancing the resilience of farming communities while prioritizing animal welfare. While progress has been made in DRR policies, there is a pressing need to provide animal protection during disasters, through developing tailored animal emergency disaster plans. It is also critical to involve communities in DRR planning, provide DRR education for veterinary professionals and engage indigenous knowledge in such scenarios. Exploring financial options and expanding the workforce dedicated to animal disaster response is one of the crucial steps in enhancing animal resilience in the continent.

*\*Not her real name*



# Advocating for Change for Neurodivergent Individuals and Animals in Our Planet

By Laur Elizabeth Charleston

**At Home in The Animal World, Laur is on a Journey to  
Work Across the World to Save Animals!**



## Who is Laur Charleston?

I am a 26-year-old zoologist and aspiring veterinarian from the United Kingdom. I am currently living in North-West England. I am a huge animal lover with a soft spot for ungulates. I am currently working within the Further Education sector.

I would describe myself as being friendly, compassionate, and thoughtful. I care deeply about helping and supporting others and advocating for change for animals and neurodivergent individuals. I am also dedicated and open to hearing about people's thoughts and experiences.

## What career have you chosen to pursue? If you were to work in Africa, what would you pursue?

I have chosen to become a wildlife veterinarian and I am currently in the process of obtaining my Veterinary Medicine Degree after already having completed a Degree in Zoology focusing on Animal Behaviour. I have plans to pursue work in Africa - first, I am planning to complete voluntary work at Care for Wild Rhino Sanctuary. I am hugely passionate about supporting charitable organisations and sanctuaries, the work they do is exemplary!

I am also keen on supporting giraffe conservation initiatives, so I would be interested in working with The Giraffe Conservation Foundation and perhaps playing a role in translocation missions. I aspire to visit Kruger National Park, to witness The Big 5, and The Giraffe Centre in Nairobi.

## Why do you love animals so much? How have they helped in your personal and social life?

Animals have played a pivotal role in my personal and social development. Being an Autistic individual, I have faced my struggles with communication and held a desire to 'fit in' for years. When in the presence of animals, I found that this subsided, I felt naturally comfortable, accepted, and didn't place any worries around fitting in. People have commented that my confidence



grows when I am around animals and sharing my knowledge of them.

## When did you gain an interest in working with animals?

I have never considered a career pathway that didn't include animals. I believe that lifelong pet ownership, starting with a rabbit named Flopsy, kickstarted my interest in animals. I learned about care, routine, and responsibility from him and gained an introduction into the human-animal bond. I have since owned an assortment of animals, ranging from rare-breed Golden Guernsey Goats to cats and terrapins.

The television programmes I most enjoyed while growing up always contained one human who was surrounded with animal friends, and I really empathized with that. I enjoyed the concept of gaining a connection with a different species and contributing to their contentment and welfare.

The animal world is widely diverse, there is always someone to love, learn about and care for. I am passionate about transforming the lives of different species with my knowledge, passion, and growing experience and in providing optimal care about beings that I care immensely about.



## What is your education background? What are you currently pursuing?

After the completion of my GCSEs in Secondary School, I pursued a two-year Level 3 Extended BTEC Diploma in Animal Care and Management. Here, I learned about the foundations of animal management, legislation and veterinary care in modules which included Zoo Health and Husbandry, Aquatics, Veterinary Nursing and Kennel and Cattery Management. After this, I completed a three-year Undergraduate Degree in Zoology with Animal Behaviour. This included modules such as Evolution and Genetics, Animal Ethics and Welfare (My favourite!), Behavioural Ecology, Conservation Practice and Primatology. I have since completed an Award in Education and Training (AET) while working as an Animal Management Teacher. I plan to complete a Masters Degree in Animal Welfare Science, Ethics and Law and a Veterinary Medicine Degree (BVMS).

## Have you had the opportunity to work in the field? How has the experience been like?

I have had incredible opportunities, so far, which have included overseas fieldwork in Florida. I loved the wildlife diversity there, which included Bottlenose Dolphins, Manatees, and fascinating bird species that I hadn't previously encountered. I have also worked at Jacobs Ridge Animal Sanctuary in Spain. I am planning on returning to Florida and have plans to work in South Africa in December. The experiences have been

**The animal world is widely diverse, there is always someone to love, learn about and care for. I am passionate about transforming the lives of different species with my knowledge, passion, and growing experience and in providing optimal care about beings that I care immensely about.**



phenomenal, the opportunities to meet new people and to witness different environments, industries and practices have been invaluable.

## How is it working with animals as an Autistic individual?

Incredible. Truly incredible. With animals, I feel the most at home and find that the usual day-to-day barriers I experience are minimised when I am with animals and doing something that I love. It



fills me with immense joy and comfort. I love the learning opportunities and chances to experience different sectors (such as in the zoo, veterinary, and domestic fields).

**You have mentioned that you approach your work differently as compared to other animal care specialists. Could you explain more?**

As an Autistic individual, I recognise that I have strengths and areas that I find more challenging. With animals, I can become hyper fixated because I am so interested and passionate about the field, which means that I devote all of my time to progressing, growing, and learning. I am also known to perfect my work, particularly when it comes to cleaning out enclosures or stables.

**What is your favourite part about working in the animal related field? Fun and funniest moments/story so far?**

Animals are unpredictable, which has created many funny moments. When I became a goat owner, my nanny, Bambi, jumped right over the stable door and absconded at just 6 months old. At times, we have been conducting practical sessions using birds of prey who have flown into trees and have taken prolonged periods to come back down.

**What are your biggest achievements and what are your future aspirations, hopes and dreams? Tell us about them.**

I completed my first Degree during the height of the Covid-19 pandemic in 2020, which involved a fast and unplanned transition to online learning. In the process of submitting my dissertation, my stepdad tragically passed away and I felt comfort in making him proud.

I aspire to grow within my chosen profession and to make a difference to the lives of animals. There are countless industries and practices that require change and voices that ought to be heard. I hope to work with as many different species, in as many different industries as possible.

**What would you advise those who wanted to work with animals but had felt like giving up on the idea because they were afraid?**

I would always advise people to never give up on their dreams and to remind them that great things take time. Remind yourself of your 'why'. The world is an incredible place with vast opportunities. Sometimes, things take longer than expected, plans don't always work out straight away and it can become incredibly frustrating when you are trying so hard. But keep on persevering, connecting with others and finding an area that you are passionate about.

**What are five (5) essential items you always have with you as an animal practitioner?**

So far, I have found strings to be of a great advantage and a fast support in mending broken items, fixtures, and fittings. A set of keys, or another alternative sharp item, to help to cut cable ties (such as those fastened around hay bales). Torches and bandages have been useful, too, animals get themselves into all kinds of predicaments.





A man wearing a red and blue plaid shuka (a traditional East African wrap) is walking in an arid, sandy landscape. He is looking back over his shoulder with a determined expression. The background shows a vast, open plain under a clear sky.

# Nature's Tapestry

## of Resilience, Indigenous Wisdom and Sustainable Co-Existence in Arid and Semi-Arid Lands in Africa

By Felix Musyoka

*The trek across the hot dry plains from the village in Serata Koiting to the 'nearby' river was long and arduous. As I made my way through the winding paths, I walked along a dried bed and followed its course. I passed by tall trees under which three- and four-year-old children were playing. As I continued on, I couldn't help but gape at the beauty that was the Acacia trees, the morans heading to the main town, and the camel kraal at the distance. I noticed large footprints on the path and was told that elephants had migrated through the previous night. After two and a half hours, the women of the village and I descended the side of a massive gorge to get to its heart where a rapid river flowed.*

*For a long time, I had come to understand that vast stony, sandy, bare and dusty landscapes with scanty vegetation unveil an Africa that has haunted many minds as a foreshadow of an inhabitable earth in future. We tend to overlook an ecosystem with the animals and people that call arid and semi-arid environments home. The interlink between these three elements demonstrate the reliance on each other for life to thrive in an environment that has been labelled the Forgotten Lands.*

**N**omadic communities, often marginalized, play a pivotal role in the sustainable coexistence within arid and semi-arid lands. We explore the nomads' nomadic lifestyles, intricate knowledge of migratory patterns, and the strategic use of natural formations like caves. Indigenous wisdom, passed down through generations, is revealed as a source of resilience, providing valuable insights into sustainable practices and resource management.

These modes of knowledge ventures into the interlink between the natural environment and the people's indigenous knowledge give provisions to the animal welfare in ages before the term was coined. It gives all an opportunity to ingrain knowledge and learn lessons from communities living in these areas in promoting the achievement of sustainable development.

### Contextualizing Landforms within the African Narrative

In both the broader arid and semi-arid regions of Africa and specifically in Kenya, these landforms transcend their status as mere geographical formations. They play integral roles in the survival strategies of ecosystems and communities. The elevated plateaus, sculpted canyons, escarpments, and volcanic landscapes become chapters in the intricate story of adaptation and resilience.

*The elevated plateaus, sculpted canyons, escarpments, and volcanic landscapes become chapters in the intricate story of adaptation and resilience. Nomadic communities, deeply connected to the land, utilize these features not just as physical markers but as sources of sustenance, guidance, and strategic advantage in navigating the challenges of arid environments.*

Nomadic communities, deeply connected to the land, utilize these features not just as physical markers but as sources of sustenance, guidance, and strategic advantage in navigating the challenges of arid environments. These landforms, contextualized within the African narrative, emerge as symbols of endurance and coexistence in the face of Earth's enduring forces.

### Nomadic Life Amidst Arid Landscapes

The communities map strategic migration routes through utilizing natural corridors. Nomadic communities, such as the Maasai in Kenya, have intricately woven their migratory patterns through these landscapes. Landforms like elevated plateaus and sculpted canyons act as natural corridors guiding their seasonal movements. Nomads strategically follow routes that offer access to water sources, grazing lands, and sheltered spots for livestock.

Elevated Vantage Points: Inhabitants of the region leverage on elevated vantage points in resource localization. Elevated plateaus serve as strategic observation points. Nomads use these vantage points to scan vast landscapes for potential resources like water bodies and patches of vegetation. The ability to anticipate resource availability is crucial for sustaining their herds and ensuring the community's survival.





**Interpreting Weather Patterns:** People read the landscape to interpret weather patterns. Nomadic communities have developed an intimate knowledge of how landforms influence local weather patterns. Escarpments and rift valleys, for instance, can impact wind direction and the likelihood of rainfall. Nomads interpret these environmental cues to predict weather changes, informing decisions on when and where to move their herds.

**Cultural Significance:** Sacred landscapes are of great cultural significance. Many of the landforms hold cultural significance for nomadic communities. Sacred sites, often located on elevated plateaus or within canyons, become focal points for rituals and gatherings. The cultural connection to the land deepens the sense of identity and belonging, fostering resilience and unity among the community.

**Natural Shelters and Refuge:** The canyons act as natural shelters that provide refuge. Canyons, with their sculpted formations and protected niches, offer natural shelters for nomadic communities during extreme weather conditions. They provide relief from harsh winds and intense sunlight. Nomads may temporarily settle in these areas, using the natural features for both protection and respite.

**Leveraging Lakes and Rivers:** They make strategic use of water sources by leveraging lakes and rivers. Volcanic landscapes, often associated with lakes and rivers, become essential for nomadic communities. Lakes like Turkana and rivers originating from volcanic areas provide critical water sources. Nomads strategically plan their movements around these water

bodies, ensuring a sustainable supply for their herds.

**Utilization of arid-adapted vegetation:** People, animals and ecosystems adapt to arid conditions and utilize arid-adapted vegetation. The sparse vegetation in arid regions becomes a vital resource. Nomadic communities guide their herds to areas with hardy grasses and shrubs that have adapted to arid conditions. Understanding the seasonal growth patterns of these plants is essential for sustainable grazing.

**Navigational Knowledge:** They harness navigational knowledge by using landforms as navigation aids. Nomadic communities use distinct landforms as navigation aids. The shapes of escarpments, the patterns of dunes, and the contours of plateaus become familiar markers for guiding their movements. This deep navigational knowledge is passed down through generations, forming a critical part of the community's collective wisdom.

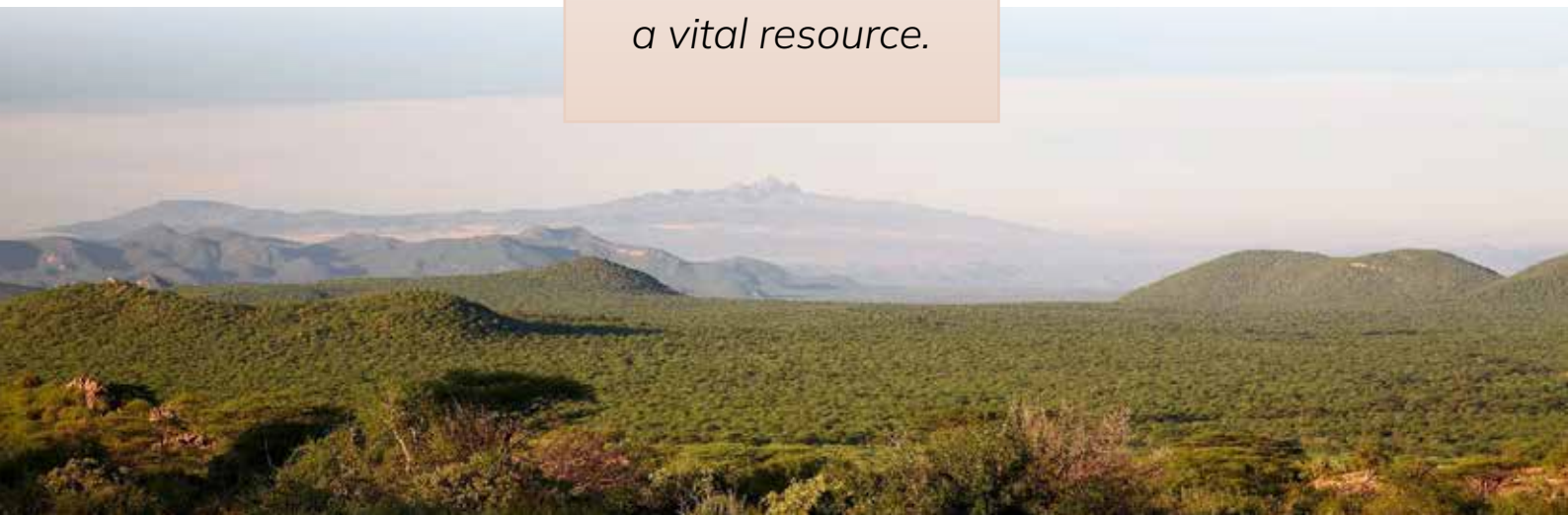
In essence, these arid landscapes are not just physical terrains for nomadic communities; they are integral components of a dynamic relationship. The landforms serve as guides, providers, and sanctuaries, shaping the adaptive strategies and resilience of nomadic life in the face of Earth's enduring forces.

**The Diverse Kenyan Communities and their Environments**

**Maasai Community in the Great Rift Valley:**

The Maasai, a nomadic community in Kenya, strategically utilize the escarpments and rift plains of the Great Rift Valley.

*People, animals and ecosystems adapt to arid conditions and utilize arid-adapted vegetation. The sparse vegetation in arid regions becomes a vital resource.*



The escarpments serve as elevated vantage points for observing the movement of wildlife, as well as potential threats or resources. The rift plains become vital grazing areas during specific seasons. Certain escarpments within the Great Rift Valley hold cultural significance for the Maasai. They are not only practical markers for navigation but also sacred sites where rituals and ceremonies take place, reinforcing the cultural connection to the land.

### ***Turkana Nomads and Lake Turkana***

Nomadic communities around Lake Turkana, such as the Turkana people, strategically plan their movements around this massive saline lake. The lake serves as a crucial water source for both humans and livestock in an otherwise arid region. The presence of canyons and ravines along the shores of Lake Turkana provides natural shelters for the nomads. During extreme weather events, these formations offer protection from harsh winds and provide a place to rest.

### ***Samburu Community in Arid Plateaus***

Samburu people, another pastoral community in Kenya, navigate the arid plateaus such as the Laikipia Plateau. These elevated plateaus offer clear vantage points for observing the movement of their herds and potential sources of water and vegetation. The sparse vegetation on arid plateaus requires careful management. Nomadic communities like the Samburu strategically plan their grazing patterns, guiding their herds to areas where vegetation is more abundant and resilient to arid conditions.

### ***Turkana and Chalbi Desert Dunes***

In the semi-arid regions around the Chalbi Desert, nomadic communities, including the Turkana, navigate through extensive sand dunes. The distinct shapes and patterns of the dunes act as navigational aids, helping nomads maintain a sense of direction in the vast and featureless landscape. Nomads utilize the dunes to predict potential resources such as oases or areas with more abundant vegetation. The wind patterns around the dunes also influence the availability of water sources, guiding the nomads in their movements.

These specific examples illustrate how nomadic communities in Kenya actively engage with and depend on the diverse landforms in arid and semi-arid regions. The landscapes become integral to their daily lives, influencing migration patterns, resource management, and cultural practices.

Our journey through the arid and semi-arid lands of Africa concludes with a reflection on the profound interconnectedness between nature and humanity. It calls for a paradigm shift in perception, recognizing these lands not as desolate spaces but as vibrant, resilient ecosystems shaped by the harmonious dance of life. As we strive for sustainable development, we are reminded that our actions should echo the grace and respect embedded in the intricate choreography of arid and semi-arid Africa.





# The Vulture:

## The Unseen Hero

By Heather Theuri

*Can you imagine if the garbage truck in your neighbourhood did not come for a month? The stench alone will have you contemplating whether to relocate. No one likes the dirty work hence, why pollution is a major contributor to climate change but that's not today's focal point.*

*Photo by Jevgeni Fil on Unsplash*

**C**leaning up is a dirty job (the irony) but it is essential for our health. One species takes this role very seriously but has gotten such a tainted reputation for it. Vultures. Known as, "Nature's clean up crew" Vultures have received such harsh judgement over the years for their carrion eating nature. Scavengers are generally seen as bottom feeders hence, are not entirely respected and most definitely misrepresented.



*Photo by Marco Pagano on Unsplash*



Vultures are large raptors that primarily feed on carrion. And no, they do not circle an animal about to die. A lot of media portray Vultures circling a "dying" animal ready to feed on them. This is a myth, while Vultures can smell decaying flesh from as far as a mile away, they do not sense death. These birds have an extraordinary sense of sight and smell which helps them locate carrion.

Vultures use thermal currents (columns of rising air) to glide for long periods without needing to flap their wings. This allows them to scout for food using a higher vantage point, they can soar upto heights of 37,100 feet. In fact, the Rüppell's griffon vulture holds the record for the highest flying bird.

Although very similar, there are 23 different species of Vultures each with their unique appearance and characteristics. We have Bearded Vultures, Black Vultures, Cape Vulture, White headed Vulture, Lappet faced Vulture, Andean condor and the list goes on.

All these Vultures scientifically known as *Cathartes aura* are categorised into two families. The old world Vultures (Accipitridae) and the new world Vultures (Cathartidae).

Vultures can be found all over the world apart from Australia and Antarctica. They are social birds and are often seen in numbers but the collective name given to these birds depends on what they are doing at the time of sighting. Like all birds they are also referred to as a flock but they can also be called a committee, volt and venue while at rest. A group of vultures in flight is called a kettle and when feeding on a carcass they become a wake.

Adding to their fascination, Vultures have highly and I do mean highly acidic stomachs. I mean, if you're going to feed on carrion you better have the stomach for it right? And indeed they do. They have the most corrosive stomach of all vertebrates helping them to kill any pathogens from the carrion they eat. This ability makes them extremely crucial in the ecosystem as they turn carcasses to bones in minutes.

This may come as a surprise but Vultures have weak feet and legs and may rely on larger scavengers like Hyenas to tear open a carcass for them to join in the party. However, not all Vultures feed on carrion, others like the Palm nut Vulture feed on fruits of different palm trees, dates and grains.

New world Vultures have a rather interesting cooling mechanism known as urohidrosis where these birds urinate on their feet. This helps them to not only cool down but to also disinfect themselves following contact with carrion.

*Guess what Vultures do when they are threatened? They vomit to lighten their body weight giving them an easier escape.*



*Photo by Steve Adams on Unsplash*

By now you're probably thinking this bird has bizarre habits and while I agree, I am not done. Guess what Vultures do when they are threatened? They vomit to lighten their body weight giving them an easier escape. Yup, you read that right! When researching on Vultures I went from impressed to cringe to straight up shocked.

They have very unique characteristics and an even more distinct appearance but one thing is for sure, they are intelligent raptors! Albeit some peculiar habits, Vultures are extremely crucial to the ecosystem. Their carrion eating



*Photo by Marvin Langer on Unsplash*



diet prevents diseases from spreading, think of them as our very own bomb containment chamber. Ecosystems are healthier because Vultures exist. That said Vulture populations are rapidly declining due to poisoning and poaching. More than half of the 23 vulture species are endangered.

Vulture body parts are used in belief based traditional practices hence they are poached through poisoning to fuel this trade.

Always first on scene when an animal dies they end up alerting rangers when an animal has been poached hence poachers lace the carcass to kill them. Collision with powerlines and accidents when heading for roadkill are among other threats to the Vulture population.

Vultures as we have learnt are absolutely vital for an ecosystem to thrive hence the importance of protecting these raptors. You can read more on individually

endangered Vulture species here. I am hoping I have somewhat encouraged you to look at Vultures with a positive lens, because they really are our first line of defense when it comes to pathogens and spreading disease. A world without these scavengers will have catastrophic repercussions for all.

International Vulture awareness day is on 2nd September, save the date!



*Photo by Dmitrii Zhodzishskii on Unsplash*

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# Could it Be...

## Are Donkeys Really a Solution to Africa's Climate Crisis?

By Catherine Chumo

*“One can see from space how the human race has changed the Earth. Nearly all of the available land has been cleared of forest and is now used for agriculture or urban development. The polar icecaps are shrinking, and the desert areas are increasing. At night, the Earth is no longer dark, but large areas are lit up. All of this is evidence that human exploitation of the planet is reaching a critical limit. But human demands and expectations are ever-increasing. We cannot continue to pollute the atmosphere, poison the ocean and exhaust the land. There isn't any more available.”*

- Stephen Hawking, Physicist & Author

**A**t the top of a mountain overlooking the land, a woman and a man in long white coats hold hands and stand to observe the state of the natural earth. A dog sits beside the woman and a bird perches on the man's shoulder. The surging rivers, the searing hot plains, the dried clayed-up wetlands, the clogged-up overflowing drainage in the stormy streets, the choked-up beaches, and the bleached coral in the oceans of Africa are evidence of the magnitude of the effects of climate change.

Such monumental weather and climate impact on the environment, animal and human lives seemed to be beyond the control of man. Yet it was caused by man. There was talk of extinction and an unliveable planet. The man looks at the woman, concern in his eyes, “How did this happen?” “That



is what you need to find out. To know where we are going, we need to understand where we come from.”

With a steely gaze, she let go of his hand and took a step forward. “The past and present are linked to the future. We need a solution.” They heard a donkey bray in the distance as she bent down patted the dog, and they turned to walk through the orchard back to the Earthship research complex, heading back to the laboratory.

### **The Past: What Caused the Climate Crisis?**

To look forward, we must look back. Before 1750, when the industrial revolution occurred, Carbon dioxide (CO<sub>2</sub>) emissions were significantly lower as cited in the paper, *The Environmental Impact of Industrialization and Foreign Direct Investment:*



Empirical Evidence from Asia-Pacific Region, by Farhan Ahmed, Imtiaz Ali, Shazia Kousar, and Saira Ahmed. The gas emissions produced during the industrial revolution formed a layer over earth and trap the heat from the sun and caused global warming and climate change.

It has been established by the UN that fossil fuels, oil, coal, and gas, are the largest contributor by a great margin, to global climate change accounting for over 75% of global greenhouse gases emissions and nearly 90% of all carbon dioxide emissions. Various United Nations publications summarise the causes of Climate Change to include generating power, manufacturing goods, cutting down forests, using transportation, producing food, powering buildings, consuming food, and excessive consumption.

In his presentation, Dr Carter Dillard from the University of Denver explored what fundamentally failed before the crisis.

He states world leadership designed a model that placed humans at the centre. This view exploited growth as a means of making money and making profits. He stated that the wealthy nations caused the climate crisis and were most prepared to survive the climate crisis. The countries that were previously colonized were the least prepared. Anthropocentric family policies were established that do not leave room for non-humans. In this

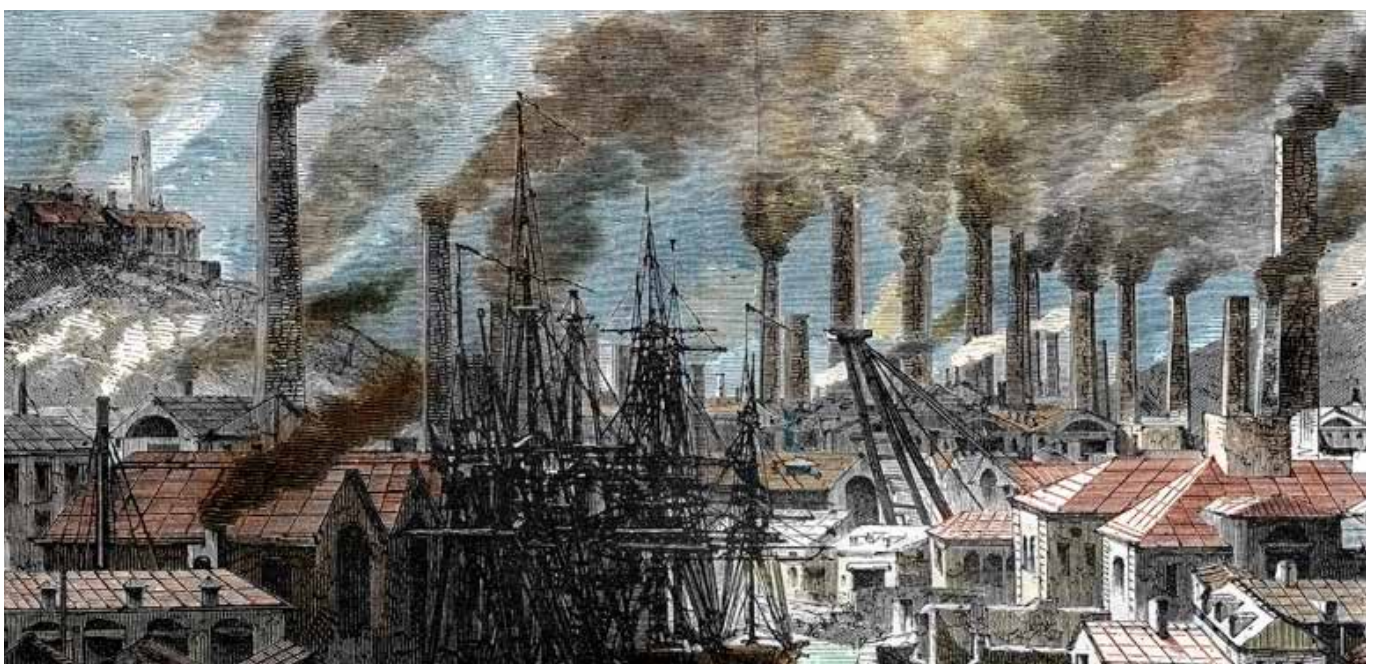
move, the development of empathy for animals in children was a failure. The climate crisis they caused set to displace billions, kill at least tens of millions of humans by the end of the century, and killed and drive countless animals into extinction.

### **The Present: The Catastrophe that is the Climate Change Crisis**

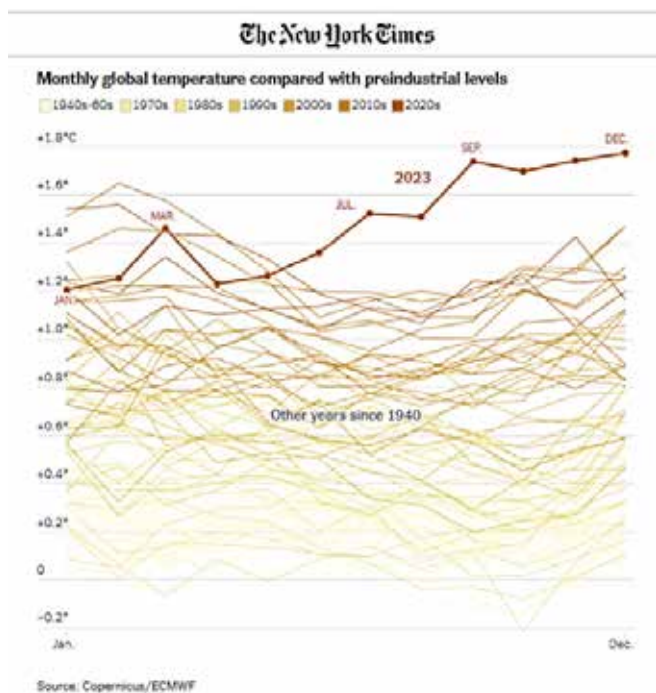
In the past few years, developing countries have stepped up their efforts to achieve approval of industrial sector reform and very rapid growth in energy consumption for the production of goods and services as quoted by Nazlioglu. et al in the paper, Nuclear Energy Consumption and Economic Growth in OECD Countries: Cross-Sectionally Dependent Heterogeneous Panel Causality Analysis and Solarin et al. and Investigating the Pollution Haven Hypothesis in Ghana: An Empirical Investigation.

The dire effects of these actions are seen today. The World Meteorological Organization (WMO) found that the annual average global temperature was 1.45 degrees Celsius higher than pre-industrial levels. It was confirmed by the WMO that 2023 was the warmest year on record by a huge margin.

Dr Carter Dillard from the University of Denver cites that the increasing frequency and intensity of extreme weather events, such as droughts



*Leemage/Corbis Via Getty Images*



and floods, have a detrimental impact on human and animal habitat, food availability, and water sources. The rising temperatures and changing precipitation patterns contribute to habitat loss, pushing many species towards extinction or migration to find suitable environments.

At the Africa Animal Welfare Conference (AAWC) in Kigali, Rwanda, Dr Dillard mentions that that climate-induced changes in vegetation and plant life disrupt food chains, leading to food scarcity for herbivores and subsequently impacting carnivores and prolonged droughts result in water scarcity for both wildlife and domesticated animals, escalating competition and exacerbating

conflicts between human and animal populations. Human beings have faced dire poverty as a result of climate change. The extreme weather patterns and the shortages of the basic necessities and find it harder to recover from failed harvests, destroyed houses and health crises. During these tough times, the prevalent donkey trade has exacerbated the effects of climate change on these families.

The drastic effects of climate change have not only affected animals in Africa, but they have also uncovered the need to look back to nature for solutions. Let's turn to the donkeys. The donkey presents a fascinating and unique opportunity to ease the burden of the families.

The families cling onto donkeys for survival. Their existence is the source of survival for many rural families in East Africa. Unfortunately, our likely solution, the life of the donkey, is at peril. Thousands of donkeys are decimated every year through the donkey skin trade. Hundreds of thousands of donkeys are slaughtered for their skins that are exported every year which drive the numbers of donkeys across the world to extinction, according to The Brooke. The demand of the trade comes from China, as the Skins are boiled to produce ejiao, a gelatine used in traditional Chinese medicine.

Dr Bojia Duguma from the Donkey Sanctuary spoke on the donkey skin trade and how and why this is the case.

*In Ethiopia, the donkey population density correlates with human population density. He gave an example of the Ethiopian highlands where with 81% of people living in the highland, we find 89% of donkeys to serving in the same area. He also stated that donkeys remained integral to rural livelihoods.*





## The Future: Could Donkeys Really be a Solution to Africa's Climate Crisis?

A curious question was posed, distilled, and examined during the 7th Africa Animal Welfare Conference in Kigali, Rwanda.

'Why does East Africa, specifically Ethiopia, Kenya and Sudan, seem to be the region where donkey populations are still surviving?'

The question hung in the air in a pause for reflection.

Dr Duguma stated that in Ethiopia, the donkey population density correlates with human population density. He gave an example of the Ethiopian highlands where with 81% of people living in the highland, we find 89% of donkeys to serving in the same area. He also stated that donkeys remained integral to rural livelihoods.

The community heavily relies on donkeys as their vital role was to access primary markets for rural households. Donkeys serve as water pipes for rural villages as they help in accessing spring water, river water, bore hole, and Lake Hawassa. Donkeys also contribute to women's quality of life. Donkeys present a self - employment opportunity which supports the rural to urban migration of the youth. They aid in transporting construction supplies and ferry goods from villages to collection sites. Donkeys are critical in areas experiencing conflict and climate extremes causing natural and

man-made disasters. Donkeys support people in drought situations and support refugees of conflict zones.

Dr Duguma cited that donkeys continue to be the animals of choice for small holder farmers because they provide diverse roles in households, they are easy to train and handle, they are unlikely to succumb to diseases compared to horses, they thrive on poor quality feed and scarce water, they are adaptable to arid and semi-arid climate and they represent a reliable, sustainable and affordable power source for small holder farmer. The expert projected the future role of donkeys in human development in a Continuum A2 – scenario hypothesis, Donkeys: Essential Animals for Human Civilization.

Dr Duguma presented two (2) scenarios. Scenario A presented a future where donkeys are integrated in the national development plans, sustain rural livelihoods (>78%), support transition to urbanization, adapt to climate extremes, mitigate conflicts (IDPs) and facilitate commodity production such as milk.

People price working animals as their biggest and most precious asset and provide an efficient, productive and environmentally friendly infrastructure, as The Brooke states. They aid the community to access investments and education. We can learn from this scenario and replicate this in regions across the world. Protect their existence and ensure good welfare.

*Donkeys continue to be the animals of choice for small holder farmers because they provide diverse roles in households, they are easy to train and handle, they are unlikely to succumb to diseases compared to horses, they thrive on poor quality feed and scarce water, they are adaptable to arid and semi-arid climate and they represent a reliable, sustainable and affordable power source for small holder farmer.*



Scenario B presented a scenario where donkeys continue under the informal economic system, with skin trade significantly decimating donkey populations, there would be an increase in burdening the remaining donkeys which in turn enables the poorest welfare, and donkey numbers would be below minimal viable level to support human development.

The nation would have the donkeys withstand cruel human behaviour such as poor handling practices, like whipping, abandonment after work, and pegging the nostrils, have cultural and religious beliefs that do not salvage value, by propagating myths and social stigma, bear technical gaps in diseases/poor service delivery,

mortality, morbidity, and abandonment, infringe on professional skill gap in accessing proper health care, and the use of unfit harnessing technology.

The nation would have policy and strategy gaps where donkey's role would be taken for granted and always run under informal economic system, climate change & environmental degradation where working donkeys and mules are increasingly engaged in relief and emergency situation transporting relief food, water, medical and shelter etc. and donkey slaughter and skin trade would pose a major threat to both donkeys, mules and the people whose livelihoods rely on them. It is up to us to choose the future we want.

## Conclusion

Poor animal welfare practices, cause immune suppression making animals susceptible to different diseases and increases the vulnerability to health problems. We need to be Extension Officers for the future. To be time travellers and advocate for Scenario A. Even in times hardships, African communities would thrive and household economies would grow.

Effective tools and structures are invented to reverse the monumental destruction caused by industrial revolution at a global scale. In a society reeling from the greatest effects of weather and climate, people are working expeditiously to calm the tide. A few technologies have been harnessed to promote animal welfare such as urine in diagnostics through machine learning, taking vaccines in tablet form, ensuring immunity in chicks and reverse genetic vaccine using viruses among others. More ethical, and sustainable innovation should be explored.

Dr Duguma stated that donkeys left a legacy with remarkable footprints in human civilization, today. They need scientists, policy makers and development organizations to save them from decimation by the skin trade. Donkeys remain integral to resilience building in rural communities of East Africa. Donkeys continue to play essential role in urbanization process of rural communities. Donkeys continue to play crucial role in disaster relief and emergency in such a precarious region, East Africa.

East Africa, more than any other region, is not ready for skin trade is in need for a 15-year moratorium. A call for integration of efforts, policies, and strategies to recognize role of working animals in national, regional and international development plans and hence the need to improve their welfare.





# Experts Weigh in on Animal Welfare Challenges During Disaster Situations in Africa

*Rwanda prioritizes animal welfare as an objective towards ensuring the wellbeing of human beings and the environment. The experts aimed to shift from merely teaching facts about animals to fostering empathy and understanding of their experiences, needs, and emotions. Dr Emmanuel Irimaso, University of Rwanda, School of Veterinary Medicine, and Dr Laurien Ntamugabumwe, Rwanda Council of Veterinary Doctors, discussed the situations of animal welfare and disaster management in the land of a thousand hills.*

**T**he breathtaking African country provides a home for people and animals in its magnificent hills, thick, lush forests, swampy wetlands, and still lakes and meandering rivers perfectly preserved. Rwanda is a well-known home to stunning biodiversity such as the Eastern and Mountain gorillas, African jacana, agamas, turacos, aardvarks, guineafowls, Olive Baboons and African Fish Eagles. The country takes pride in its commendable conservation models of managing its biodiversity and varied ecosystems and habitats.

## Animal Welfare in Rwanda

Animal welfare in Rwanda has taken grand strides in its place in the nexus aimed towards sustainable development. The Government of Rwanda, academic institutions and organizations such as Rwanda



Animal Welfare Organization (RAWO), Welfare for Animals Guild Rwanda (WAG Rwanda) work every day to advance animal welfare in the country. “We used to hurt our animals unwillingly by beating them, depriving them of water due

to its shortage, and necessary medical treatment. Now we have learnt more so that we can respect their wellbeing and share that experience with our neighbors,” the Director of RAWO, Dr. Jean Claude Masengesho stated.

However, it was identified that there is a need for education in animal welfare to change the existing narrative. There is need for improved standards on animal welfare, which will in turn contribute to the economy through higher production for farmers. Dr Emmanuel Irimaso, who works at the University of Rwanda, School of Veterinary Medicine, shed light on the opportunity to open up more areas for research and incorporate ethics.

It is crucial that Africans have a positive attitude towards animals and have them live better lives and achieve global targets. Dr Irimaso highlights that they strove to overcome shared challenges such as limited resources lead to competition for those resources, conflict of interests between human and animal welfare, keeping pace with scientific developments and a lack of age-appropriate education for

younger children and much older demographics.

## Animal Welfare and Disaster Management

There are many common natural disasters affecting animal welfare in Africa which has severe consequences for wildlife and domestic animals. While millions of people depended on animals and livestock, there are not enough mitigation centered on rescuing animals in times of disaster.

Dr Laurien Ntamugabumwe of the Rwanda Council of Veterinary Doctors cites that the impact on animals and people attributed to

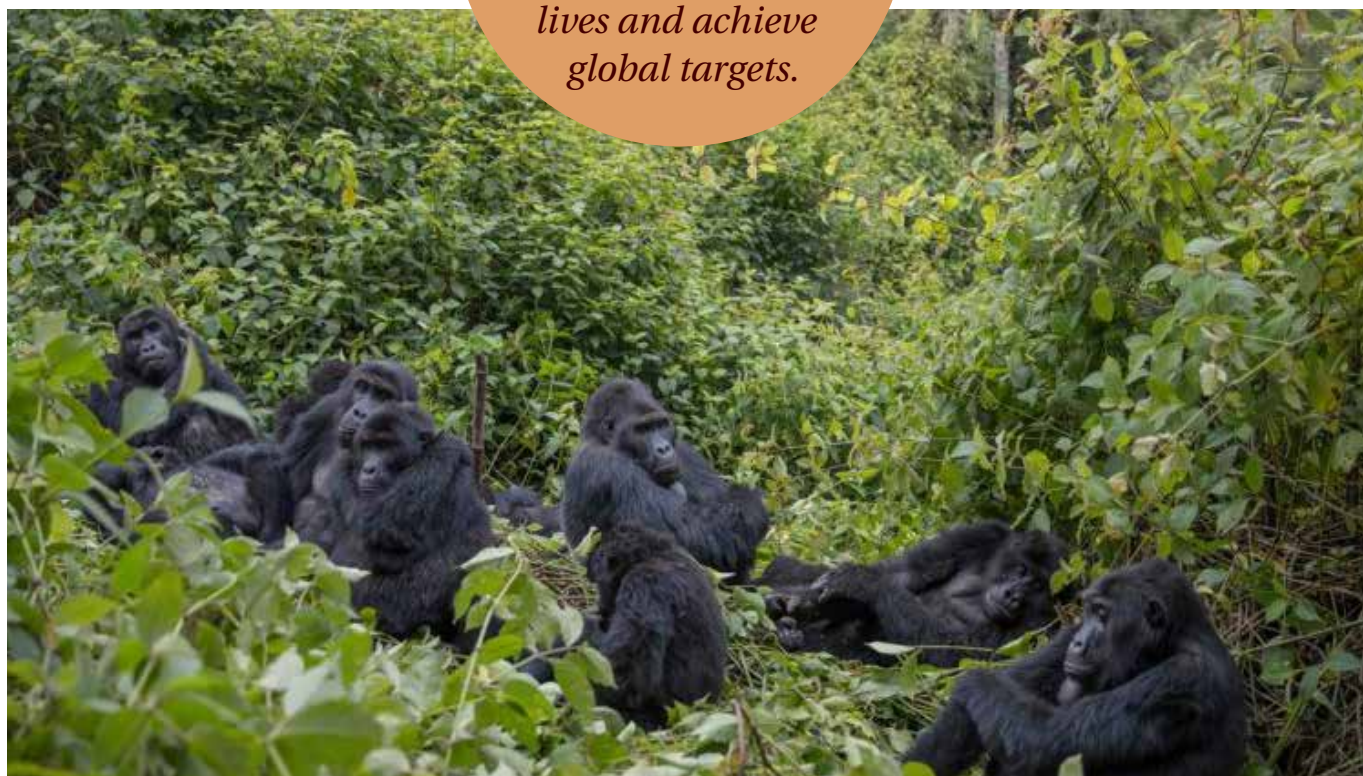
disasters was profound and they experienced loss of food and water, injury or death of domestic and wild animals and tough economic hardships for human populations. According to a study done by International Fund for Animal Welfare (IFAW), it showed that 59% of households had lost all their livestock to consecutive rains.

## Challenges that Needed Attention

The disasters disrupt ecosystems by displacing animals which would increase the risk of zoonotic disease transmission to human beings.

The challenges experienced in disaster management include limited resources and infrastructure, inadequate natural resource management resulting in low resilience against droughts, floods and other natural disasters, and climate change all leading to

*It was crucial that Africans have a positive attitude towards animals and have them live better lives and achieve global targets.*





a negative impact on animal welfare.

Unfortunately, there are cultural and traditional practices that do not prioritize animal welfare. Competition from other pressing social and economic priorities make it a challenge to allocate sufficient attention and resources to the issue.

### Solutions To Explore

Despite this, there is a great opportunity for Non-Governmental Organizations (NGOs) and governments to collaborate in initiatives towards international partnership, research and innovation, policy advocacy, creation of early warning systems with community-based disaster risk reduction.

The best animal welfare practices observed in other countries could be modeled. For instance, in Kenya, the Faculty of Veterinary Medicine has integrated

disaster management and animal welfare as part of their curriculum. Nigeria is in the process of implementing policies on the general care of animals in production and research during emergency and disaster situations.

The proactive responses in Rwanda including creation of early warning systems through methodology agency, land use and mapping to

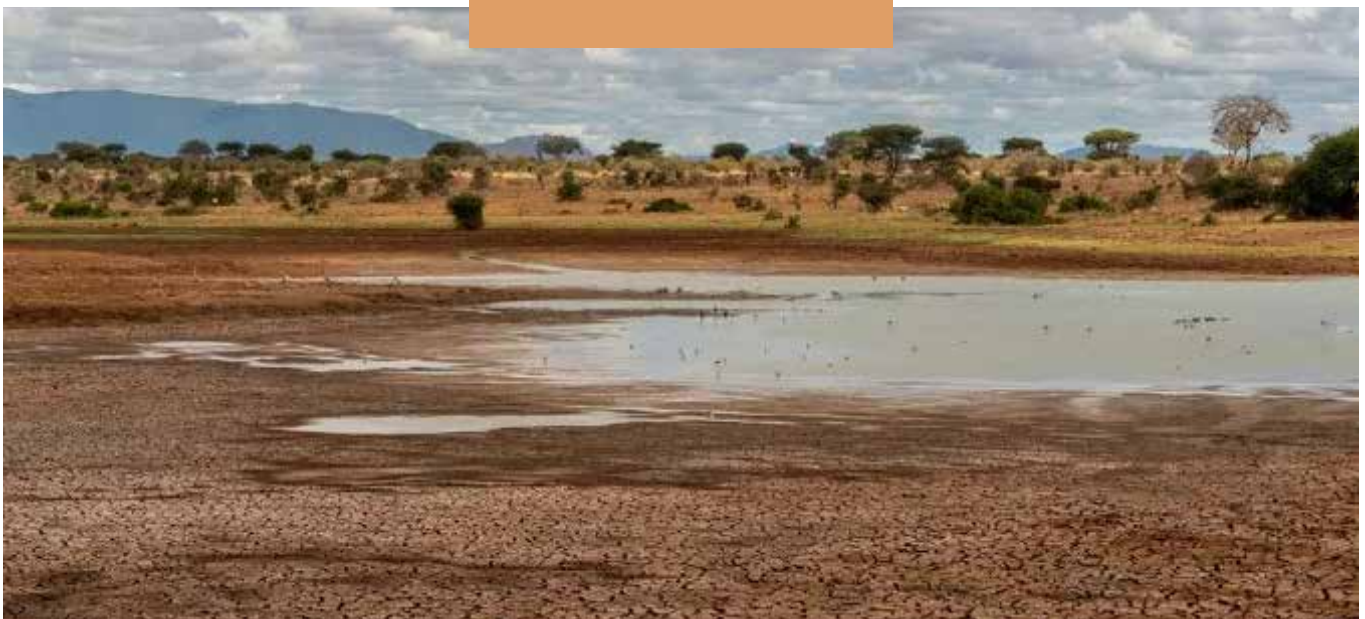
ensure its implementation, conversion of poachers who had become conservationists and developments of the animal welfare law is ongoing.

### Next Steps That Need to Be Taken

The frequency and intensity of natural disasters is predicted to continue to escalate as the continent experienced climate change. The AU member' states was urged to adopt the One Health approach and ensure implementation while acknowledging the role of animals in human lives as an integral part of effective disaster planning and response.

While building a robust and sustainable disaster management system is challenging, it is possible for African Members States to adapt disaster management systems and ensure animal rescue was a part of disaster preparedness plan.

*The challenges experienced in disaster management include limited resources and infrastructure, inadequate natural resource management resulting in low resilience against droughts, floods and other natural disasters, and climate change all leading to a negative impact on animal welfare.*





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Warm Regards,  
Animal Welfare Magazine Team.





# FUTURISTIC BOOKS:

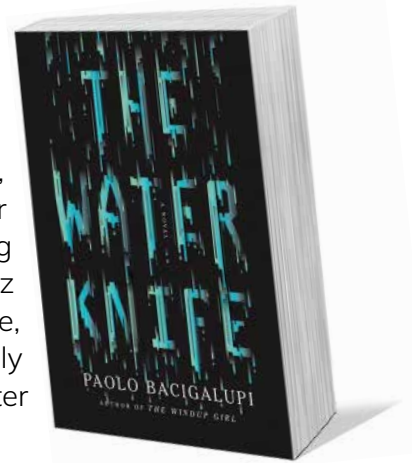
## Examining the Imagined Post-Climate Change World

By Sharon Wawira

*Futuristic books, dubbed 'cli-fi' books, give a creative glimpse of the future that is affected by climate change. Deliberating on the common trajectory, the imaginative storylines will have you mull over how our actions as humans have caused the devastating occurrences we see today and how the outcome will look like if we continue staying passive or keeping on pursuing them.*

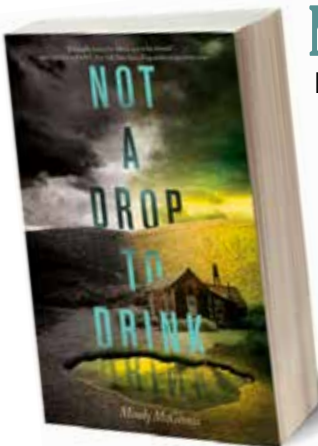
### The Water Knife - by Paolo Bacigalupi

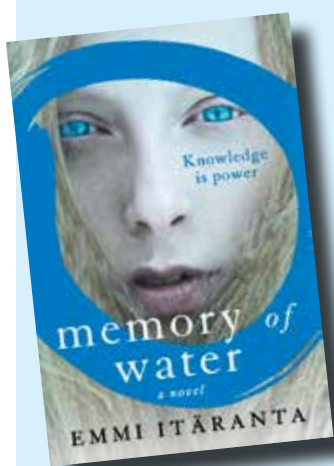
In a future hammered by climate change and drought, mountain snows have turned to rain, and rain evaporates before it hits the ground. In a fragmenting United States, the cities of Phoenix and Las Vegas skirmish for a dwindling share of the Colorado River. But it is the Las Vegas water knives - assassins, terrorists and spies - who are legendary for protecting Las Vegas' water supplies, and for ensuring Phoenix's ruin. When rumours of a game-changing water source surface, Las Vegas dispatches elite water knife Angel Velasquez to Phoenix to investigate. There, he discovers hardened journalist Lucy Monroe, who holds the secret to the water source Angel seeks. But Angel isn't the only one hunting for water, Lucy is no pushover, and the death of a despised water knife is a small price to pay in return for the life-giving flow of a river.



### Not a drop to drink - by Mindy McGinnis

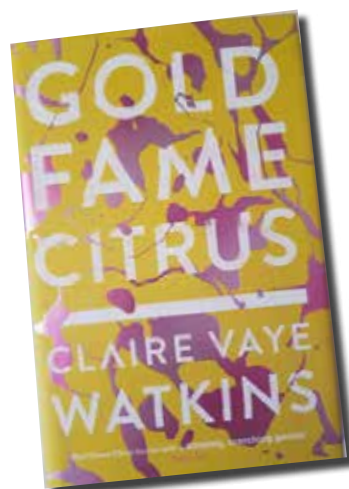
Lynn knows every threat to her pond: drought, a snowless winter, coyotes, and, most importantly, people looking for a drink. She makes sure anyone who comes near the pond leaves thirsty, or doesn't leave at all. Confident in her own abilities, Lynn has no use for the world beyond the nearby fields and forest. Having a life means dedicating it to survival, and the constant work of gathering wood and water. Having a pond requires the fortitude to protect it, something Mother taught her well during their quiet hours on the rooftop, rifles in hand. But wisps of smoke on the horizon mean one thing: strangers. The mysterious footprints by the pond, nighttime threats, and gunshots make it all too clear Lynn has exactly what they want, and they won't stop until they get it.





## Memory of Water - by Emmi Itäranta

Global warming has changed the world's geography and its politics. Wars are waged over water, and China rules Europe, including the Scandinavian Union, which is occupied by the power state of New Qian. In this far north place, seventeen-year-old Noria Kaitio is learning to become a tea master like her father, a position that holds great responsibility and great secrets. Tea masters alone know the location of hidden water sources, including the natural spring that Noria's father tends, which once provided water for her whole village. But secrets do not stay hidden forever, and after her father's death the army starts watching their town-and Noria. And as water becomes even scarcer, Noria must choose between safety and striking out, between knowledge and kinship.



## Gold Fame Citrus — by Claire Vaye Watkins

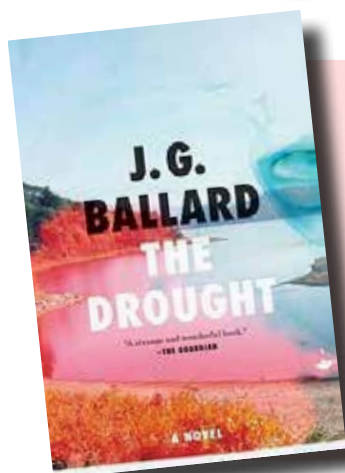
In a parched southern California of the near future, Luz, once the poster child for the country's conservation movement, and Ray, an army deserter turned surfer, are squatting in a starlet's abandoned mansion. Most "Mojavs," prevented by armed vigilantes from freely crossing borders to lush regions, have allowed themselves to be evacuated to encampments in the east. Holdouts like Ray and Luz subsist on rationed cola and water, and whatever they can loot, scavenge, and improvise.

For the moment, the couple's fragile love, which somehow blooms in this arid place, seems enough. But when they cross paths with a mysterious child, the thirst for a better future begins.



## The High House — by Jessie Greengrass

Perched on a sloping hill, set away from a small town by the sea, the High House has a tide pool and a mill, a vegetable garden, and, most importantly, a barn full of supplies. Caro, Pauly, Sally, and Grandy are safe, so far, from the rising water that threatens to destroy the town and that has, perhaps, already destroyed everything else. But for how long?



## The Drought – by J.G. Ballard

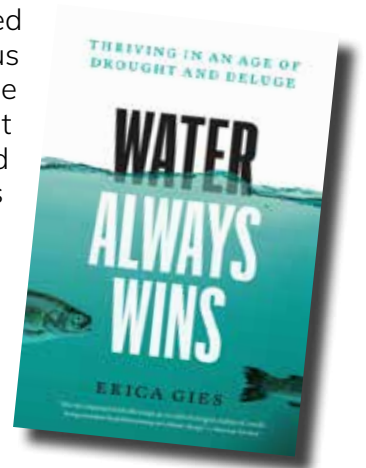
An apocalyptic dystopia like no other, one whose "originality and power of vision can be felt. Weird and mesmerizingly grotesque, The Drought tells the chilling story of the world on the brink of extinction, where a global drought, brought on by industrial waste, has left mankind in a life-or-death search for water. Violence erupts and insanity reigns as the human race struggles for survival in a worldwide desert of despair.



## Water Always Wins:

### Thriving in an Age of Drought and Deluge – by Erica Gies

Nearly every human endeavour on the planet was conceived and constructed with a relatively stable climate in mind. But as new climate disasters remind us every day, our world is not stable—and it is changing in ways that expose the deep dysfunction of our relationship with water. Increasingly severe and frequent floods and droughts inevitably spur calls for higher levees, bigger drains, and longer aqueducts. But as we grapple with extreme weather, a hard truth is our development, including concrete infrastructure designed to control water, is actually exacerbating our problems. Because sooner or later, water always wins. In this quietly radical book, science journalist Erica Gies introduces us to innovators in what she calls the Slow Water movement who start by asking a revolutionary What does water want? Using close observation, historical research, and cutting-edge science, these experts in hydrology, restoration ecology, engineering, and urban planning are already transforming our relationship with water.



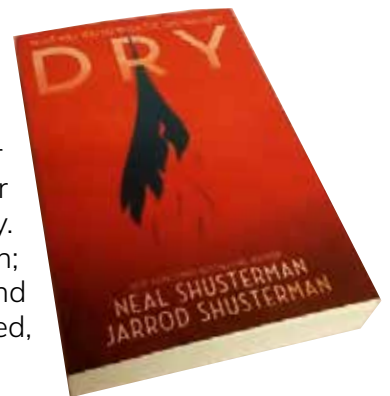
### The Ministry for the Future – by Kim Stanley Robinson

Established in 2025, the purpose of the new organization was simple: To advocate for the world's future generations and to protect all living creatures, present and future. It soon became known as the Ministry for the Future, and this is its story. From legendary science fiction author Kim Stanley Robinson comes a vision of climate change unlike any ever imagined. Told entirely through fictional eye-witness accounts, *The Ministry for the Future* is a masterpiece of the imagination, the story of how climate change will affect us all over the decades to come. Its setting is not a desolate, post-apocalyptic world, but a future that is almost upon us—and in which we might just overcome the extraordinary challenges we face.



### Dry – by Neal Shusterman and Jarrod Shusterman

When the California drought escalates to catastrophic proportions, one teen is forced to make life and death decisions for her family in this harrowing story of survival. The drought or the Tap-Out, as everyone calls it has been going on for a while now. Everyone's lives have become an endless list of don'ts: don't water the lawn, don't fill up your pool, don't take long showers. Until the taps run dry. Suddenly, Alyssa's quiet suburban street spirals into a warzone of desperation; neighbours and families turned against each other on the hunt for water. And when her parents don't return and her life and the life of her brother is threatened, Alyssa has to make impossible choices if she's going to survive.



### Termination Shock – by Neal Stephenson

Neal Stephenson's sweeping, prescient new novel transports readers to a near-future world where the greenhouse effect has inexorably resulted in a whirlwind troposphere of superstorms, rising sea levels, global flooding, merciless heat waves, and virulent, deadly pandemics. One man has a Big Idea for reversing global warming, a master plan perhaps best described as "elemental." But will it work? And just as important, what are the consequences for the planet and all of humanity should it be applied?



# Wild Flora and Fauna in Africa's Arid Landscape and Nature's Tapestry of Resilience and Sustainable Co-existence

By Felix Musyoka

*A donkey makes its way home with two filled 20-litre containers carefully strapped on its back. It did not strike people in the community as odd that a donkey could be sent to fetch water and the owner would trust that someone would fill the water at the river and it would come back on its own.*



**L**ike cows making their way home by themselves from pasture in other parts of the continent, the donkey has adapted to the way of life in arid and semi-arid lands.

These lands, covering vast expanses of Africa, have long been misunderstood as inhospitable and barren. However, our exploration begins by challenging this perception, recognizing these regions as dynamic ecosystems teeming with life. A US National Park Service (NPS) article, *Arid and Semi-arid Region Landforms*, serves as a springboard, showcasing the diverse landforms that lay the foundation for a complex web of relationships between nature, wildlife, and indigenous communities.

African arid landscapes host a plethora of flora and fauna uniquely adapted to the challenges posed by scarce resources. Through a lens of

biodiversity, we examine the strategies employed by desert-adapted species, showcasing the interdependence between these animals and their environment. Nomadic communities, deeply connected to the land, have developed symbiotic relationships with wildlife, contributing to the delicate balance of these ecosystems.

## **Wildlife and the Community Way of Life**

The wildlife in arid and semi-arid regions of Kenya plays a crucial role in influencing pastoral communities in various ways, contributing to their livelihoods, cultural practices, and overall well-being. Here's an overview of how different species interact with pastoral communities in these challenging environments:

**Grevy's Zebra, Oryx, Gerenuk, and Desert Warthog (Mammals).** Wild animals are crucial as they are part of the broader ecosystem that



supports herbivores, which are prey for carnivores that pastoralists might rely on.

**Secretary Bird, and Bustards (Birds).** Birds can hold cultural significance for pastoral communities, influencing folklore, rituals, and traditional practices. They may be featured in stories or considered symbolic, contributing to the cultural identity of these communities.

**Spiny-tailed Lizard, Monitor Lizards, and Sand Boa (Reptiles).** Reptiles contribute to the ecosystem by controlling insect populations and maintaining ecological balance. Insects can be pests for livestock, and the presence of reptiles helps in controlling their numbers, indirectly benefiting pastoralists.

**Dung Beetles and Antelope Orb Weaver Spider (Insects).** Insects, like dung beetles, play a crucial role in providing ecosystem services such as decomposing animal waste. This contributes to nutrient cycling, improving soil fertility, which indirectly benefits pastoralists by maintaining healthy grazing areas. Antelope orb weaver spiders help control insect populations, contributing to pest management.

**Acacia Trees, Baobab Trees, and Thorny Shrubs (Plants and Vegetation):** Acacia and thorny shrubs provide essential forage and shade for

*Healthy ecosystems are essential for sustaining water sources, regulating climate, and providing essential services that directly or indirectly impact pastoral livelihoods.*

wildlife, attracting herbivores that, in turn, may be prey for carnivores important to pastoralists. Additionally, these plants contribute to the landscape's resilience by preventing soil erosion and providing shade for both wildlife and livestock.

**Turkana Tilapia and Nile Crocodile (Aquatic Life)** The aquatic life in Lake Turkana, such as Turkana tilapia, provides a potential source of food for pastoral communities living in the vicinity. However, Nile crocodiles may pose a threat to both livestock and humans, leading to the need for coexistence strategies.



*While wildlife in arid and semi-arid regions can be a source of benefits for pastoralists, it's essential to manage human-wildlife interactions carefully.*

**Overall Ecological Balance**

The diverse array of wildlife in these regions contributes to the overall health and resilience of ecosystems. Maintaining biodiversity ensures that ecosystems remain stable, providing resources such as water, forage, and food that are essential for pastoral communities.

While wildlife in arid and semi-arid regions can be a source of benefits for pastoralists, it's essential to manage human-wildlife interactions carefully.

Conservation efforts and sustainable practices are crucial to ensuring the co-

existence of wildlife and pastoral communities while maintaining the delicate balance of these ecosystems.

**Impact on Community Livelihoods**

The wildlife in arid and semi-arid regions of Kenya can significantly influence the livelihoods of pastoral communities in various ways. Here are specific ways in which different wildlife species impact the livelihoods of these communities:

**Economic Contribution**

The unique wildlife in these regions can attract tourists interested in experiencing the diversity of flora and fauna. Tourism can generate income for pastoral communities through guided safaris, accommodations, and other related services.

**Cultural and Spiritual Significance**

Certain wildlife species, like birds, reptiles, and plants, hold cultural significance in the traditions and practices of pastoral communities. These species may play a role in rituals, folklore, and traditional ceremonies, enriching the cultural fabric of these communities.

**Food Resources**

While direct consumption of wildlife might be limited due to cultural practices or conservation





concerns, some communities may rely on traditional hunting practices for subsistence purposes, using wildlife as a food source.

### **Livestock Forage and Health**

Acacia trees, thorny shrubs, and other vegetation provide good quality forage for both wildlife and domesticated livestock. The presence of these plants contributes to the overall health and nutrition of livestock, which is crucial for the livelihoods of pastoralists.

### **Ecosystem Services**

Dung beetles contribute to nutrient cycling by decomposing animal waste, enhancing soil fertility. Additionally, the maintenance of healthy vegetation, facilitated by various wildlife species, ensures the availability of grazing areas for livestock.

### **Traditional Medicine and Crafts**

Some wildlife and plant species may be used in traditional medicine or for crafting purposes. The cultural practices associated with these uses contribute to the livelihoods of individuals engaged in traditional healing or craftsmanship.

### **Ecotourism and Employment**

The presence of unique wildlife attracts ecotourism, providing opportunities for employment within pastoral communities. Locals may work as guides, in hospitality, or in other tourism-related activities.

### **Biodiversity and Environmental Health**

Biodiversity, maintained by the presence of diverse wildlife, contributes to the overall stability of ecosystems. Healthy ecosystems are essential for sustaining water sources, regulating climate, and providing essential services that directly or indirectly impact pastoral livelihoods.

While the wildlife in these regions can bring numerous benefits, there are also challenges, such as human-wildlife conflict and potential threats to livestock. Sustainable conservation practices, community involvement in wildlife management, and the development of responsible tourism initiatives are essential for ensuring that wildlife positively contributes to the livelihoods of pastoral communities in the long term.



# Understanding One Welfare:

## The Connection Between Welfare of Animals, Human Beings and Environment

By Barnabas Babalola



*“One Welfare” is a holistic approach that recognizes the intricate interconnection between the well-being of animals, humans, and the environment. This concept goes beyond traditional boundaries, emphasizing the profound impact each element has on the others. In exploring the nexus of animal welfare, human health, and environmental sustainability, we unravel a tapestry of interconnectedness that demands attention and concerted efforts.*

### Animal Welfare:

The ethical treatment of animals is not only a moral imperative but a fundamental aspect of a compassionate society. The conditions in which animals are raised, housed, and treated can significantly impact their physical and psychological well-being. Beyond the moral obligation to treat animals with kindness, there are broader implications for society and the environment.

Animal welfare influences food systems, as ethically treated animals often result in healthier products for human consumption. Furthermore, humane treatment contributes to the prevention of zoonotic diseases, safeguarding both animal and human health.

### Human Well-being:

The connection between animal welfare and human health is intricate and profound. Animals, whether as pets or livestock, contribute significantly to human well-being. The companionship of pets, for example, has been linked

to lower stress levels and improved mental health. Moreover, a healthy ecosystem, which includes well-treated animals, directly impacts the quality of air, water, and overall environmental conditions that humans rely on for survival.

Conversely, the mistreatment of animals can have adverse effects on human health. Factory farming practices, for instance, can lead to the spread of diseases, posing significant risks to global health. The welfare of animals is intrinsically linked to the well-being of humanity.

### Environmental Impact:

The exploitation of natural resources and the environmental consequences of human activities have profound implications for animal welfare. Climate change, deforestation, and pollution directly affect the habitats of animals, often leading to displacement and endangerment of various species. Conversely, sustainable practices that prioritize environmental health contribute to the well-being of animals.

Intensive farming of animals for mass

consumption has been identified as a significant contributor to environmental degradation. It leads to deforestation, water pollution, and the release of greenhouse gases. Adopting practices that prioritize both animal welfare and environmental sustainability is crucial for long-term planetary health.

“One Welfare” encapsulates the understanding that the well-being of animals, humans, and the environment is intricately connected. Recognizing this interdependence is not just an ethical choice but a practical necessity for a sustainable and harmonious future. By embracing practices that promote animal welfare, human health, and environmental sustainability, we pave the way for a more compassionate, healthier, and balanced world. The journey towards “One Welfare” requires collaborative efforts across disciplines, acknowledging that the prosperity of one element is contingent on the well-being of the others.



# A Review of African Geological Landforms in Arid and Semi-Arid Landscapes

By Felix Musyoka

*From the expansive Sahara Desert in the north to the lush rainforests of the Congo Basin in the central region, and from the towering peaks of the Ruwenzori Mountains to the low-lying plains of the Serengeti, Africa's landscapes are a testament to the forces that have shaped the continent over millions of years. Africa, a continent of unparalleled geographical diversity, showcases an astonishing variety of landforms that contribute to its unique character.*

**D**rawing inspiration from the rich geological tapestry highlighted by the National Park Service (NPS), we weave together insights into the adaptive strategies employed by both the natural environment and indigenous inhabitants. From the majestic landforms that define the landscape to the nomadic communities and their deep-rooted indigenous knowledge, this paper examines the multifaceted relationships shaping life in these challenging terrains.

We delve into the geological wonders that define arid and semi-arid Africa. From towering plateaus to sculpted canyons, each landform tells a story of Earth's enduring forces. Importantly, we contextualize these landforms within the African narrative, exploring their role as more than just geographical features. These formations are pivotal in shaping the survival strategies of both flora and fauna.

## Landforms in the African Outback

African landforms encompass deserts, mountains, plateaus,



savannas, and coastal plains. The Great Rift Valley, stretching over 7,000 kilometers from Lebanon in Asia to Mozambique in Southeast Africa, is a prime example of a geological feature that traverses multiple countries. Its escarpments, lakes, and volcanic peaks contribute not only to the continent's topographical diversity but also

to its cultural and ecological richness.

Over 80% of Kenya's lands are classified as arid and semi-arid (ASAL), based on the relatively low amounts of annual rainfall received. Often marginalized, and with high rates of poverty, the 16 million people residing in these areas (~30% of

*The Great Rift Valley, stretching over 7,000 kilometers from Lebanon in Asia to Mozambique in Southeast Africa, is a prime example of a geological feature that traverses multiple countries.*



Kenya's population) earn their living principally through a mix of pastoralism and small-scale agriculture. ASALs are particularly susceptible to droughts and flooding, and with increasing impacts from climate change, these areas are considered to be at risk of desertification. Moreover, a large percentage of ASALs have been degraded from deforestation and overgrazing, which further reduces the productivity of these lands, threatening food security, livelihoods and biodiversity.

Silali is the largest volcano in the Kenya's Rift Valley, with an eruptive history that began hundreds of thousands of years ago, forming the base of the Suguta Valley, a very arid portion of the Rift.

Mount Silali is a dormant volcano in the Gregory Rift Valley, near Kapedo, Kenya. Silali is south of the Suguta Valley, which reaches northward to Lake Turkana, and is about 70 kilometers (43 miles) north of Lake Baringo.

The Kapedo Tuffs, which border the sleeping giants, are ancient volcanic ash deposits erupted from Silali between 135,000-

123,000 years ago, exposed in places along the flanks of the volcano. Shallow stream deposits within the Kapedo Tuffs preserve Middle Stone Age (MSA) archaeological sites; the sparse density of which suggest ephemeral occupation of the area potentially linked to the limited availability of water.

### **Physical Features in the Arid and Semi-Arid Lands**

In addition to Mount Silali and the Suguta Valley, the arid and semi-arid regions of Kenya feature a diverse range of landforms shaped by the unique climatic conditions. These areas are characterized by low and erratic rainfall, leading to arid landscapes with sparse vegetation. Here are some prominent landforms found in

the Arid and Semi-Arid regions of Kenya:

#### **Lacustrine Basins**

Numerous shallow depressions and basins dot the landscape, forming temporary or seasonal lakes during the rainy season. Lake Turkana, to the north of Mount Silali, is an example of such a lacustrine basin.

#### **Bare Plateaus and Mesas**

Extensive plateaus and mesas with rocky outcrops are common in arid and semi-arid regions. These elevated flatlands may be covered with hardy vegetation adapted to the harsh conditions.

#### **Sand Dunes**

Arid areas often exhibit vast stretches of sand dunes, sculpted by wind action. These







*The lack of consistent vegetation cover and the sporadic nature of rainfall contribute to the development of various erosional landforms.*

dunes can be found in the Chalbi Desert and other sandy plains within the ARIS regions.

**Erosional Landforms**

The lack of consistent vegetation cover and the sporadic nature of rainfall contribute to the development of various erosional landforms. These include gullies, badlands, and dry riverbeds, where water occasionally flows during periods of rain.

**Volcanic Landforms**

Apart from Mount Silali, the region may host other volcanic landforms, such as cinder cones, lava plateaus, and volcanic craters. These features bear witness to the geological activity that has shaped the landscape over millennia.

**Escarpments and Rift Valleys**

The Gregory Rift Valley extends through the region, creating escarpments and steep slopes. The East African Rift System has played a crucial role in shaping the topography, with deep valleys and rifts cutting through the landscape.

**Tephras and Alluvial Fans**

Tephras, volcanic ash deposits similar to the Kapedo Tuffs, may be found in various areas, contributing to the unique soil composition. Alluvial fans, formed by the deposition of sediments carried by intermittent streams, are also common.

**Rock Outcrops**

Exposed rock formations,

ranging from weathered granite outcrops to rugged cliffs, characterize the ARIS regions. These rocky features influence local ecosystems and provide habitats for certain plant and animal species.

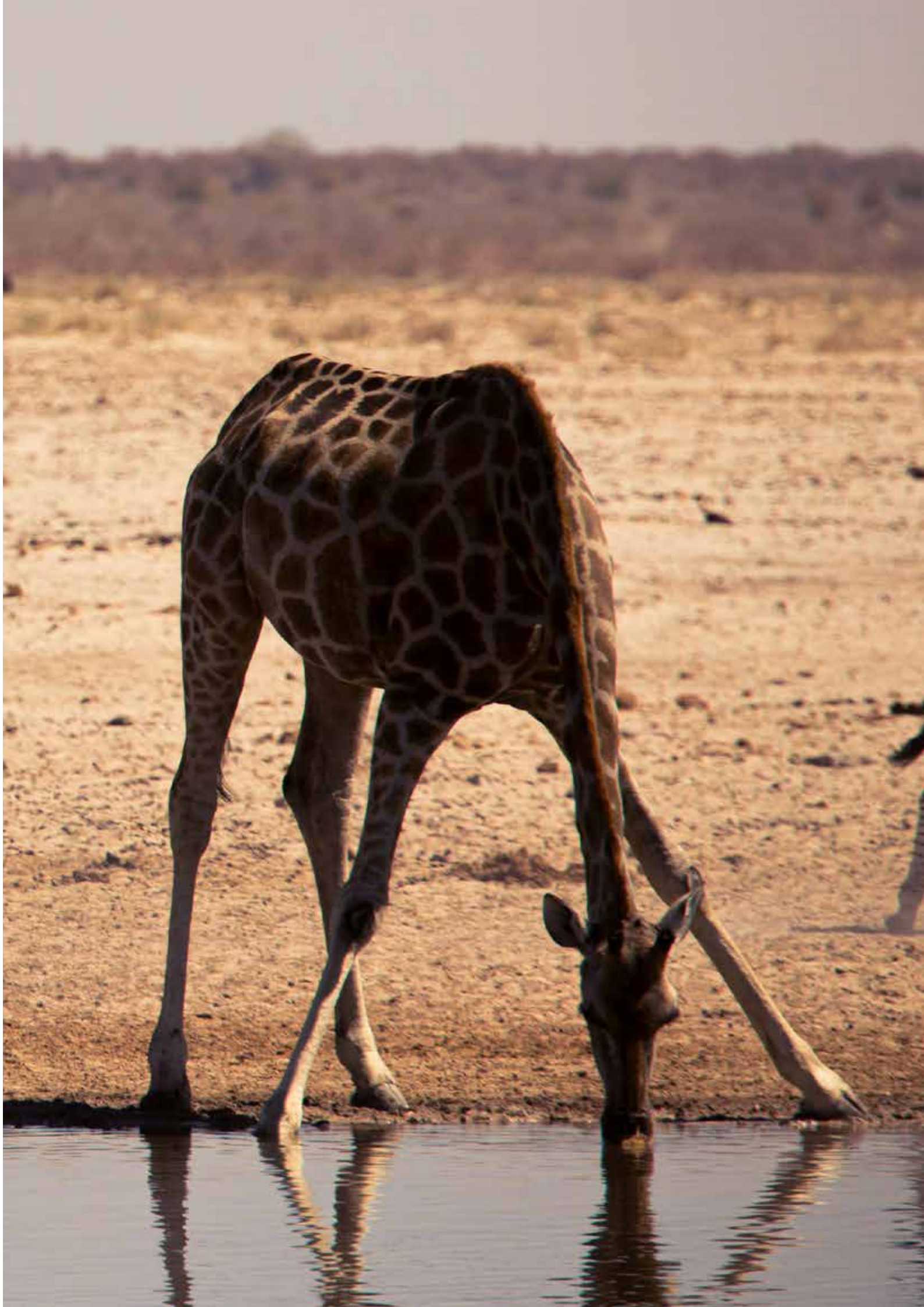
**Playas and Salt Pans**

Seasonal water bodies, such as playas and salt pans, form during the rainy season and dry up during prolonged periods of drought. These areas may contain saline soils and support unique flora and fauna adapted to such conditions.

**Sparse Vegetation and Acacia Woodlands**

The vegetation in arid and semi-arid zones is adapted to conserve water, featuring hardy plants like acacias and thorny shrubs. Acacia woodlands are common, providing essential resources for the local fauna. The diverse and dynamic landscape of Kenya's Arid and Semi-Arid regions reflects the intricate interplay of geological, climatic, and ecological processes over time.







# How Africa's Animals Initiate Self Protection in the Face of Danger

By Sharon Wawira

*In this issue, we venture into ways human beings can do to protect and care for animals through the integrating the interlink between animal welfare, environmental and sustainable development. The interlinks discourages the approach of working in silos, the need to lean on other facets to efficiently solve challenges we face as a human race today. However, we must acknowledge that animals do defend themselves and possess natural instinctive mechanisms to ward off danger and fight off prey to survive. We explore how Africa's captivating creatures defend themselves and examine an element under the microscope to look at the ways they adapt to the environment and protect themselves and their offsprings.*

## Pangolins

Pangolins, often dubbed nature's living fortress, stand as remarkable examples of evolutionary adaptation and survival. Encased in a suit of keratin scales, these elusive creatures have honed the art of defense to perfection, showcasing an array of sophisticated tactics that ensure their safety amidst the perils of the wild. One glance at a pangolin immediately reveals its prowess in self-defense. When threatened, pangolins effortlessly roll into a tight ball, transforming themselves into impenetrable spheres rendering themselves virtually impenetrable. Moreover, its scales aren't just tough; they're razor-sharp. Controlled by powerful musculature, anything caught between a pangolin's scales faces the risk of being effortlessly sliced to shreds.

© Dr Sanjay K Shukla / WWF-International



## African Crested Rat

In the intricate tapestry of the animal kingdom, the African crested rat, also known as the Maned Rat, stands out as a master of deception, employing ingenious strategies to outsmart predators and ensure its survival in the wild. When faced with danger, the crested rat adopts a remarkable tactic. By puffing up its body, it transforms into a dead ringer for the formidable, crested porcupine, a creature whose spiky exterior serves as a clear warning to potential threats. However, the crested rat's defense doesn't stop there. Unlike its spiky counterpart, this cunning rodent has a secret weapon hidden within its seemingly harmless fur. By rubbing its hairs in toxins obtained from the poison-arrow tree, the crested rat becomes an even more perilous adversary, capable of delivering a toxic blow to any predator foolish enough to attempt an attack.



© Sara Weinstein

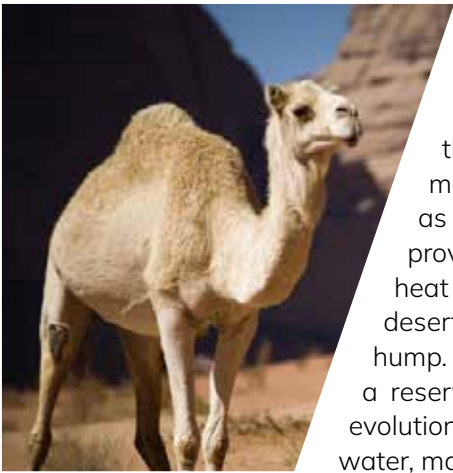
## Dorcas Gazelle

In the harsh expanse of the desert, the Dorcas Gazelle emerges as a testament to the extraordinary adaptations that enable life to thrive in the most challenging environments. One of the most remarkable adaptations of the Dorcas Gazelle lies in its unique method of water conservation. By extracting water before urination, these resilient animals ensure that their urine emerges as solid pellets of uric acid, minimizing water loss and maximizing hydration efficiency in the unforgiving desert environment.

© Ori Fragman-Sapir



## Camel



While it may seem that camels are inherently suited to the sands they traverse, their remarkable adaptations tell a different story. Equipped with long eyelashes and a third eyelid, camels boast sophisticated ocular defenses that shield their eyes from the abrasive grains of sand, allowing them to navigate the desert without impediment. Camels' fur is another marvel of adaptation, serving both as protection from the scorching sun and as a means of thermoregulation. Thick fur on sun-facing parts of their bodies provides shade and insulation, while thinner fur elsewhere facilitates efficient heat dissipation, allowing camels to stay cool even in the blistering heat of the desert. However, perhaps the most iconic adaptation of the camel is its signature hump. Contrary to popular belief, the hump is not a water storage unit but rather a reservoir of fat that camels can metabolize when resources are scarce. This evolutionary innovation enables camels to endure extended periods without food or water, making them well-suited to the challenges of desert life.

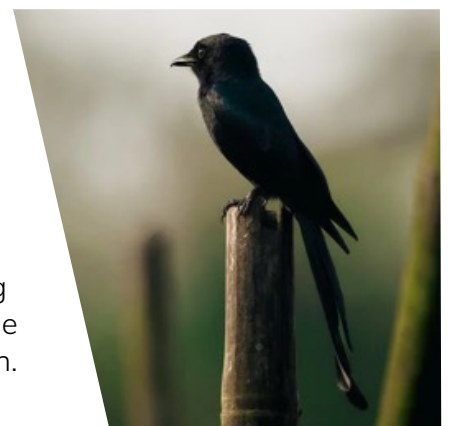


## Chameleon

Chameleons have a mesmerizing ability to change color at will, a skill enabled by specialized pigment cells distributed throughout their skin. With subtle shifts in pigment distribution, chameleons can effortlessly blend into their surroundings, disappearing from view to both predators and prey alike. The chameleon's body is adorned with intricate textures and patterns that mimic the bark of trees or the foliage of plants, further enhancing their ability to evade detection.

## African Fork-Tailed Drongo Bird

Drongos possess the remarkable ability to mimic the alarm calls of their target species, exploiting their innate instincts and eliciting a panicked response. They have been known to mimic meerkat warning calls when meerkats are eating their prey. The alarm causes the meerkats to flee, leaving their abandoned meal for the drongo to finish.







## Meerkats

In the harsh and unforgiving landscape of the desert, meerkats stand as resilient survivors, equipped with a myriad of adaptations that enable them to thrive amidst the dry and dusty terrain. Among their remarkable array of adaptations, one stands out for its ingenuity: the dark patches of fur surrounding their eyes. Serving as natural sunglasses, these dark patches help to reduce the sun's glare, allowing meerkats to navigate their sun-drenched surroundings with greater ease and clarity. In a habitat where exposure to the scorching sun is a constant challenge, this adaptation provides a crucial advantage, allowing meerkats to forage for food, evade predators, and engage in social behaviors without being hindered by the blinding brightness of their environment.

## Striped Polecat

Much like skunks, striped polecats possess the remarkable ability to spray large amounts of powerfully odorous secretions from their anal glands when threatened. This noxious spray serves as a formidable deterrent against predators and rivals, ensuring the striped polecat's safety in the wild. When faced with danger, the striped polecat unleashes its pungent arsenal with precision and accuracy, directing the foul-smelling spray towards its aggressor with remarkable aim. The overpowering odour of the secretion serves to repel predators and discourage further pursuit, allowing the striped polecat to make a swift escape.

© Anthony Bannister



## Ladybugs

Ladybugs are generally known as cute garden bugs who are both harmless to humans and beneficial to gardens. Sometimes people even see them as a sign of good luck. The classic red and black pattern adorning ladybugs' wings, however, is not merely a visual delight; it is also a powerful warning to would-be predators. This striking coloration is an example of aposematic coloring, a common signal in nature that alerts potential predators to the presence of toxicity. Just as frogs and other insects employ similar warning signs, ladybugs utilize their distinctive appearance to ward off threats. While ladybugs are harmless to humans, they possess a potent defense mechanism against certain predators: toxic alkaloids. These chemicals, present in the ladybug's blood, serve as a formidable deterrent to any creature foolish enough to attempt a meal. Brighter colors in a ladybug's back indicate higher levels of toxicity, providing a clear warning to potential predators.



## Butterfly Fish

The four-eyed butterfly fish is adorned with false eyes near its tail that closely resemble its actual eyes. This ingenious mimicry confuses predators, diverting their attention away from the vulnerable head region and allowing the fish to evade capture. Similarly, the threadfin butterfly fish employs strategic markings to evade detection. A dark spot on its fin near the rear mimics an eye, while a dark stripe running through its actual eye serves to camouflage it further. Angled stripes on its sides subtly guide a predator's eye towards its tail, minimizing the likelihood of an attack on vital body parts.



© Sergey Skleznev/Shutterstock.com





# Whistles of the Savannah

## Creative Writing: A Short Story

by Irene Nyathira

I see the sun breaking the horizon. Its daybreak. Tuesday. A lot is scattered on the vast compound occupied by six families, that of my father and those of his five brothers. My father is already up, very unlike him since he sleeps in until breakfast is served on normal days. Today is definitely not a normal day!

All the cattle pens on our compound are empty. Even the barely weaned calves are gone. As for the sheep, only a handful from the humongous flock remain, mainly the kids and some emaciated ones, the rejects. Fortunately, mama's donkeys are all untouched in the semi-permanent structure that also serves as the kitchen. Father is speaking to his brothers and my elder brothers and cousins. I am not allowed near the meeting, but I know what they are talking about. They must be processing the events of last night and also planning on restocking.

I heard the noise last night. My people call that noise the whistles of the savannah. Young men from the neighboring community paid our community the dreaded visit. They came

*You see, livestock is the sole prestige of every family among my people. The fuller the pens, the more the reverence and respect. Any man with huge herds has a place among the high and mighty.*

to get livestock for their empty pens since last season's drought hit them very hard. My brother said that none of their herds came out of the drought alive. So basically, they came to restock. The kind of restocking that has been done by our founding fathers since time immemorial.

The forceful and impermissible kind. The whistles of the savannah reminded me of everything father told us when we were all so young. The tales of the livestock raiders, so to some extent, I know where they were coming from.

You see, livestock is the sole prestige of every family among my people. The fuller the pens, the more the reverence and respect. Any man with huge herds has a place among the high and mighty. So about the tales of the livestock raiders, father said that when he was a boy, raiding was redistributive.

They used to carry out counterraiding with the neighbors and that contributed heavily to the diversification of their herds thus enhancing livelihoods. Also raiding was the ultimate means of acquisition of herds after a drought because droughts or not, every community must own herds, the means of acquisition notwithstanding! Raiding herds was part of culture. It pointed out the strongest community and that community got the chance to assert their dominance over the defeated community until the next raid. But then as it is with culture, it evolves and this one hasn't been left behind. The kind of raiding done these past decades is by all dimensions predatory.

From moving away from using simple spears, ordinary fist fights and a considerate and



*The whistles of the savannah might have left us broken and shaken but they shook the herds more. For us, we have each other and the handful remaining animals, but for the raided livestock, they are all alone, more like the “new kid on the block” thing.*

calculated livestock seizures to applying live ammunition, violence and seizure of all herds. Massacres have increased and all the communities among my people live in constant fear. Fear of the escalating intercommunity violence due to negative reciprocity and retaliation, after all, violence begets violence. I am certain that the agenda of the meeting the men are having on the compound is retaliation!

Apart from the whistles of the savannah and father's meeting I am worried about something else. The animals they took. I am really worried for them. They must be extremely stressed and tired from the very long trip they will have to endure to the other side. The weather is quite harsh too. It has been raining heavily these days, so most of the roads

and thickets and bushes they might have to cruise through are very wet. I cannot get the roaming leopards off my mind as well.

They will definitely prey on some of the animals. Then the cattle and sheep that make it safe and alive to the other side will have a lot of getting used to to do.

They will be mixed with the resident herds. Some might be fought to injury, or even death in the fight for dominance. I am worried about what they will eat. What if their new owner is not as particular about good husbandry as my father? What if they don't give them enough space to freely move around in their new home? What if the veterinary doctor cannot get to them as soon as he did when

they were here? I wish they were not taken away, that way I would be sure of their safety and welfare!

The whistles of the savannah might have left us broken and shaken but they shook the herds more. For us, we have each other and the handful remaining animals, but for the raided livestock, they are all alone, more like the “new kid on the block” thing. They might get bullied, they certainly will be. And they will be absolutely helpless.

I fully understand the ways of life of my people, but on the aspect of raiding, I totally disagree. I do not subscribe to the idea of treating animals as mere commodities or trophies. They have their rights too. They are entitled to proper husbandry, protection from harsh weather, timely and proper veterinary care, protection from predation among others, rights that cannot be mutually inclusive with raiding. I don't know what father and the other men decide, but I will be sure to tell them my thoughts on the whistles of the savannah!





# Local and International Animal Welfare News

*This section highlights articles that cover activities, programs and initiatives that take place across the world. The Animal Welfare Magazine brings to fore local, regional and global news pieces that demonstrate the status and progress of the field in different parts of the world.*

## LOCAL NEWS

### 21 Black Rhinos Start Journey to A New Home After Relocation

**A**fter an unsuccessful 2018 attempt to translocate black rhinos, Kenya has successfully relocated 21 mammals. The 18-day translocation was executed by highly trained capture and veterinary experts from the Kenya Wildlife Service (KWS) and its partners.

The animals' new home is an expansive 58,000-acre territory in Loisaba Conservancy in central Kenya with 25,000 acres dedicated exclusively to the conservation of this iconic species. The country witnessed the tragic poaching of its last rhinos half a century ago. Their return is welcomed by rangers. "It's been decades since rhinos roamed here. Almost 50 years ago, their numbers were severely impacted by poaching. Now, our focus is on rejuvenating this landscape and allowing rhinos to breed, aiming to restore their population to its former splendor," Daniel Ole Yankere said.

This is Kenya's most significant rhino relocation project to date, and involved the meticulous efforts of tracking, darting, and moving critically endangered rhinos to their new home. The chief executive of Loisaba Conservancy celebrated a milestone on Tuesday February 13. "From a low of 300 and something individuals, we have now hit a huge milestone at the beginning of this



*Photo Credit: Save the Rhino*

year of 1,004 eastern black rhinos in Kenya," Tom Silvester said.

After dark days in the 1980s, Kenya's black rhino population is now the third-largest globally, following South Africa and Namibia. The big challenge that has come from that is that we have run out of space in the established sanctuaries."

The achievement adds to the 17 sanctuaries across the country. As Kenya tries to re-establish its rhino population, moves like this will be required so that no one area becomes overpopulated. This research scientist explains. "Once you reach the maximum ecological carrying capacity the reproduction rate goes down, and therefore by removing some animals we expect that the rhino population in those areas will rise up. And then we reintroduce that founder population

of at least 20 animals into new areas and we expect the population growth to thrive before it reaches the ecological carrying capacity." The 21 black rhinos were caught last January and transferred from Nairobi National Park, Ol Pejeta, and Lewa conservancies. Kenya also plays a crucial role in saving the northern white rhino from extinction, hosting the last two females of the species globally.

Collaborating through the BioRescue project, a consortium of local and international experts, Kenya has developed 30 embryos awaiting implantation into southern white rhino surrogate females, contributing to global conservation endeavors.

*Source: Rédaction Africanews and AP, February 2024*

## Kenyan Efforts to Protect Pangolins from Extinction

*"We have been able to sacrifice one pangolin to understand how the scales lose their weight ...."*



Photo Credit: International Fund for Animal Welfare (IFAW)

**K**enyan scientists and conservationists are intensifying efforts to safeguard these elusive creatures from extinction. "We have been able to sacrifice one pangolin to understand how the scales lose their weight and so when at the airport you are found with a suitcase or a bag of pangolin scales we can be able to determine how many pangolins are in that bag or how many pangolins did you kill, remove the scales and is trying to sell or export. If you are found with the skin of a pangolin with scales, we are able to determine which species it is and we are moving forward to know from which population you must have taken this one," explains Benard Agwanda, a research scientist at the National Museums of Kenya.

Joshua Omele, a pangolin monitoring expert, laments the challenge of lost tracking tags: "We have lost so many tags since. That is one of the biggest challenges. One pangolin can go up to around one month with a single tag then it disappears and that is a great loss."

Beryl Makori, programs and habitat manager at The Pangolin Project, sheds light on the dangers pangolins face from electric fences erected by farmers: "So traditionally the Maasai community would traditionally own pieces of land but in recent time this area here was

demarcated and everyone was handed their title deed. What everyone did was put an electric fence around their piece of land. Pangolins do not know this, they come, they get electrocuted and the thing they can do and the only defence they have is to curl into a ball. They do that they get electrocuted continuously until they die."

Philemon Chebet, head warden at Kenya Wildlife Service Trans Mara Station, emphasizes community awareness as a crucial step in pangolin conservation: "We are focused on doing a lot of community awareness before we do law enforcement activities to reduce the threat to pangolins in this Nyakweri forest."

Pangolins, solitary and nocturnal creatures, face grave threats to their existence as human activities encroach upon their habitats and they fall victim to illegal trafficking. Their scales are highly sought after for use in traditional medicine, and their meat is considered a delicacy in certain regions.

Three of the pangolin species found in Kenya - the tree pangolin, the Temminck's pangolin, and the giant ground pangolin - are listed as Critically Endangered by the International Union for the Conservation of Nature (IUCN). Kenya, fearing a fate similar to the northern white rhino, with only two

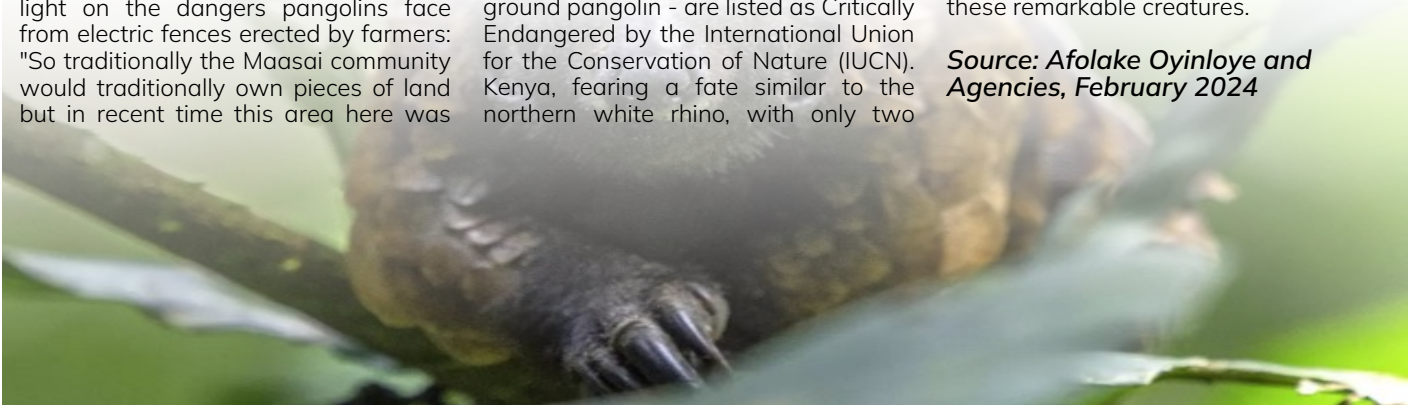
females remaining, is ramping up efforts to protect its pangolin populations.

In response to these challenges, conservationists are employing innovative methods such as tracking pangolins through their scales and collaborating with local communities to create safe habitats. The Pangolin Project, a non-governmental organization, is working with landowners in the Nyakweri Forest to mitigate conflicts between pangolins and farmers by modifying electric fences and introducing the Habitat Lease Program.

Despite the obstacles, the Nyakweri Forest Conservation Trust has been established to safeguard pangolin habitats, covering almost 2,020 hectares. Through these collective efforts, Kenya aims to strike a balance between human needs and pangolin conservation, ensuring these scaly mammals continue to roam the African wilderness.

As the world commemorates World Pangolin Day on February 17th, Kenya's dedication to pangolin protection serves as a beacon of hope for the future of these remarkable creatures.

**Source: Afolake Oyinloye and Agencies, February 2024**





## KWS Exhibits Wildlife Protection Digital Innovations



**K**enya Wildlife Service (KWS) showcased digital innovations to promote wildlife conservation and eradicate human-wildlife conflicts. The devised technological innovations are crucial in monitoring the movement of animals in the wild, and at the same time help to protect the endangered species from poaching. The innovative devices which include tagging and collaring, camera traps, Geographic Information Systems (GIS), and remote sensing have helped the government and conservationists to accurately monitor wildlife populations, their behaviors, and movement.

Kenya Wildlife Service (KWS) director in charge of Mt. Kenya region, Ellama Hapicha, speaking in Nanyuki, Laikipia County during the exhibition on wild animal protection innovations, said that the use of technology in wildlife monitoring had significantly reduced human-wildlife conflict, poaching of endangered species like Mountain Bongo and rhinos. "As KWS, we embrace the technology so that we can conserve wild animals by using camera traps, collaring and tagging to monitor animals that cause human-wildlife conflict," said Hapicha, adding that digital technology had enabled them to track and protect the endangered species.

The digital innovation resonates with this year's World Wildlife Day, 'Connecting People and Planet: Exploring Digital Innovation in Wildlife Conservation.' The Amboseli-Chyulu sub-landscape coordinator Dr. John Kioko revealed that the government was exploring an array of digital innovations that were geared towards wildlife conservation aimed at making it easy for wild animals' protection. "It's about digital innovations to conserve wildlife, sharing experiences on different technologies and ensuring they conform, make work easy for the rangers who are taking care of the wildlife," said Dr. Kioko.

Laikipia Community Association CEO Peter Matunge said that, despite the concerted effort by the conservators, they were still facing a myriad of challenges including climate change that had severely affected wildlife and called on for partnership from Kenyans in protecting the wildlife heritage for future generations. "Despite the benefits that we are getting from wildlife including contribution to the economy in the tourism sector, wildlife are still faced with a lot of challenges that we all need to partner and support the government on conservation," said Matunge.

On her part, Peregrine Fund Officer Faith Achieng decried that predatory birds were on the decline due to their prey poisoning by humans. The Peregrine Fund is an international organization keen on protecting endangered predatory bird species. She noted that secretary birds, bateleur eagle, and tawny eagle were critically endangered and hence called for their protection including not cutting down trees.

*Source: Kenya News, March 2024*

## World-Class Training to Enhance the Protection of Whales and Dolphins Along the Kenyan Coast



**K**enyan marine rangers, fishermen, and Beach Management Unit representatives underwent an intensive training workshop this week to help enhance the conservation and protection of marine mammals along Kenya's vast coastline. The International Fund for Animal Welfare (IFAW) partnered with Kenya Wildlife Service (KWS) and Kenya Marine Mammal Research and Conservation (KMMREC) to deliver a three-day training course centered around whale disentanglement and dolphin stranding response. Led by Brian Sharp – an International Whaling Commission (IWC) trainer, the training combined the IWC's globally accepted best practices from the Global Whale Response Network and IFAW's stranding response expertise.

Approximately 35 community members joined classroom activities, with 20 Kenyan rescuers participating in on-the-water whale disentanglement training and land-based dolphin stranding response. The training will help Kenyan rescuers better monitor the health of their coastline and assess the viability of rescuing stranded dolphins. "These trainings will increase the safety and outcomes of marine mammal rescues, for both animals and responders," said Brian Sharp, Director of Marine Mammal Rescue at IFAW. "Very importantly, they will raise awareness for the conservation of whales and dolphins along the Kenyan coastline. It's critical to protect the diverse ecosystem on Kenya's coastline while also protecting the livelihoods of the coastal community," said Michael Mwango'mbe from KMMREC. "We continue to learn more about the threats affecting Kenya's marine mammals and are grateful to learn from experts to best address the challenges we face."

In March 2023, IFAW partnered with KWS and the Wildlife Research Training Institute to conduct an aerial survey for marine megafauna species in Kenyan waters - the first in 30 years. The survey highlighted the diversity of marine species found along the whole coast of Kenya, including sea turtles, whales, dugongs, whale sharks and the critically endangered Indian Ocean humpback dolphin – all of which are vulnerable to entanglement in fishing gear and marine debris. Kenyan rescuers visited IFAW's marine mammal rescue program last year to learn from the organization's 25 years of experience, research, and innovation in marine mammal rescue. IFAW is a globally recognized leader in stranding response. Based on Cape Cod, in the USA, no location in the world sees more frequent mass strandings of dolphins.

IFAW's Academy of Rescue and Conservation (ARC) will continue to provide long-term support to ensure the Kenyan marine rescuers' skills remain up-to-date. This training took place thanks to the generous support of the Dutch Post Code Lottery.

*Source: Africa.com, March 2024*

## Ol Pejeta Re-opens Chimpanzee Sanctuary After 3-Year Hiatus

*Kenya's only Chimpanzee sanctuary is set to reopen after a three-year closure following the outbreak of the Covid-19 pandemic.*

The Sweetwaters Chimpanzee Sanctuary located at the world-famous Ol Pejeta Conservancy will open its doors to the public from March 1, 2024. The conservancy's CEO Justin Heath while announcing this, expressed his happiness saying visitors can now get an up-close encounter with one of nature's most fascinating creatures. "We are thrilled to announce the grand reopening of the Sweetwaters Chimpanzee Sanctuary which marks not just a return to normalcy, but also the unveiling of a new, immersive experience," Heath said.



*A chimpanzee with her baby at the Sweetwaters sanctuary at Ol Pejeta Conservancy on February 27, 2024.*

Nestled in the rolling plains of Laikipia County, the Ol Pejeta Conservancy has been a haven for Chimpanzees since 1993. The sanctuary is renowned for its commitment to offering refuge to chimpanzees rescued from the black market, war zones and captivity. "This reopening is a celebration of resilience, both of the chimpanzees and the dedicated team at Ol Pejeta Conservancy. Our guests will have the opportunity to witness firsthand the care, rehabilitation, and joy of the chimps," Justin added.

According to the head of tourism at Ol Pejeta, Enid Nkatha, each chimpanzee at the conservancy has a unique rescue story, from being victims of the illegal bush meat trade to suffering abuse at the hands of humans. "These stories of resilience and the enduring spirit of these animals serve as a potent reminder of the sanctity of life and the importance of conservation," Nkatha said.

Chimpanzees share 98.6 per cent of their DNA with humans and are believed to be the closest cousins to humans. Their intelligent and emotional beings display behaviors remarkably similar to humans, such as laughter, affection, and even bipedal walking. Conservationists say that the global Chimpanzee population in the



wild has been dwindling rapidly over the years as a result of human intervention with only 150,000-200,000 remaining, classifying them as endangered. "Following the re-opening of the Sanctuary, visitors can go a step further by participating in the adoption program. This initiative allows individuals to directly contribute to the care and well-being of these rescued chimpanzees. By adopting a chimp Max, a visitor can become a part of their story of recovery and a champion for wildlife conservation" added Heath.

Ol Pejeta is a leading wildlife conservancy in Kenya, renowned for its innovative approaches to conservation and animal welfare. It is home to the largest black rhino sanctuary in East Africa and hosts the two only remaining Northern White Rhinos in the World. Ol Pejeta is the only place in Kenya where you can see chimpanzees.

*Source: Felix Kipkemoi, The Star, February 2024*

## REGIONAL NEWS

### African Union Imposes Historic Ban on Cruel Donkey Skin Trade *Donkeys are critical to millions of people and are important for poverty eradication; Brazil to follow suit*

A historic ban on the trade in donkey skin has been agreed upon by the African heads of state. This agreement, announced on the concluding day of the African Union summit in Ethiopia, outlawed killing of donkeys in the African continent for their skin. This is a significant outcome following the Dar es Salaam declaration adopted at the first AU-IBAR Pan-African Donkey Conference in December 2022.

The statement acknowledged the socio-economic significance of donkeys in Africa. It had demanded for an African Union Commission (AUC) resolution to be passed in favor of a 15-year ban on the commercial killing of donkeys for their skin. Other demands included the creation of an Africa donkey strategy for donkey production and productivity, and the inclusion of donkeys in the global development agenda. In September 2020, the Pan-African Animal Conference, also, had urged African governments to take immediate action to protect donkeys, including the creation and successful application of laws and policies that will support them, and to outlaw the sale of donkeys and the trade in their skin, as these activities pose a major



*Equid ownership represents the only viable escape from extreme poverty. Photo: iStock*



socioeconomic threat to communities that depend on them. In June 2021, a ministerial meeting during the ECOWAS Regional Donkey Skin Trade Conference also raised concerns over the devastating impact of the donkey skin trade on donkey populations and the communities across Africa.

The landmark moratorium on skin trade in donkeys agreed upon at the AU summit has been welcomed by wildlife conservationists such as Marianne Steele, chief executive, The Donkey Sanctuary. "This agreement from leaders of the African Union strikes at the heart of the brutal skin trade. It's our hope that this decision will act as a catalyst for the rest of the world to act now, to not just save our donkey populations but to actively recognize their value and protect them properly," said Steele in her statement. Donkey skin is used to make the traditional Chinese medicine ejiao. It is in constant demand, fueling a global trade that is vicious, unsustainable and opportunistic. In five years between 2016 and 2021, ejiao production is estimated to have increased by 160 per cent, the Donkey Sanctuary estimated in a paper Donkeys in global trade released this year.

The ejiao industry now requires a minimum of 5.9 million donkey skin annually to keep up with the latest Chinese demand, the organisation noted. The demand for donkey skin reduced the donkey population in China from 11 million in 1992 to just under two million. Efforts to intensively farm donkeys locally failed to address this demand. So, the demand for ejiao, a gelatine manufactured by boiling donkey skin, is met primarily by imported skin sourced from South America and Africa. With increasing demand, at least 6.8 million donkeys are projected to be killed every year in 2027, the Donkey Sanctuary estimated.

Africa is particularly affected by this, as it is home to over two-thirds of the 53 million donkeys estimated to exist worldwide. Farmers who depend on donkeys for their livelihoods have seen theft and cruel treatment of animals as a result of the increased demand. The countries where donkeys are being traded illegally for their skin include Ghana, Nigeria, Botswana, Burkina Faso, Mali, Niger, Senegal, Uganda, Ethiopia, South Sudan, Tanzania, Kenya and Egypt. The number of donkeys in Africa has decreased dramatically over the past 10 years.

For example, in Kenya, the population of donkeys decreased by 800,000 in about seven years. In 2016, the country had 1.8 million donkeys, which reduced to around 1 million in 2023, according to a report by the Association of Donkey Owners of Kenya (ADOK). This translates to a decrease in the donkey's population by around 44 per cent in just seven years. "If the exploitation of donkeys were to continue at the rate we had been seeing, in another three to six years, donkeys could be joining rhino and elephants as an endangered species in Africa," stated Calvin Solomon Onyango, director of The Donkey Sanctuary in Kenya. The population of donkeys in Botswana declined from 493,000 in 2003 to 125,000 in 2021.

The historic pan-African agreement will protect 33 million donkeys that are on the continent from being stolen, trafficked and killed. This will also save tens of thousands of African communities who depend on donkeys for their well-being and means of subsistence. Donkeys are critical to millions of people and the global trade in donkey skin undermines efforts to achieve at least nine of the 17 United Nations-mandated sustainable development goals. These include the goal to end poverty (SDG1), since equid ownership represents the only viable escape from extreme poverty.

For example, two-thirds of donkey owners in Mali reported a monthly income of more than \$167, through the work of their donkeys, above the average per capita income. For rural households in Ethiopia, working equids contribute an average of 14 per cent of family income. This landmark decision needs to be implemented and enforced by every country that makes up the African Union, stated Otieno Mtula, regional campaigns and advocacy manager for The Donkey Sanctuary. Brazil is also likely to impose a ban on illegal donkey skin trade. This may disrupt the supply chain and the ejiao industry in China, experts predicted.

**Source: Kiran Pandey, Down to Earth, February 2024**

## Animal Welfare Group Call for End of Wildlife Farming, Urge Governments to Take Action



**W**orld Animal Protection (WAP) has launched the 'Wildlife Not Profit' campaign, advocating for an end to wildlife farming and urging governments to take immediate action. This is after a recent report exposed the widespread exploitation of wild animals, revealing how billions are bred and traded for various purposes such as pets, entertainment, food, fashion, and traditional medicine. The report highlighted a severe lack of transparency and monitoring within the global multi-billion-dollar wildlife exploitation industry. WAP noted that animals are treated as commodities rather than living beings, subjected to malnourishment, disease, stress, injuries, and even cannibalism, and the unhygienic conditions put their caretakers and the public at risk of zoonotic diseases potentially reaching pandemic proportions. The report highlighted cases like big cat farming in South Africa, bear farming in China, and elephant breeding in Thailand, where animals are subjected to cruelty for profit. The public has been encouraged to support the campaign by signing a pledge against wildlife exploitation. Edith Kabesiime, the Wildlife Campaign Manager, emphasized the cruelty and devastation inflicted upon animals by captive wildlife farming, as revealed in the report.

She called for an immediate end to this practice, whether it's for the pet industry, trophy hunting, entertainment, traditional medicine, decoration, or fashion. She stressed that wild animals deserve to live freely in their natural habitats. "Governments, the private sector, and consumers must prioritise efforts to ensure that wildlife is protected in their natural habitats. The public must also be guarded against the very real threat of zoonotic diseases from wildlife farms," she elaborated. Kabesiime insisted that the animals trapped in captive farming should be the last generation exploited for profit, emphasizing that wildlife is not ours to exploit. "Wildlife is not ours to exploit, and we can all play a part in protecting animals from cruel commercial exploitation. Join us in saying no to the cruel farming of wild animals," she said.

WAP urges governments worldwide to implement a comprehensive and timely phase-out of commercial wildlife farms and associated trade. Additionally, they advocate for increased support for alternative livelihoods for communities involved in wildlife farming to ensure a just transition away from these harmful practices. Records reveal that a minimum of 900 million wild animals have been bred and subjected to a life of captivity, ultimately meeting their demise to meet the demands of commercial industries. However, this figure likely represents only a fraction of the true scale of the exploitative industry, which could involve as many as 5.5 billion wild animals globally, based on the best estimate derived from available data.

**Source: Amukohe Yvonne, Capital Business, March 2024**

# Cape Town Cattle Highlight Awful Conditions on Livestock Ships

*"There is a traditional belief in many countries... that fresh meat is in some way tastier, healthier than boxed, chilled or frozen meat,"*



Millions of farm animals endure long ocean voyages every year. Photo by Getty Images.

Residents of Cape Town woke up to a pungent, sewage-like smell engulfing their neighbourhoods on Monday morning. The source? A ship from Brazil carrying 19,000 cattle had anchored in the South African port city the night before, in order to reload on animal feed. After performing an assessment on board the *Al Kuwait*, staff from a leading animal welfare organisation, the National Council of SPCAs (NSPCA), said the cattle had been on board for two-and-a-half weeks and were living in a "build-up of faeces and ammonia [a gas released from urine]". Conditions were "awful" and the stench was "unimaginable", the NSPCA said in its statement.

The ship has now left for Iraq but there will still be a funk in the air, campaign groups say. The cattle are just a fraction of the millions of farm animals that endure lengthy journeys in order to be slaughtered and eaten in another country. Animal rights organisations have long complained that conditions on board these ships can be hazardous. They say that, in some cases, creatures have been trampled to death because of overcrowding, while dehydration, disease and hunger are also risks. Defenders of exporting livestock argue that the practice brings food security to importing nations and also financially benefits farming communities in countries that export.

A handful of casualties have made headlines in recent years, like when more than 40 crew members and almost 6,000 cattle died after a ship sank off the Japanese coast, or when earlier this month a vessel carrying 16,000 sheep and cattle became stranded off the coast of Australia in extreme

heat. Although disasters like these are horrific, "the really bad thing is just the day-to-day suffering" of exported livestock, Peter Stevenson from global animal welfare group Compassion in World Farming (CIWF) told the BBC.

The 19,000 cattle that docked in South Africa are part of a much larger herd of Brazilian exports - in 2022 the South American country sent 150,000 live cattle abroad, CIWF estimates. Last year, a Brazilian judge outlawed live cattle exports from the country, citing poor welfare practices, but the ban is yet to be imposed.

Australia and the European Union (EU) are also major exporters of livestock, with the latter selling around 4.5 million live farm animals to foreign countries, according to the South African chapter of animal welfare charity Four Paws. In Africa, Somalia and Sudan export the most. Sudan's authorities said the country exported more than 2.7 million cattle in 2023, despite a raging civil war, according to local media.

But why do countries want to import live animals, rather than chilled or frozen meat?

"There is a traditional belief in many countries... that fresh meat is in some way tastier, healthier than boxed, chilled or frozen meat," Mr Stevenson said. Some of these nations would struggle to rear animals from birth as they experience arid conditions that have only worsened with global warming. Australia's LiveCorp, an organisation serving Australia's livestock exporters, and AgForce, which represents Queensland's rural producers, argue that shipping animals contributes to

food security in water-stressed regions such as the Middle East. They also say the export of livestock benefits the Australian economy and farming communities, which can sell their animals for a higher price abroad than they can domestically.

Nonetheless, Australia committed to "phasing out" live sheep exports in 2023. It has not set a deadline, however. Its neighbour New Zealand enforced a ban the same year. In Europe, Luxembourg has outlawed the trade and the UK is on its way to doing the same - a bill passed through its lower chamber of parliament, the House of Commons, last month. On Wednesday it will be considered by the upper chamber, the House of Lords. Four Paws notes that as well as hosting a ship full of livestock in its Cape Town port, South Africa exports farm animals itself.

"There is insufficient regulation in place and raising animals in the country simply to be transported to be killed in another means that South Africa bears the harmful impacts associated with animal agriculture while the importing country does not," Fiona Miles, the charity's South Africa director, said.

Not only did the cattle docked in Cape Town cause a nasty stink, they also reminded the world of the risks animals face on the long journeys to our plates. "Animals are sentient beings and feel pain and stress just like we do," Ms Miles said.

**Source: Wedaeli Chibelushi, BBC, February 2024**



## Train Driver Honored in Cape Town for Stopping to Help Lost Dog

*Riyaad Sampson, a Capetonian train driver, has been honoured for his efforts in saving a dog that was lost on his line, by stopping the train in its tracks.*

**T**rain driver Riyaad Sampson has been honoured by animal welfare organisations and Alderman JP Smith after he stopped his train to save a dog from the tracks. The train was completely full and the heroic moment took place on the Southern Line track, between Steenberg and Lakeside in February. Once he had spotted the dog, he also sent out an alert to all the other train drivers on duty, informing them to be aware of other potential animals on the tracks. He touched so many hearts thanks to his efforts and has likely saved many more animals lost on the train tracks of Cape Town.

His efforts have been seen by Paws-a-While and the Cape of Good Hope SPCA. Cape of Good Hope SPCA expressed their thanks with a heartfelt poem – “It’s not just a dog”, by Richard Biby, which was said to sum up all the feelings towards Mr Sampson’s act. “It’s not ‘just a dog’ but an embodiment of all the hopes and dreams of the future, the fond memories of the past, and the pure joy of the moment.”



*Photo Credit: Belle Lumiere Foto*

Jamie Pieterse, part of the local neighbourhood watch, searched for the dog and later educated the dog’s owner on how to keep the dog safely on their property. He, too, was honoured for his efforts in this rescue. Paws-a-While patron, Alderman JP Smith, handed over a certificate of kindness and compassion to Mr Sampson, co-signed by Cape Animal Welfare Forum chair Tony Gerrans, with Mr Sampson’s wife, mother-in-law and furchild, Layla, in attendance.

*Source: Tyler Leigh Vivier, Good Things Guy, March 2024*

## In Namibia’s Kunene Region, Government Initiative Helps Livestock Farmers Cope with Recurring Droughts

*In the face of recurring droughts, Namibia’s government intervenes to assist livestock farmers in the northwestern Kunene region.*

**I**t has been a decade since substantial rains fell in the Kunene region in northwestern Namibia, where droughts are recurring. The arid to semi-arid region is delineated by the Kunene River and Epupa Falls to the north and the Skeleton Coast to the west. Here, the Ovaherero, like Mombura’s lineage, and Ovahimba tribes, who are traditionally pastoralists or subsistence livestock farmers, have been practicing animal husbandry since before the 16th century, as per the earliest records kept by Portuguese mariners.



*Image by Mandile Mpofu. Namibia, 2023.*



Image by Mandile Mpofu. Namibia, 2023

In the past, these tribes were wealthy cattle herders, with some families owning upwards of 500-animal herds, but that changed in the 20th century when farmers experienced dramatic livestock losses due to drought. No rain meant no grass, and no grass meant nowhere for cows to graze. While the farmers recovered, continued land degradation and frequent droughts have made cattle farming difficult. Seven years ago in 2016, the Ministry of Agriculture, Water, and Land Reform stepped in to assist farmers, proposing a project titled Improving Rangeland and Ecosystem Management (IREMA) to the Environmental Investment Fund of Namibia and the Green Climate Fund, a United Nations-operated fund that partners with developing countries on climate-related projects.

IREMA would award 21 goats—one bull and 20 does—to a select group of farmers in parts of Kunene, namely Sesfontein, Fransfontein, and Warmquelle. Once given the livestock, the farmers would not be allowed to sell the goats. Instead, they would have to rear the goats, using them only for their milk. Once their goats had reproduced, the farmers would also be encouraged to return between 5-20 goats to the government to be given to another farmer. This is called a “revolving scheme.” When IREMA began in 2019, its goal was to

“address the vulnerabilities of small-scale farmers” in response to the devastating livestock losses of 2016 that prompted the government to declare a state of emergency. According to Daniel Hakweenda, the senior agricultural scientific officer for the Ministry of Agriculture, Water, and Land Reform, over 50 farmers in Kunene have benefited from IREMA’s goat distribution program so far. But the ever-frequent droughts and the government’s limited resources have proven to be obstacles in the project’s implementation.

The word for drought in Otjiherero is ourumbu, signifying “a world that becomes dry and colorless, shorn of green, and devoid of life,” writes Michael Bollig, an anthropologist and professor at the University of Cologne in Germany. The drought of 1980 was dubbed *otjita*, or “The Great Dying,” called so because of the extent to which it decimated the region’s herds, killing 90% of all livestock. The 56 farmers IREMA has assisted in Kunene in its four years of operation represent a sand-grain-sized portion of the population that depends on farming. Amon Kapi, the chairperson of Ngatuwane Farmers Union says IREMA has been very effective but that it needs to expand to other parts of the region. The union is a nonprofit organization that represents and advocates for the needs of communal farmers on a grassroots level.

Kapi says the grass that grows after the rains fall can last for even a year, but where there may be grass, people still experience water scarcity. This is what Kapi identifies as one of two droughts. The second drought is limited market access, another challenge livestock farmers face. People are struggling and the government has a social responsibility, he says, which is why he’d like to see IREMA do more. He says the program is “motivating some people just to become self-sustainable,” even encouraging some to start backyard gardens.

Source: Mandile Mpofu, Pulitzer Center, November 2023

## INTERNATIONAL NEWS

### EasyJet Holidays Bans Zoos and Marine Parks in New Animal Welfare Policy

**E**asyJet Holidays will no longer offer zoos and marine parks under a wide-ranging new animal welfare policy, in which it commits not to offer harmful animal-based attractions within its tours and activities programme.



easyJet holidays will no longer sell tickets to zoos and marine amusement parks (Credit: federicoghedini / pixabay)

Created in consultation with animal rights groups such World Animal Protection, the new policy not only rules out zoos and marine parks, but also attractions featuring animal performances and animal rides, as well as sporting events featuring animals. The operator said it would also work closely with hotelier partners to educate and inform them on the importance of animal welfare. EasyJet holidays said its new policy incorporated Abta’s animal welfare guidelines, setting out “basic welfare requirements” and “unacceptable practices”. “We’re

passionate about the protection and respect of all forms of nature in the destinations we offer holidays to, which is why we’ve made the decision to not offer or promote attractions that exploit animals within our tours and activities programme,” said chief operating officer Matt Callaghan.

The policy sets easyJet holidays apart from two of its biggest rivals, Tui and Jet2holidays, which continue to sell tickets for marine amusement parks and have been the subject of protests and pickets by animal rights groups.

Katheryn Wise, World Animal Protection’s UK wildlife campaigns manager, said: “From the outset easyJet holidays have been clear that they are committed to offering their customers responsible, wildlife friendly travel options. “It has been a pleasure to work with a company focused on listening to their customers and choosing not to profit from captive wildlife entertainment. It is through working together and commitment like this that we can truly expect to see lasting change for wild animals across the world.”

The policy forms part of easyJet and easyJet holidays’ wider ESG commitments, which include tackling food waste with its hotel partners and making airport transfers electric. It has also partnered with UN agency UN Tourism to help develop the first ESG framework for tourism businesses, which feature a tool allowing firms to better measure, monitor and manage the impact of tourism on the environment and people.

Source: Ilaria Grasso Macola, Fairer Travel, March 2024



## Scientists Discover 100 New Marine Species in New Zealand

The findings, from the largely uncharted waters of Bounty Trough, show that “we’ve got a long way to go in terms of understanding where life is found in the ocean,” a researcher said.

A potentially new species of elusive deep-sea squid found by scientists who were working to identify new marine life as part of the Ocean Census project. Credit...Ocean Census/NIWA

A team of 21 scientists set off on an expedition in the largely uncharted waters of Bounty Trough off the coast of the South Island of New Zealand in February hoping to find a trove of new species. The expedition paid off, they said on Sunday, with the discovery of 100 new species, a number that was likely to grow, said Alex Rogers, a marine biologist who was a leader of the expedition. “I expect that number to increase as we work through more and more of the samples,” Dr. Rogers said. “I think that number is going to be in the hundreds instead of just 100.”

Dozens of mollusks, three fish, a shrimp and a cephalopod that is a type of predatory mollusk were among the new species found in the expedition, which was led by Ocean Census, a nonprofit dedicated to the global discovery of ocean life, the National Institute of Water and Atmospheric Research in New Zealand, and the Museum of New Zealand Te Papa Tongarewa. One creature that caused a “lot of head-scratching” is a star-shaped animal, about a centimeter across, but researchers have not managed to identify it, Dr. Rogers said. They believe it may possibly be a coral.

Two million-plus species are estimated to live in the oceans, but only 10 percent of ocean life is known. It is vital to learn more about the aquatic life because marine ecosystems carry out functions that support life on Earth, such as creating food for billions, storing carbon and regulating climate, Dr. Rogers said. “We’re dealing with a situation where we know marine life



*“I expect that number to increase as we work through more and more of the samples,” Dr. Rogers said. “I think that number is going to be in the hundreds instead of just 100.”*

is in decline,” he said. “In order to try to manage human activities to prevent this continuing decline, we need to understand the distribution of marine life better than we currently do.”

Ocean Census was founded last year by the Nippon Foundation, a Japanese philanthropic organization, and the U.K.-based ocean exploration foundation Nekton. When it began its work, Ocean Census set a goal of finding at least 100,000 new marine species in a decade. The group is focused on exploring some of the most under-sampled bodies of water.

In the February expedition, researchers first mapped the area with an imaging system and video cameras to check that it would be safe for their equipment and to ensure that there were no vulnerable animal communities that potentially could be harmed.

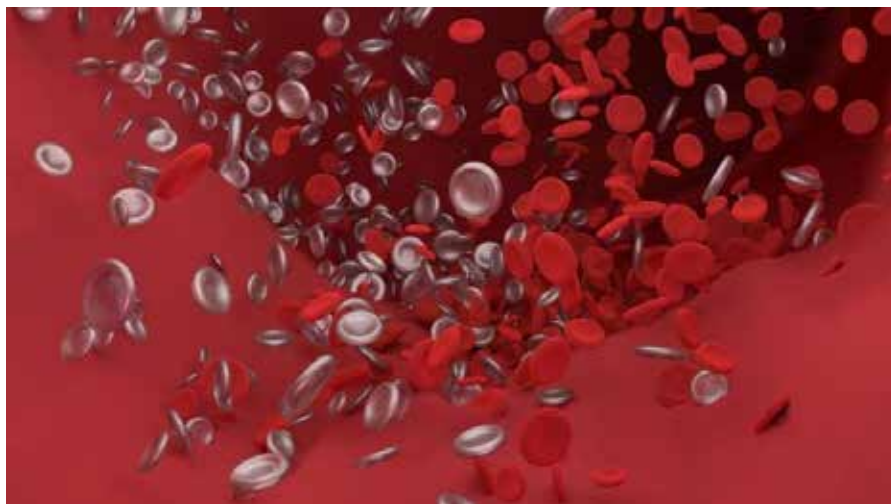
Then, they deployed what is known as the Brenke sled, a sampling device that has two nets, one close to the seabed, and the other a meter above it. As it drags along the floor, it churns up animals living close to the sea floor. To find larger animals, the researchers used other methods, such as baited nets.

Trawling the depths at 4,800 meters — or roughly the equivalent to Mont Blanc, the highest peak in the Alps — researchers collected 1,791 samples. Given its depth, Bounty Trough is not of great interest to fisheries and therefore is poorly sampled, Dr. Rogers said. Geologists have surveyed this area but biologists have not. Worldwide, about 240,000 marine species have been discovered and named to date but only 2,200 species are discovered each year on average, according to Ocean Census.

In many bodies of water there is still a lot that scientists have to learn, Dr. Rogers said. “It’s probably the equivalent of a space mission,” he said. “We’re still in early days, but the number of species that we found in the Bounty Trough really indicates to us that we’ve got a long way to go in terms of understanding where life is found in the ocean.”

**Source: Rebecca Carballo, *The New York Times*, March 2024**

## Scientists' Discovery Could Reduce Dependence on Animals for Vital Anticoagulant Drug



Credit: Pixabay/CC0 Public Domain

**H**eparin, the world's most widely used blood thinner, is used during procedures ranging from kidney dialysis to open heart surgery. Currently, heparin is derived from pig intestines, but scientists at Rensselaer Polytechnic Institute (RPI) have discovered how to make it in the lab. They have also developed a path to a biomanufacturing process that could potentially revolutionize how the world gets its supply of this crucial medicine.

"In recent years, with disease and contamination issues disrupting the global supply chain of pig heparin and potentially putting millions of patients at risk, it's clear we need to diversify the way we make this drug," said Jonathan Dordick, Ph.D., Institute Professor of Chemical and Biological Engineering, and vice president of Strategic Alliances and Translation at RPI. "Our work will make it possible to manufacture heparin that is both consistently available and safe."

With their patented process, detailed in a study published in the journal PNAS, the researchers are already working with FDA and have initiated scale-up leading to commercial production. "While the current study describes the laboratory-scale production of heparin, we are also moving toward a commercial-scale process, affording the same high quality heparin, to generate the drug for clinical studies," said Robert Linhardt, Ph.D., Ann and John H. Broadbent Jr. Senior Constellation Professor Emeritus of Biocatalysis and Metabolic Engineering at RPI and a co-author of the study. Both Dordick and Linhardt are members of RPI's Shirley Ann Jackson Center for Biotechnology and Interdisciplinary Studies.

"This multidisciplinary research is a prime example of how discoveries made in the lab can successfully translate into new tools to

*"Synthesizing those enzymes in such large scale was uncharted territory for us in an academic lab," said Marc Douaisi, Ph.D., first author of the study and senior research scientist RPI.*

advance global health," said Shekhar Garde, Ph.D., dean of the RPI School of Engineering.

Recognized by the World Health Organization as an essential medicine, heparin is always in high demand. To meet the need, the intestines of billions of pigs are processed annually, producing about 100 tons of purified heparin. More than 70% of the supply comes from China.

Animal-based products are susceptible to shortages, and heparin is no exception. The 2008 heparin contamination crisis, recurring swine diseases outbreaks, and the supply chain issues of the COVID-19 pandemic have all disrupted heparin availability, prompting researchers to investigate how to make heparin without animals.

At RPI, the quest for non-animal heparin led to the creation of the Heparin Applied Research Center in 2015. Over the next several years, the team of scientists developed a novel method of synthesizing heparin that would not only be virtually indistinguishable from animal-derived heparin but could also be

made at scale.

"Heparin was discovered more than 100 years ago, but only recently have we had the techniques to start trying to make it in the lab," said Dordick, senior author of the study. "Unlike insulin—another very important medicine that used to come from pigs and is now man-made—heparin isn't just a single protein or molecule, but a complex chain of various carbohydrates. That makes it very hard to synthesize in a way that translates into a more traditional large manufacturing setting."

Dordick likens synthesizing heparin in the lab to decorating a Christmas tree.

"We start with the core of the heparin structure, which is like the bare tree. Then, using various enzymes, we add molecules—the ornaments, the tinsel, the lights. As you can imagine, there are many ways to decorate a tree, so getting the decoration just right to make heparin is the challenge," he said.

In recent decades, scientific teams around the world have been attempting to do just that, but without success. "Past research used native enzymes to replicate what happens in pig intestines to make heparin. However, this produces a tiny amount of heparin and can't be done at scale. Our biggest achievement was the insight to optimize the enzymes for higher yield and stability," said Elena Paskaleva, Ph.D., senior research scientist at RPI and one of the study's co-authors.

"Synthesizing those enzymes in such large scale was uncharted territory for us in an academic lab," said Marc Douaisi, Ph.D., first author of the study and senior research scientist RPI.

"It took a large, coordinated effort across the whole center to synthesize the volume needed to synthesize a product with a structure and biological activity equivalent to the pig-derived drug. At the end of the day, it was exhilarating to know that what we ultimately made matched all the criteria of heparin." The discovery is an example of how universities can drive research and development of new life-saving drugs and technologies, Dordick said.

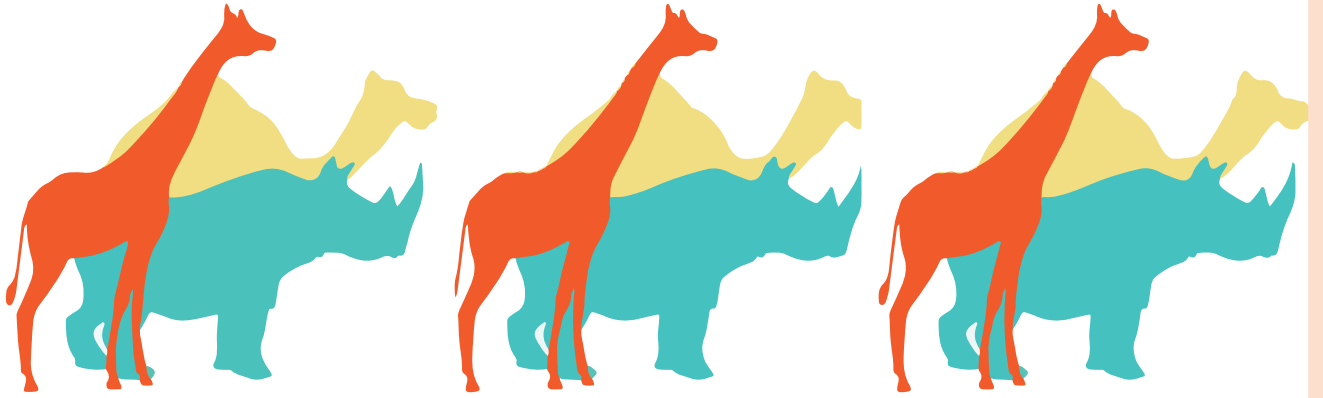
"Our goal was to find an alternative to a drug that's been on the market since 1935. For a private company, that kind of project would bring too much risk. But a university, especially one like RPI, is the perfect place to pursue this kind of project," Dordick said.

Source: Rensselaer Polytechnic Institute, March 2024

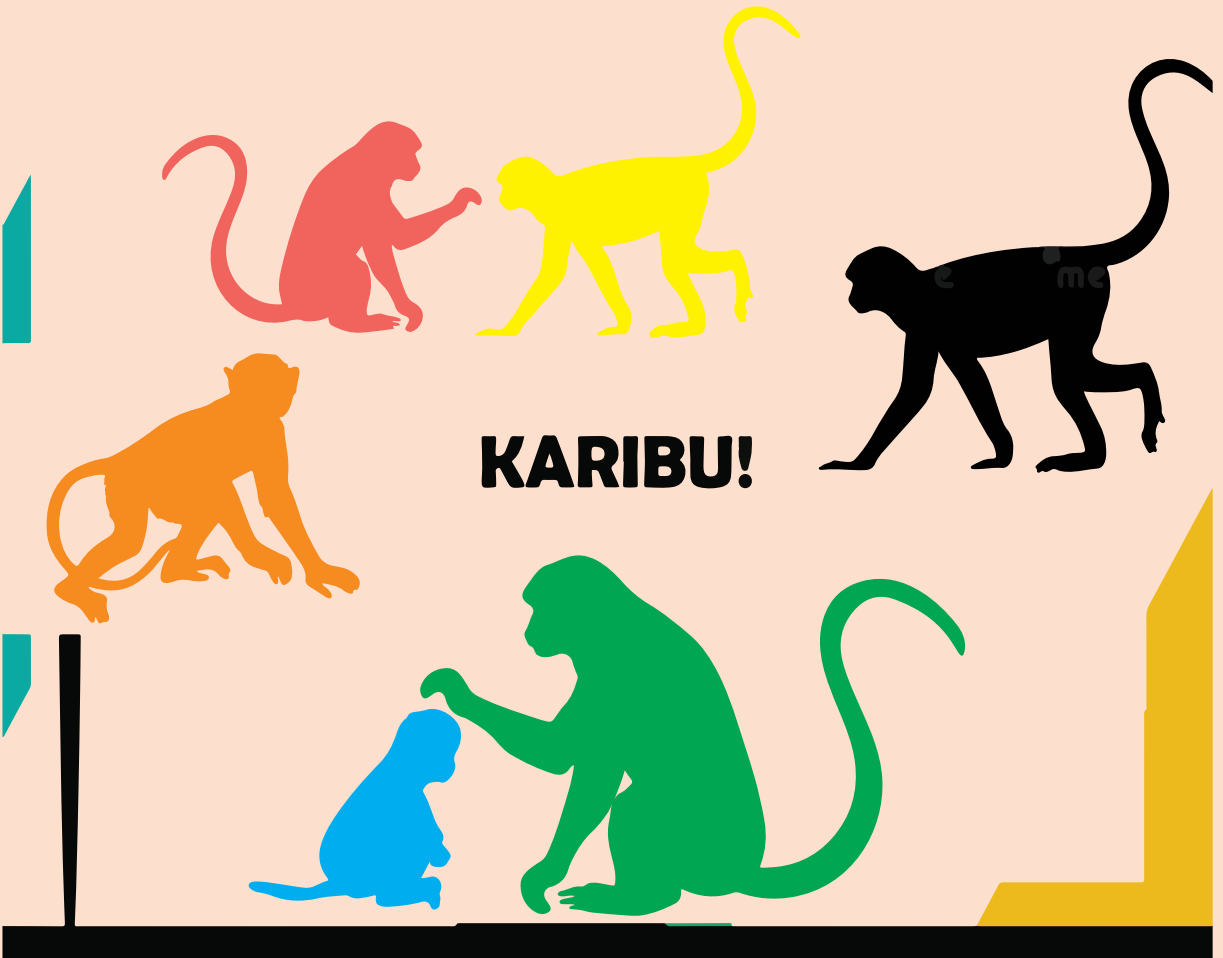




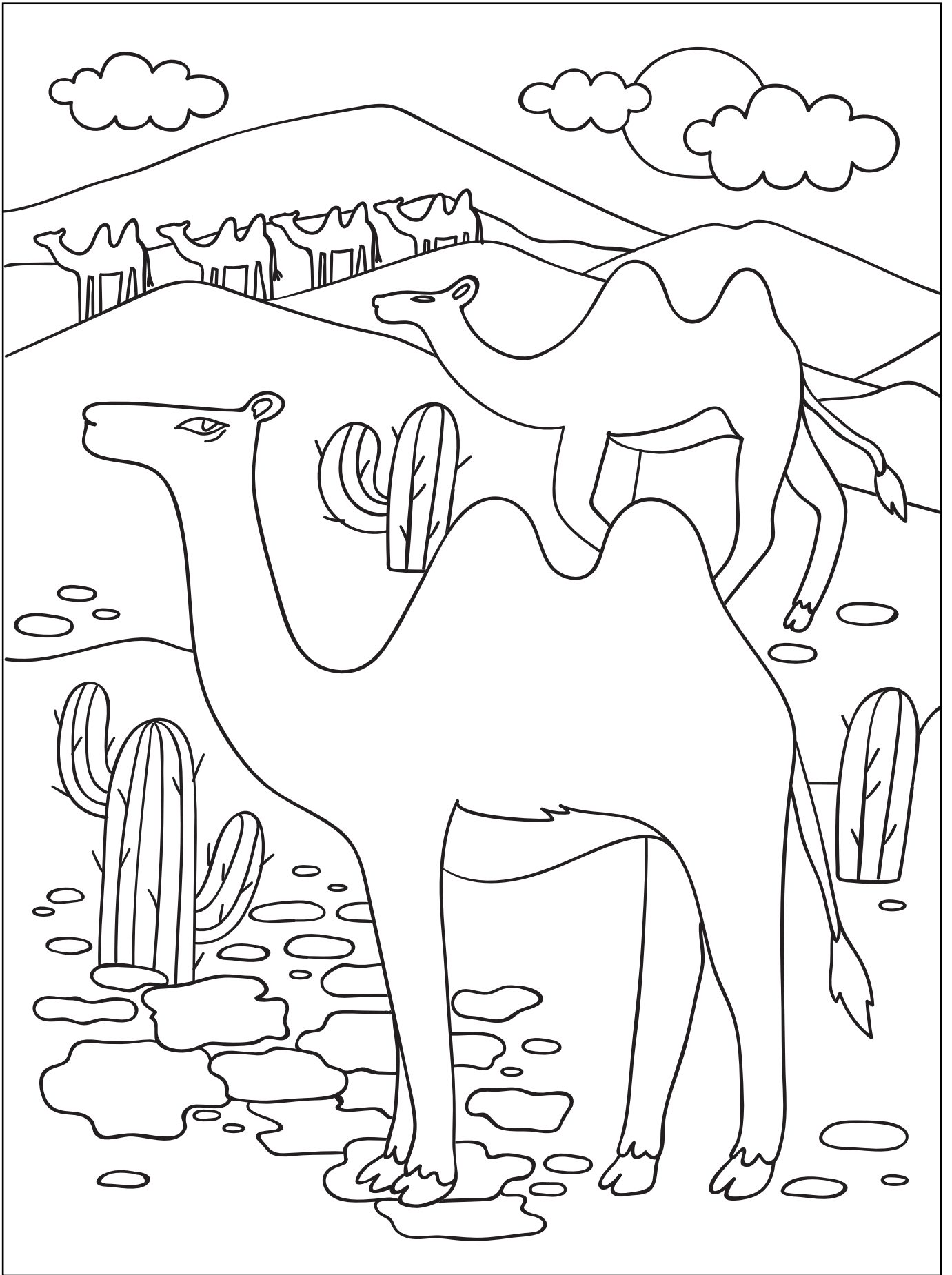
# THE ANIMAL WELFARE MAGAZINE



# CHILDREN'S SECTION

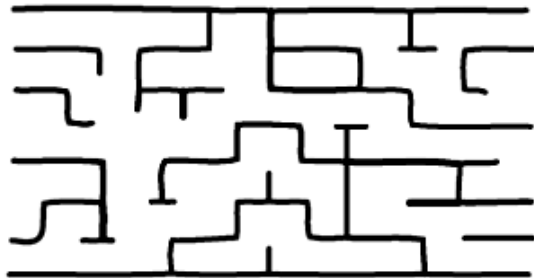
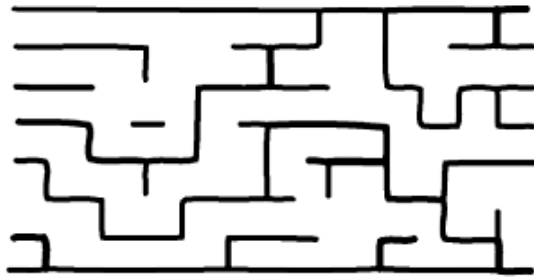
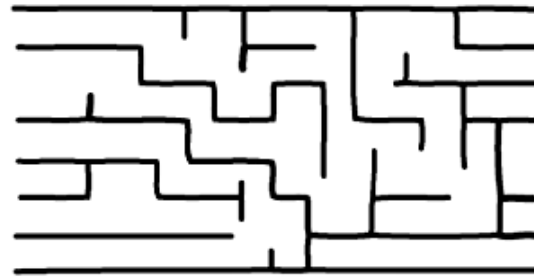






Source: [www.crayola.be](http://www.crayola.be)

### Hungry Animals



Help the animals find their food!

Source: Freepik.com

# the FIVE FREEDOMS

1. Freedom from hunger and thirst



2. Freedom from pain, injury and disease



3. Freedom from distress



4. Freedom from discomfort



5. Freedom to express behaviors that promote well-being



Source: <https://goodcssm.live>





Farm Animal Word Search Puzzle!



D	X	O	D	N	V	M	X	C	E	P	W	V	E	R
S	B	P	B	E	O	Q	Z	Q	S	E	E	Y	E	S
P	N	E	K	C	I	H	C	T	I	A	J	T	H	S
F	I	V	A	S	I	X	D	M	A	C	S	C	D	U
O	S	G	M	A	H	K	T	J	C	O	W	A	C	J
Q	T	H	L	A	A	O	E	H	O	O	G	T	D	N
B	I	H	L	E	M	C	E	R	W	K	I	O	U	P
O	H	I	L	M	I	D	C	P	T	P	N	P	T	P
P	J	D	S	R	A	B	B	I	T	K	S	N	M	M
M	S	J	T	T	X	X	E	E	X	Z	K	A	V	
W	H	S	D	L	F	N	J	Y	X	O	M	L	D	T
W	O	Y	B	O	I	G	E	N	N	O	X	C	P	I
S	Q	J	S	H	K	M	E	O	G	B	V	C	B	H
E	J	J	W	J	H	O	R	S	E	V	G	R	G	V
Q	Y	S	Y	K	X	W	N	E	O	F	A	W	I	C

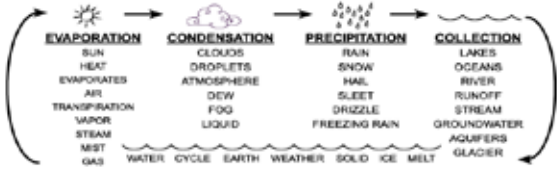


- COW
- DONKEY
- GOAT
- HORSE
- LLAMA
- PIG
- RABBIT
- SHEEP
- CHICKEN
- ROOSTER
- PEACOCK
- OSTRICH

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THE WATER CYCLE

R	I	A	M	T	H	C	N	L	I	A	H	T	N	N	I	A	R
E	W	I	S	A	G	L	A	O	T	D	R	O	P	L	E	T	S
E	S	E	R	C	Y	O	C	L	I	A	I	N	U	S	F	L	C
T	E	R	L	I	Q	U	I	D	N	T	I	E	S	R	E	A	O
S	L	E	R	Z	S	D	O	S	A	C	C	R	E	E	T	R	N
R	N	I	E	A	Z	S	P	T	W	E	D	E	T	L	A	O	D
E	O	C	V	L	E	I	I	F	O	G	Z	H	L	D	E	P	E
F	I	A	I	T	R	P	R	H	E	I	F	F	S	L	H	A	N
I	T	L	R	A	I	R	H	D	N	F	H	S	N	Y	O	V	S
U	A	G	T	C	E	C	M	G	O	S	T	O	A	T	D	C	A
Q	R	I	E	T	Y	A	R	N	R	N	R	M	E	L	S	M	T
A	O	R	A	C	E	A	U	O	L	O	A	T	C	E	O	A	I
N	P	W	L	T	I	R	E	C	I	W	E	A	O	M	L	E	O
O	A	E	S	N	S	E	T	A	R	O	P	A	V	E	I	R	N
G	V	R	E	T	A	W	D	N	U	O	R	G	I	C	D	T	C
Y	E	S	E	K	A	L	C	R	E	H	T	A	E	W	L	S	E



Tree Valley Academy

WORD SEARCH PUZZLE

ANIMALS

z	e	u	f	f	z	e	b	r	a	e	t	j	c	q	s	h	e	c	t
a	l	i	g	a	t	o	r	q	l	d	v	m	l	o	p	k	k	p	
n	g	q	g	b	e	a	r	w	k	e	q	g	b	w	o	n	b	r	u
z	d	l	e	o	p	a	r	d	a	p	x	t	r	q	p	p	e	h	m
c	h	p	m	e	o	j	o	p	n	h	v	i	y	n	i	t	a	i	a
e	l	a	o	d	z	a	c	a	g	a	q	g	k	j	v	l	v	n	g
b	i	n	n	m	l	g	a	n	a	n	f	e					e	o	i
z	o	t	k	w	l	u	m	d	r	t	l	r					r	c	r
k	n	h	e	m	a	a	e	a	o	q	t	o					k	e	a
l	b	e	y	c	m	r	l	y	o	y	s	r					y	r	f
y	h	r	y	v	a	q	c	q	w	o	l	f	e	t	s	b	x	o	f
t	x	l	e	r	q	c	r	o	c	o	d	i	l	e	x	d	h	s	e



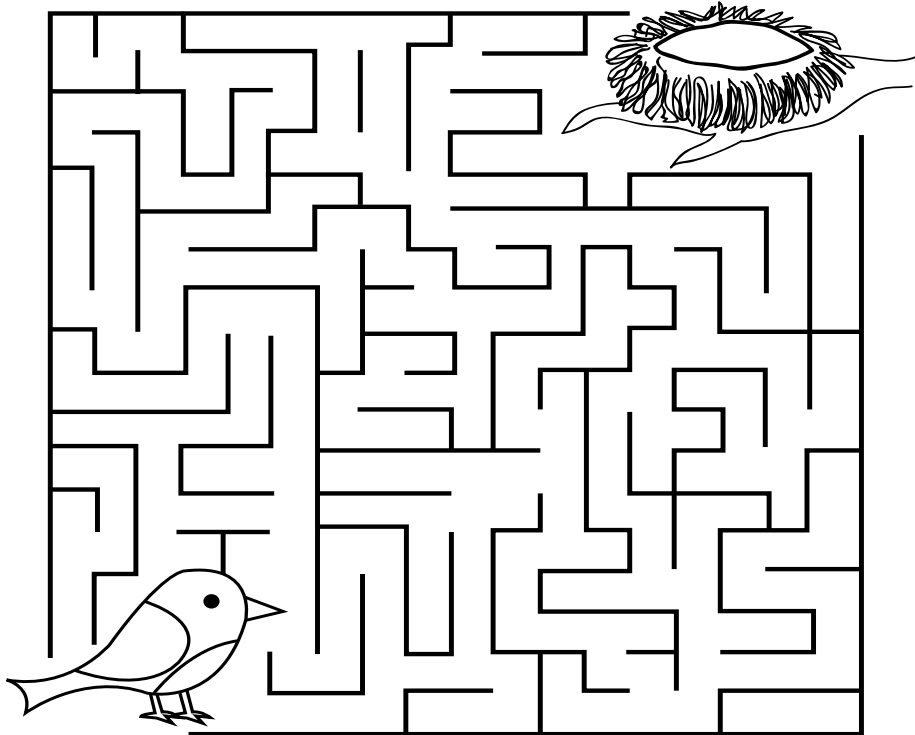
- alligator
- bear
- beaver
- camel
- crocodile
- elephant
- giraffe
- jaguar
- kangaroo
- leopard
- lion
- llama
- monkey
- panda
- panther
- puma
- rhinoceros
- tiger
- wolf
- zebra

e	s	u	p	x	e	i	p	o	o	o	b	j	e	i	x	i			
j	o	x	q	s	i	a													
j	l																		
e	e	k																	
j	o	a																	
l	o	b																	
u	u	a	i	l	v	i	k	f	b	u	u	o	u	z	p	o	v	e	
e	i	e	i	u	l	l	a	u	o	o	e	w	u	o	u	c	o		
w	u	e	d	d	b	j	x	u	r	e	e	e	e	e	e	u	p	z	
j	q	u	o	m	q	b	b	e	x	m	a	e	e	q	b	b	u		
l	p	o	k	k															
t	l	c	b	s	h	e	c	t	e	e	e	e	e	e	e	e	e	e	z

Source: Vector Stock

# Bird Maze

Help the bird get back to its nest.



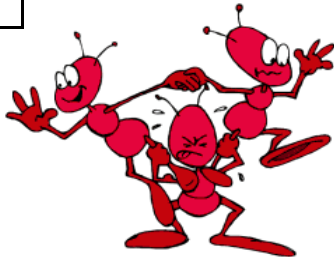
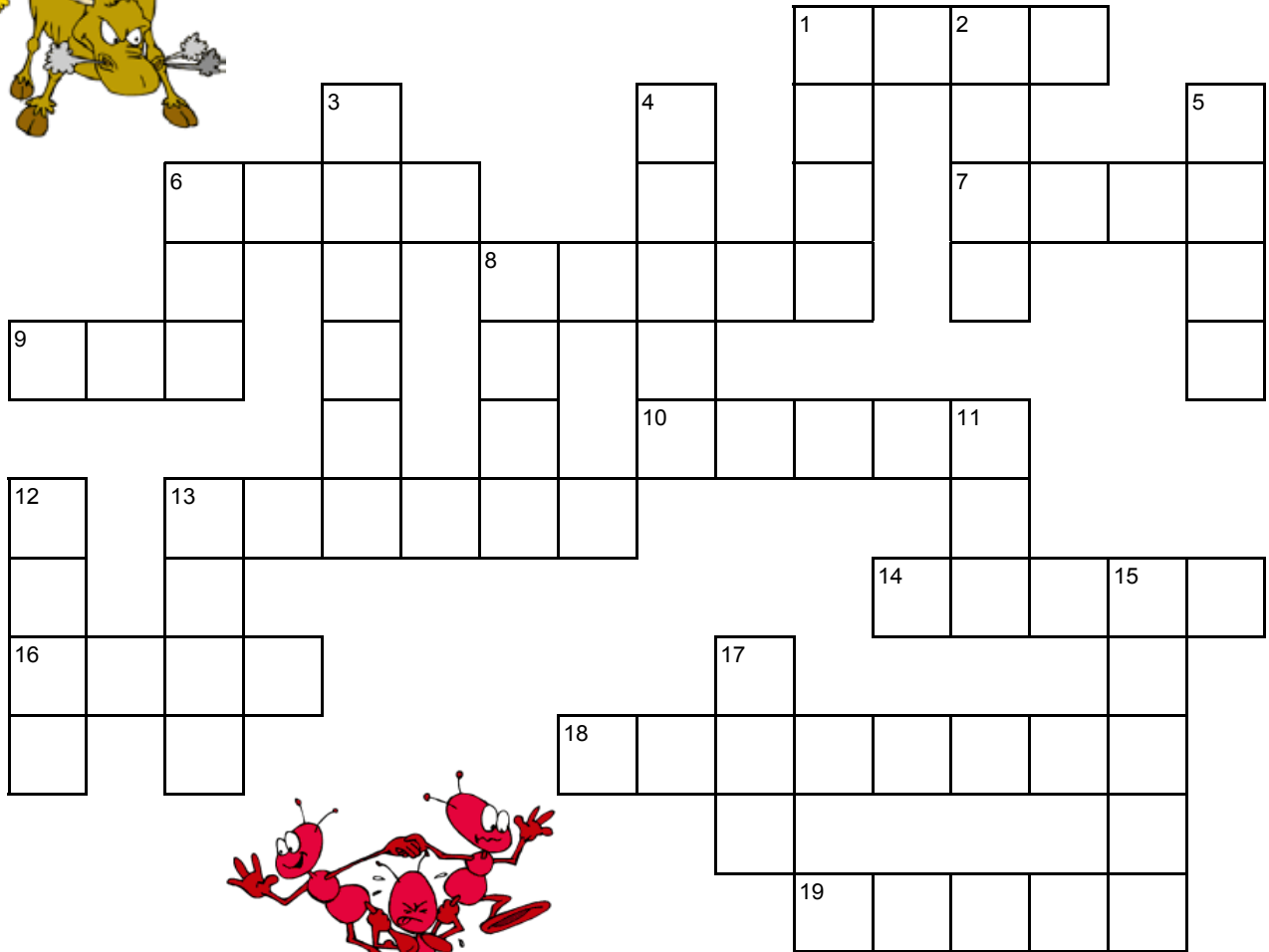
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By the World Health Organization (WHO)



# Name that Animal!



## Down

1. male deer
2. young sheep
3. group of fish
4. group of monkeys
5. group of antelope
6. group of whales
8. young deer
11. female sheep
12. male donkey
13. young cow
15. female goat
17. male sheep

## Across

1. male cow
6. group of wolves
7. female horse
8. group of sheep
9. young goat
10. group of lions
13. group of ants
14. female donkey
16. young pony
18. male horse
19. male goat





# POETRY

## FROGS

By Beverly Stock



If you can't "Ribbit,"  
Or play leap frog,  
Answer the riddles,  
Of the frogs on this log!

1. What type of shoe do frogs wear?
2. Why are frogs rarely angry?
3. What do you call a frog that lies?
4. What do you call 144 frogs in a box?
5. Why are frogs so good at basketball?

### Answers

1. Open-toad sandals
2. They eat whatever bugs them
3. An Am-fib-ian
4. Gross!
5. They always do jump shots

## "Up To Bat"

By Little Dazzy Donuts



[www.jamboreetours.com](http://www.jamboreetours.com)

*They swoop through the air,  
and put on a grand show.  
Looping the loop,  
shoot high, and drop low.  
With a quick flap of wings,  
they then glide and they munch,  
eating thousands of insects  
for their breakfast and lunch.*

*So, when the sun has sent out  
the last of its rays,  
I grab a lawn chair  
to sit down and wait  
for the arrival of the  
best ever aerial display  
that only happens at night.  
Never during the day.*

*There really is nothing  
to ever beat that,  
which is why, every evening,  
I'm first up to bat.*

# Kifaru House

## wilderness trail

Birds, Monkeys,  
Bushbabies, Snails  
and Trails.

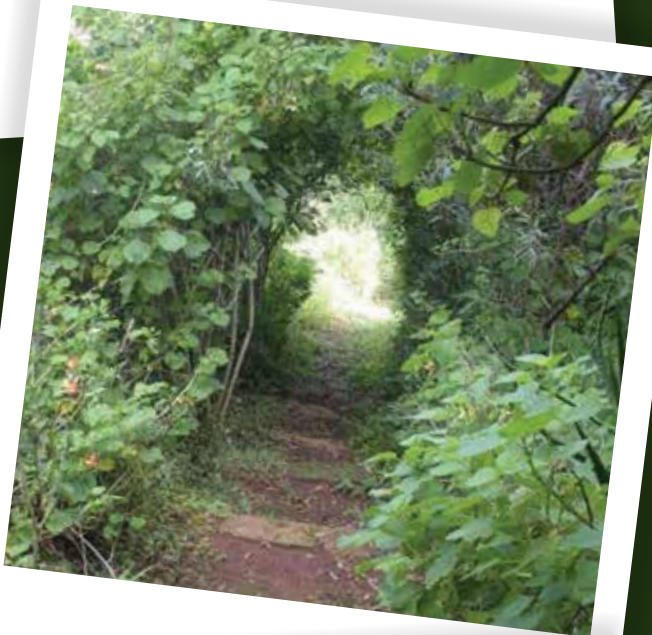
Come join us and take in the outdoors.

Meditate as you explore nature  
on brief walks in the trails.

On the five-acre land, the trail winds  
down to the creek that runs on  
to join the River Mbagathi.

With **Kshs. 500**, you can spend an hour or two in  
Karen suburbia and visit with the exciting staff!

Welcome!







# THE 8<sup>TH</sup> AFRICA ANIMAL WELFARE CONFERENCE ACTION 2024

**THEME:** Partnership Actions to Improve Animal Welfare  
for Environmental Sustainability

**DATE:** September 30 - October 2, 2024    **VENUE:** UN Complex, Nairobi, Kenya  
For more information: **Call:** +254 727 234 447 | **Visit:** <http://www.aawconference.org>