2022 Annual Report

DEPARTMENT OF NATIONAL PARKS & WILDLIFE
DNPW
"CONSERVE WILDLIFE"

Zambian
CARNIVORE PROGRAMME

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CARNIVORE PROGRAMME

Zambian Carnivore Programme
PO Box 80, Mfuwe, Eastern Province, Zambia
www.zambiacarnivores.org

DEPARTMENT OF NATIONAL PARKS & WILDLIFE
DNPW
"CONSERVE WILDLIFE"

Cover: A wild dog in Zambia's Greater Kafue Ecosystem, where ZCP-DNPW wild dog conservation work has occurred since 2011. *Photo: Anna Kusler*

This page: A cheetah in the Greater Kafue Ecosystem, the country's largest cheetah population and the site of ZCP-DNPW conservation work since 2011.

Next page: ZCP Luangwa Senior Ecologist Bridget Mayani Nkhoma returning from an aerial tracking flight for wild dogs and lions. A graduate of ZCP's Women in Wildlife Conservation Training Programme, Bridget now mentors aspiring conservation leaders through an array of training programmes.

Next spread: Hyenas in the Greater Liuwa Ecosystem, site of the country's longest-running hyena conservation project.

Back cover: A hyena from Liuwa Plain's Mutata Clan. *Photo: Sandra Martens*

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ROSHNI LODHIA

Year in Review

Dear Friends and Supporters,

Dr. Vincent R. Nyirenda
ZCP Board Chairman

This year I am excited to assume the Board Chair position for the first time – a post well-run by our Board Member John Lemon for many years. I have been involved with ZCP for over a decade, firstly in my capacity as former Head of Research for ZAWA (now Department of National Parks and Wildlife, or DNPW), as a Research Partner out of Copperbelt University, and as a ZCP Board member. We look forward to what the future brings, working closely with the DNPW and over two dozen partners across the nation to help make Zambia a model of effective conservation science, action and local leadership.

As we conclude another productive and exciting year working to conserve large carnivores and ecosystems in Zambia, the future looks very bright despite the many challenges. Particularly exciting are the continuing record increases in Zambian conservationists throughout our projects, with 48 young professionals receiving mentoring and training across our Women in Wildlife Conservation, Conservation Biologist, Wildlife Vet, and Integrated Field Conservation training programmes in 2022. This is in addition to the dozens of Zambian conservation biologists leading professional teams conducting work across five key ecosystems in Zambia.

Thank you again for your support and collaboration!

DAAN SMIT

Dear Friends and Supporters,

The 2022 season was the first year of our five-year Strategic Plan, and it was a big success. As always, it was a time of change and progress, but as the first post-pandemic year we were grateful for it being less eventful, relatively speaking! With a 70+ person team across five ecosystems we again set records for our organizational work in terms of field effort, numbers of trainees in all conservation leadership programmes, and community outreach and sensitization efforts. We also continued to expand and improve our human-carnivore conflict mitigation work and continued to expand our training impact on a continental scale.

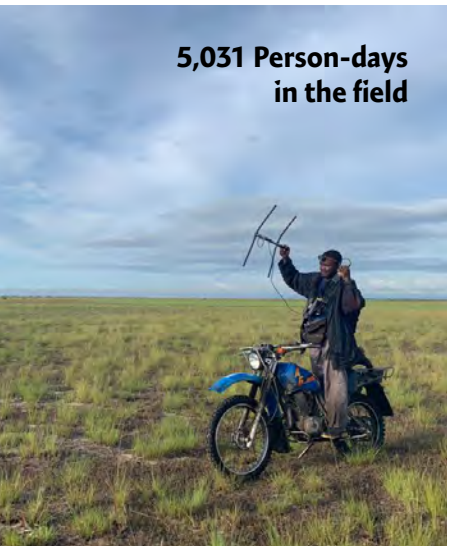
One of the most exciting developments in 2022 was the addition of a Deputy Director to our team. As part of our Strategic Plan we welcomed Dr. Terry Brncic to ZCP, and her over 15 years of African conservation experience. Terry quickly integrated into the work and has been an invaluable addition to the organization.

We received outstanding management and leadership training as part of our Organizational Strengthening Plan designed by our long-term partner Maliasili. Going forward we will continue to implement our strategic plans and organizational strengthening continues to be a strong focus to ensure the volume of our conservation impact is matched by our resources and the efficiency of our systems. It is an exciting time and as always, we are grateful for your support and collaboration.

Dr. Matthew Becker
ZCP CEO

2022 Year at a Glance

39,500 km² intensively covered across 5 ecosystems



5,031 Person-days in the field

Worked with 34 organizational partners

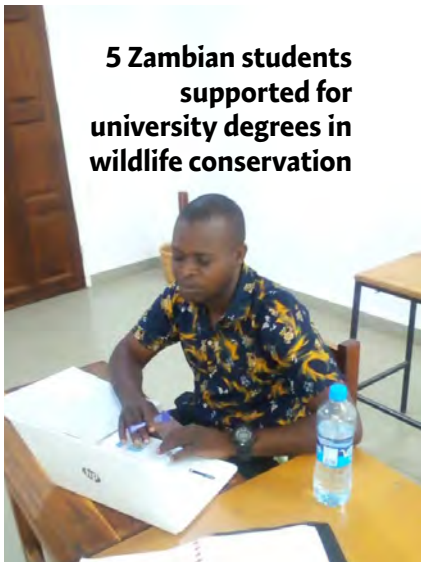
7 scientific studies published or in peer review

48 Zambian trainees in our Women in Wildlife Conservation, Conservation Biologist, Wildlife Vet Training Programmes and Integrated Field Conservation Course

104 safari drives for 753 community members in the Luangwa Valley

11 herbivore surveys conducted across 4 ecosystems

3 trainees from 3 different organizations from 3 African countries trained in large carnivore conservation science work



5 Zambian students supported for university degrees in wildlife conservation


Worked in 7 National Parks
and 8 Game Management Areas


1131 carnivores intensively
monitored across 3 ecosystems


8 large carnivores de-snared

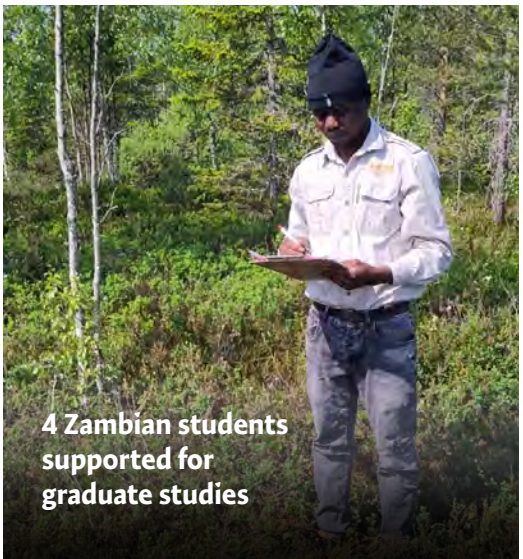

102 Community Clean Sweeps
engaged 305 community members
and removed 144 snares


10,550 snare checks
on large carnivores


122 radio shows, conservation
football matches and theater
programmes engaged 33,500
community members


2,966 livestock owners trained
on carnivore conflict mitigation


86 educational programmes
to 313 students across
4 ecosystems


4 Zambian students
supported for
graduate studies


3,175 domestic
dogs vaccinated
for rabies

VISION

Restored and thriving ecosystems that are collaboratively conserved by local communities, scientists, and policy-makers through evidence-based approaches.

MISSION

We conserve Zambia's large carnivores and ecosystems through science, action, and strengthening local leadership.

WHY CARNIVORES?

Umbrella Species

Carnivores require space, and lots of it; protecting their habitats protects a lot of other species.

Keystone Species

Carnivores have an ecological influence disproportionate to their numbers.

Indicator Species

Carnivores are very sensitive to human impacts, so are often the first to disappear from ecosystems.

Flagship Species

Carnivores are charismatic and readily attract public interest and support for conservation.

DAAN SMIT

Our Approach

CONSERVATION SCIENCE

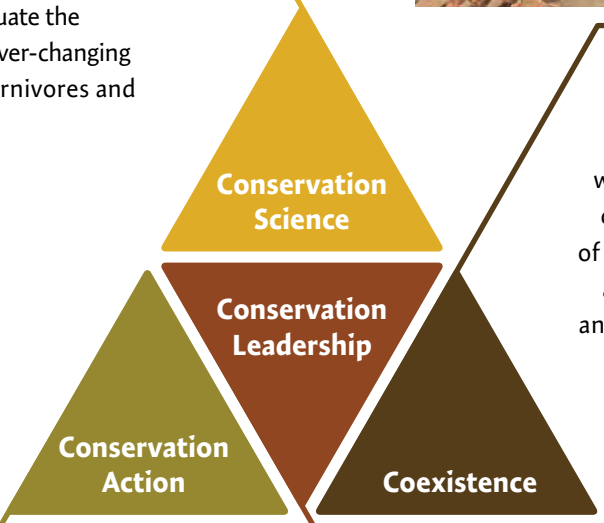
We conduct long-term research and monitoring to identify and evaluate the limiting factors and the myriad, ever-changing threats facing Zambia's large carnivores and ecosystems.

CONSERVATION ACTION

We address immediate threats, as identified by science, with programmes including combatting the bushmeat and illegal wildlife trade, large landscape conservation and connectivity protection.

COEXISTENCE

We are committed to working with communities to reduce the costs, and increase the benefits of coexisting with wildlife, as well as to increasing, understanding and appreciation of conservation.



CONSERVATION LEADERSHIP

We are helping Zambia become a model for locally-led conservation through supporting well-trained, passionate, and committed conservation leaders.

THE GREATER KABOMPO ECOSYSTEM

(2018-PRESENT)

The Kabompo Ecosystem, centered around West Lunga National Park in Northwestern Zambia, is a recovering ecosystem with a diversity of unique habitats, and connectivity to the Greater Kafue Ecosystem through one of Zambia's largest remaining corridors. Our work focuses on conducting research and monitoring work to provide science-based guidance and evaluations as the ecosystem changes rapidly with restoration efforts.

THE GREATER KAFUE ECOSYSTEM

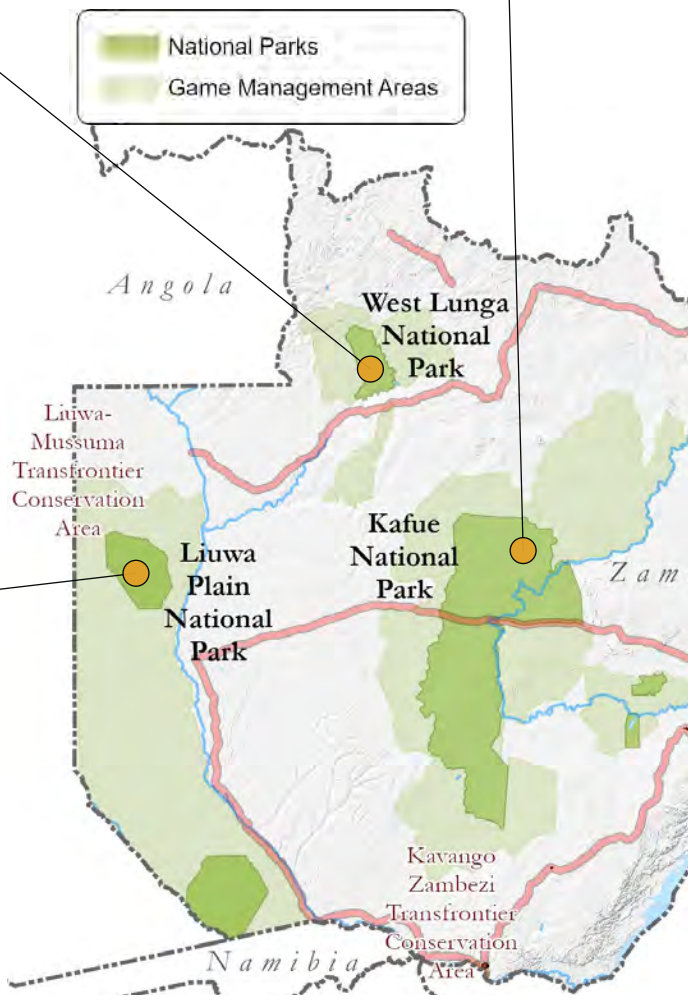
(2011-PRESENT)

The Greater Kafue includes Kafue National Park, the largest protected area in Zambia and Africa's second largest national park, as well as surrounding Game Management Areas. It contains Zambia's largest cheetah population and second-largest populations of wild dogs, lion, and leopard, as well as the highest antelope diversity of any national park in Africa.

THE GREATER LIUWA ECOSYSTEM

(2010-PRESENT)

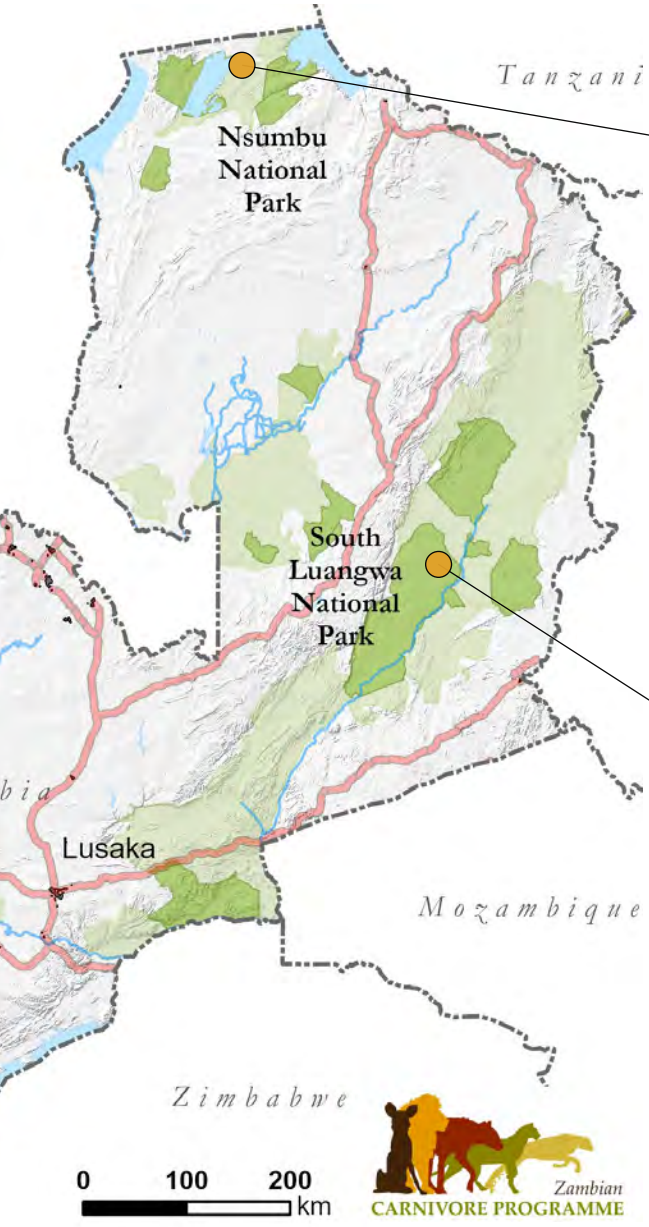
Liuwa Plain, located in Western Province, is a vast, seasonally flooded ecosystem. Work here is focused on research and monitoring efforts to help guide, inform and evaluate conservation as the ecosystem changes rapidly. Liuwa currently hosts important populations of spotted hyena and cheetah, recovering populations of wild dog and lions, as well as Africa's second largest wildebeest migration. It is also part of the proposed Liuwa-Mussuma Transfrontier Conservation Area with Angola.



Where We Work

Zambia: The Crossroads of Connectivity

Zambia's 50 million hectares of forests and abundant freshwater systems host some of the most important habitats for wildlife in Sub-Saharan Africa, including large carnivores. Bordered by eight countries, Zambia also occupies a crucial position in connecting Eastern and Southern African wildlife populations and in supporting large-scale ecological processes that depend upon this connectivity.



THE GREATER NSUMBU ECOSYSTEM

(2017-PRESENT)

Greater Nsumbu forms the southern edge of Lake Tanganyika and Zambia's northernmost landmass, centered around Nsumbu National Park and Tondwa Game Management Area. With a diversity of unique habitats Nsumbu is a recovering ecosystem and our collaborative work is to assist in research, monitoring, and restoration of carnivores.

THE LUANGWA VALLEY ECOSYSTEM

(2005-PRESENT)

The Luangwa and Mid-Zambezi Valley ecosystems stretch over 70,000 km^2. This is an unfenced and relatively intact wilderness which hosts Zambia's largest carnivore populations of lion, wild dog and leopard. Here, ZCP has its oldest field site and organization headquarters in South Luangwa, with long-standing projects focused on wild dogs, lions, leopards, hyena and giraffe.

Conservation Science

Our Conservation Science work in 2022 comprised some of Africa's most comprehensive studies – spanning 5 ecosystems, 7 national parks and 7 Game Management Areas as well as multiple corridors and Transfrontier Conservation Areas, with long-term intensive studies of 15 different populations and over 1100 individual, mostly known-age, carnivores. Collectively this work comprises some of Africa's most comprehensive, long-term ecological studies to guide science-based conservation into the challenges, uncertainties, and opportunities of the future.

We live in what scientists term the Anthropocene, or the Age of Humans, where for the first time we are the primary agent of ecological change on the planet.

Understanding the rates and consequences of these rapid changes and challenges – and being able to effectively address them – is of critical importance for conservation.

Long-term studies that encompass the complexities of human and ecological drivers in ecosystems are therefore of critical importance in providing science-based conservation in a rapidly-changing world.

High-Quality Evidence for Science-Based Conservation

The quality of evidence is extremely important in science-based decision-making; therefore, anonymous peer-reviewed scientific papers are the gold standard for the value of scientific evidence.

Findings and recommendations from this technical work are made readily available to partners and stakeholders through a myriad of reports, meetings, and media. Nevertheless, scientific papers still must provide the foundation of evidence for – as well as the justification and validation of – policies and management actions.

Our evidence foundation is built on 53 peer-reviewed studies published by ZCP-DNPW and partners from Zambia work since 2012 (with 8 in review), making Zambia one of the most well-equipped countries in the region for science-based conservation.

Conservation and Management Topics for Which We Provide Science-Based Guidance:

- Demography of Carnivores & Herbivores
- Movement and Spatial Dynamics
- Connectivity and Corridors
- Dispersal
- Predator-Prey Dynamics
- Competition between Carnivore Species
- Genetics
- Disease
- Bushmeat Poaching/Prey Depletion
- Trends and Patterns of Snaring
- Trophy Hunting Management
- Human-Carnivore Conflict Mitigation
- Illegal Wildlife Trafficking
- Human Encroachment/Land Use Change
- Survey Techniques
- Species Restoration/Translocation Protocols
- Climate Change
- GMA Community Conservation Models
- Land-Use Planning

Please visit our website for a complete list of our updated list of our Peer-reviewed Scientific Publications for Management and Policy: www.zambiacarnivores.org/publications

Highlights from Studies Completed and Published in 2022

Predation strongly limits demography of a keystone migratory herbivore in a recovering transfrontier ecosystem
"This collaborative work is the first comprehensive demographic analysis of Liuwa's blue wildebeest – one of Africa's largest remaining migrations and the largest Southern African population. Predation was the dominant cause of mortality, and mortality risk varied with position along the migratory route, highlighting the importance of protecting the corridor between Angola and Zambia's proposed Transfrontier Conservation Area that contains their winter range, and the success of carnivore and herbivore restoration efforts in Liuwa Plain National Park."

—James Milanzi, Zambia Country Director, African Parks

Guidelines for evaluating the conservation value of African lion (*Panthera leo*) translocations
"These guidelines—developed by 37 experts from 56 agencies, institutions and organizations across Africa—are badly needed to help maximize the conservation value of the ever-increasing management practice of lion translocations."

—Dr. Peter Lindsey, Director Lion Recovery Fund

African wild dog movements show contrasting responses to long and short term risk of encountering lions: analysis using dynamic Brownian bridge movement models
"Wild dogs evolved as subordinate competitors to lions and their dynamics reflect that. How does prey depletion and bushmeat poaching affect wild dog movements? Even at low lion densities dogs still adjust for avoidance of this threat, which carries significant implications for conservation in human-impacted landscapes."

—Dr. Scott Creel, ZCP Senior Scientist

AFRICAN LIONS

In 2022 we continued our long-term intensive lion work across Zambia's strongholds in the Luangwa Valley and Greater Kafue Ecosystems.

In addition we continued our work with a recovering population in the Greater Liuwa Ecosystem, and on lion restoration efforts in the Greater Nsumbu Ecosystem (see Conservation Action page 22). **We intensively monitored 412 lions from 85 prides and coalitions**, and utilized data from an additional 40 individuals through Citizen Science.

HIGHLIGHTS

- Our focus continued to be on the impacts of prey depletion on lion dynamics, both within and across ecosystems and gradients of protection.
- We made considerable progress on analyses of lion space use and movement across gradients of protection and across ecosystems
- We continued to refine and utilize the Lion SNP Chip (see Conservation Action page 24) for assessing connectivity and estimating population sizes.
- We continued and neared completion of an analysis of lion demography after increases in resource protection in the Greater Kafue.
- We continued studies of lion dispersal by males in the Greater Kafue
- We contributed our long-term findings and recommendations to a technical workshop on lion survey techniques given the challenges in effectively estimating population trends and densities.

ANNA KUSLER

AFRICAN WILD DOGS

In 2022 we continued our wild dog conservation work across three ecosystems in Zambia, one of 6 remaining countries considered to have viable populations of this endangered species.

We intensively monitored 442 individual dogs in 49 packs and dispersing groups across the Luangwa, Kafue and Liuwa Ecosystems as part of our long-term work. We also utilized data from an additional 137 dogs through collaborative Citizen Science work.

HIGHLIGHTS

In addition to providing key demographic data on these critical populations we also upscaled our work evaluating bushmeat poaching impacts on dogs – looking across our numerous subpopulations that differ in the density of dominant competitors (lions) and prey, as well as in the impacts of snaring.

We completed a first evaluation of the effects of prey depletion on wild dogs and the importance of this threat – which has not typically been recognized – in comparison to other factors such as climate change.

We documented the longest-recorded dispersal distance for the species in 2022, with a group of females traveling over 2,000 km from our Luangwa study site, into Mozambique and back into Zambia's Lower Zambezi National Park (see Media page 43).

We completed and published a study evaluating wild dog movements in relation to their dominant competitors, lions in prey-depleted systems (see Conservation Science page 11).

PRIMARY IMPLEMENTING PARTNERS

CHEETAH

As the lowest density and widest-ranging species of the large carnivores, cheetahs are also a subordinate competitor, and consequently often occur more outside strictly protected areas, which in turn subjects these cats to ever-increasing human impacts.

We continued long-term work on Zambia's two largest cheetah populations in the Greater Kafue and Greater Liuwa Ecosystems in 2022. Though monitoring such a cryptic and wide-ranging species can be incredibly challenging, the ZCP field teams **intensively monitored 34 cheetahs in 18 different groups across the two ecosystems**, and added data from an additional 18 cheetahs through our collaborative Citizen Science programmes.

HIGHLIGHTS

In partnership with the Africa Range-Wide Cheetah Conservation Initiative, we assisted in conducting the first-ever camera trap survey for cheetahs and wild dogs in the area between Liuwa Plain National Park and Angola, part of the proposed Liuwa-Mussuma Transfrontier Conservation Area.

We added two new adult cheetah and six dispersal-age individuals to our intensive monitoring work in the Greater Kafue, tripling the number of intensively monitored individuals for which we can provide targeted protection, and greatly improving our understanding of cheetah dispersal dynamics, recruitment, and space-use requirements.

We continued work on the human and ecological factors driving cheetah demography, space use, and movements across gradients of protection and ecosystems. For example, since 2019, poaching and road strikes accounted for upwards of 2/3 of known adult and subadult cheetah mortalities in the Greater Kafue Ecosystem, and wild fires appear to pose a serious threat to denning-age cubs.

We continue to gather critical data on how bushmeat poaching – and resulting prey depletion – may exacerbate competition between cheetahs and lions, who remain the cheetah's most dominant and dangerous competitor.

PRIMARY IMPLEMENTING PARTNERS

SPOTTED HYENA

Spotted hyena are perhaps the most widespread and successful of the large carnivore guild yet are subject to the same array of human threats that big cats and wild dogs are, in addition to being associated with witchcraft and actively persecuted.

We continued our work on Africa's most-maligned, data-deficient, and least-supported large carnivore (see Media page 43). While all other species are IUCN listed as Vulnerable or Endangered, hyena are listed as Least Concern, in no small part due to being highly data-deficient. **We intensively monitored 229 hyenas from 20 clans**, including continuing to expand one of the continent's longest-running and most comprehensive hyena studies in the Greater Liuwa Ecosystem, as well as increasing our work in the Luangwa Valley and Greater Kafue Ecosystems to enable evaluations of hyena threats and dynamics within and across ecosystems.

HIGHLIGHTS

We completed an 11-year analysis of hyena demography in a recovering ecosystem in Liuwa, continuing to find high survival and reproduction due to an abundant preybase, low lion density, and low human conflict.

We documented multiple hyena dispersals in Liuwa, including transboundary and female dispersals.

We added 4 new intensively-monitored clans in the Greater Kafue and Luangwa Valley Ecosystems as part of increased monitoring work.

We contributed to the development and application of a Spotted Hyena SNP Chip enabling high-quality genetics from scat in order to assess connectivity and populations in human-impacted systems.

PRIMARY IMPLEMENTING PARTNERS

LEOPARDS

We continued work in Zambia's two leopard strongholds of the Luangwa Valley and Greater Kafue Ecosystem in 2022, though in contrast to the other large carnivores we primarily focused on camera-trap based studies rather than conducting intensive monitoring.

We focused long-term studies across protection gradients in the ecosystems with well-described populations of both competitors and prey to understand the impacts of bushmeat, prey depletion, and legal hunting on these dynamics.

HIGHLIGHTS

We assisted in the development and application of a leopard SNP Chip, allowing high quality genetics from scat and other low quality samples, which can be used for anti-trafficking, assessing connectivity and population monitoring.

We continued to assist with camera-trap based surveys in the Greater Kabompo, Greater Liuwa, and Greater Nsumbu Ecosystems for detection of leopard in these areas they were once present.

PRIMARY IMPLEMENTING PARTNERS

KEVIN MACAULAY

HERBIVORES

In addition to being of critical importance to large carnivores as prey, large herbivores are of key ecological importance as major structural agents of vegetation and nutrient cycling, and are similarly imperiled across their ranges by human impacts.

Consequently, ZCP and DNPW have always emphasized conservation science work on herbivores, both by conducting surveys across our focal ecosystems and by conducting long-term intensive studies of particular species and populations. In 2022 we conducted 12 ground-based surveys for herbivores across the Luangwa Valley, Greater Kafue, Greater Liuwa, and Greater Kabompo Ecosystems, utilizing distance sampling methods to estimate density, distribution, and the human and ecological factors affecting them for various species. In addition, we continued long-term intensive studies of wildebeest in the Greater Liuwa Ecosystem, and of giraffe in the Luangwa Valley, while continuing a new study on buffalo in the Greater Kafue Ecosystem.

HIGHLIGHTS

To accelerate our long-term studies of giraffe in the Luangwa Valley (initiated in 2008) we brought on a full-time Giraffe Project Coordinator to oversee this work with the support and collaboration of our partner Giraffe Conservation Foundation.

We completed and published a comprehensive evaluation of wildebeest population dynamics in relation to human and ecological factors in the Greater Liuwa Ecosystem (see Conservation Science page 11).

We continued to expand studies of bushmeat poaching impacts on herbivores across all ecosystems and the cascading ecological impacts.

PRIMARY IMPLEMENTING PARTNERS

Conservation actions are not static – human impacts are changing ecosystems so rapidly, threats change in intensity, and new ones arise. To effectively combat these we need to be able to quickly pivot, adapt and address emerging challenges. Fortunately, with long-term projects and relationships in place we are well-situated to employ a wide spectrum of conservation actions for whatever is needed.

ANNA KUSER

Conservation Action

Effectively addressing threats to carnivores and ecosystems requires close alignment between science and conservation, but many conservation organizations lack the in-house capacity to bridge these gaps. Working closely with over two dozen partners and having multiple long-term field-based projects on the ground, ZCP has the foundation, resources, and relationships to enable a rapid and appropriate response to the array of dynamic and novel threats as they arise, and change, across our many focal landscapes.

In 2022 we continued to work on a variety of conservation actions including:

- Combatting the illegal bushmeat trade and anti-snaring
- Developing and applying genetic tools to assist intelligence and forensics efforts to combat illegal trafficking of big cat skins and parts
- Assisting with restoration efforts of wild dog and lion populations where they were locally extirpated
- Continuing to identify, evaluate and help conserve corridors and connectivity within and between ecosystems using a combination of human land-use change data, movements of dispersing carnivores, and genetics.

Combatting the Illegal Bushmeat Trade: Mitigating Snaring Impacts on Large Carnivores

A science-based approach

De-snaring and field-based protection, or the Halo approach, is obviously beneficial for the individual that is snared, but does it positively benefit the population? Using our long-term data on lion demography ZCP graduate student Dr. Kambwiri Banda and Dr. Scott Creel are evaluating this key question.

How Much Is One Dog's Life Worth?

Wild Dog 73
Rescued from a lethal snare in 2014

At least 17 additional packs formed from dispersing offspring

At least 272 pups, grand-pups, great-grand pups and great-great grand pups

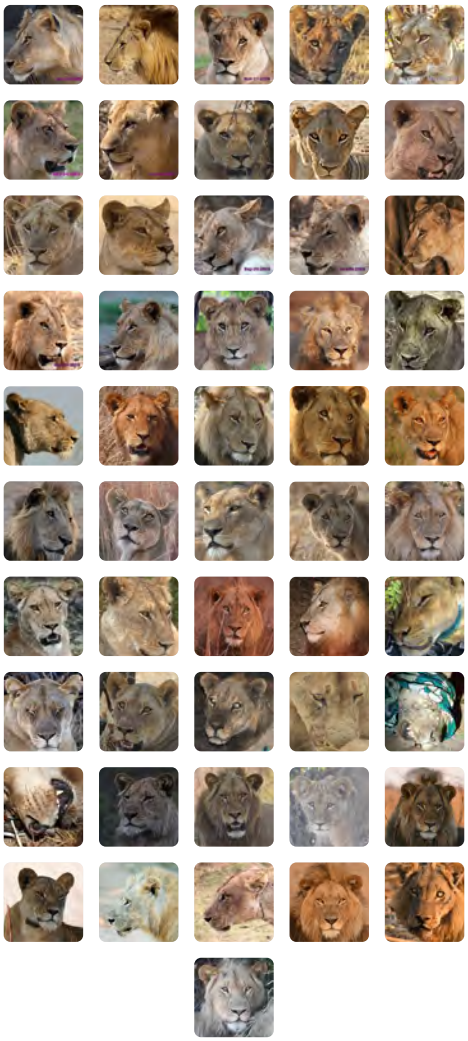
Packs have populated throughaout the Luangwa Valley

The oldest known dog in the wild was 12 years of age. The Hot Springs Pack's alpha male was born in 2006 at the latest, making him over 12 years old when he died in 2018. As alpha male his pack endured severe snaring impacts and he was dying from a snare himself but was rescued by the collaborative work of ZCP, CSL and DNPW. His legacy is found in all the dogs populating the Luangwa with ties to the Hot Springs pack, and his life is a testimony to the value of this work.

2022

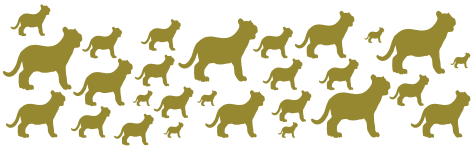
- Over 10,000 snare checks on over 1100 carnivores
- Employed field-based Zambian vets across 3 ecosystems
- De-snared 8 large carnivores
- Worked with law enforcement partners to direct anti-snaring patrols to areas of high risk for carnivores

Population effects from snared lion rescues



51 lions de-snared

292 cubs born



PRIMARY IMPLEMENTING PARTNERS

Combatting Illegal Trafficking of Big Cat Skins and Parts

The Problem

- Illegal trade in skins and parts of big cats increasing
- Patterns and trends unclear
- No genetic tools to assist in combatting
- No systematic sampling occurring with seized samples
- No genetic baselines comparing seizures with source populations
- No genetic tools to help in prosecutions

Our Approach

1. **Developing Genetic Tools and Obtaining Baseline Genetics from Lion Populations Across Their Range**
   Cutting edge SNP chips created for lions and leopards and baseline genetics data compiled across lion range in Africa

2. **Expanding Collaborations**
   Working with dozens of collaborators across Africa and beyond to develop and implement these tools

3. **Building Anti-Trafficking Capacity**
   Developing in-country and regional capacity for forensics and intelligence work using genetics

DAAN SMIT

PRIMARY IMPLEMENTING PARTNERS

As a long-term carnivore conservation project already conducting genetics work, we were well-placed to contribute to combatting illegal trafficking of big cats across Africa and beyond.

Working with an integrated team of collaborators this work has now ultimately transformed a situation of having no scientific means of obtaining information from big cat skin seizures, to where key tools have now been created for lions and leopards that can effectively trace seizures to their population of origin across the global ranges.

ZCP Scientist Dr Göran Spong explains DNA extraction techniques to the Luangwa Project team.

ZCP student Margret Mwale (R) works with Women in Wildlife Conservation trainees Fanely Mbao (L) and Tikambenji Mando to process genetics samples from large carnivores in preparation for analyses.

Species Restoration

While conserving existing free-ranging populations – and the connectivity between them – is the highest priority, restoration of species through reintroductions is sometimes necessary, particularly in ecosystems heavily depleted of wildlife.

Helping Nsumbu Prepare for Lion Restoration

Restoring Africa's top carnivore has numerous ecological and economic benefits, but can also come with significant costs in human-lion conflict, and thus must be carefully considered and planned.

Nsumbu currently has no resident lion population; therefore, lion reintroduction is a core component of DNPW and Frankfurt Zoological Society's (FZS) ecosystem restoration efforts as part of the Nsumbu Tanganyika Conservation Programme. In order to help prepare for this work, in 2022 a delegation from Nsumbu comprised of DNPW, FZS, community representatives, and traditional leaders visited South Luangwa to learn about the benefits, opportunities and challenges that come with living alongside lions. Together with our Luangwa conservation partners, the delegation took part in game drives and lodge visits to experience the benefits of a wildlife-based tourism economy, engaged with our human-lion conflict teams to learn about mitigating the costs of living with lions, and learned about lion ecology and how to effectively monitor and protect populations. This collaborative work provided a unique opportunity for all parties to productively engage in the development of the lion restoration process to help maximize benefits and minimize costs of returning Nsumbu's apex predator.

DAAN SMIT

Wild Dogs Reintroduced to Liuwa Plain

Wild dogs were successfully returned to the Greater Liuwa Ecosystem in 2022 as part of the Liuwa Plain Predator Management Plan.

Three female dogs from Kafue National Park and eight male dogs from South Africa's Waterberg Plateau were translocated to Liuwa as part of an initiative led by African Parks and the Zambia DNPW, and assisted by ZCP and Endangered Wildlife Trust. After a boma period through the rains, the dogs were released in April 2022 and effectively bonded into a pack, began mating shortly after release, and successfully denned in August, raising three pups as part of the first wild dog litter in Liuwa since 2012. We are working with the DNPW and African Parks with intensive monitoring, community work, vaccination programmes, and anti-snaring efforts as a part of the Wild Dog Management Plan for Liuwa.

AFRICAN PARKS

FRANKFURT ZOOLOGICAL SOCIETY

ENDANGERED WILDLIFE TRUST
Protecting forever, together.

PRIMARY IMPLEMENTING PARTNERS


The Nsumbu delegation visits a livestock enclosure as part of human-lion conflict mitigation work.


Senior Ecologist Bridget Mayani Nkhoma explains lion monitoring techniques.

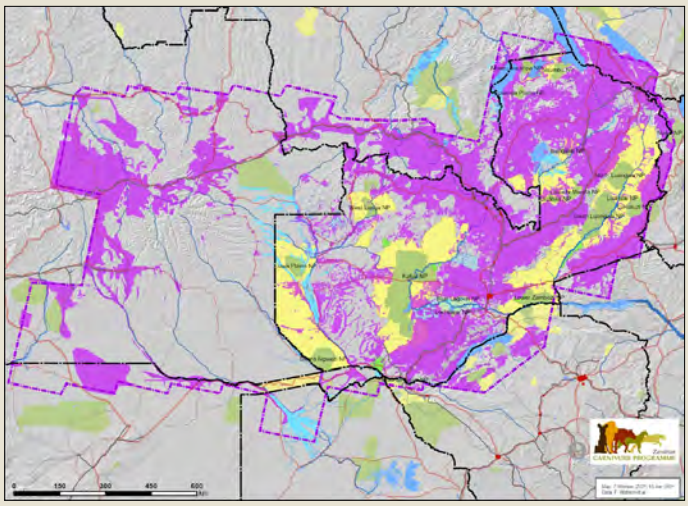

The delegation on a safari drive in South Luangwa National Park.


Human-Carnivore Conflict Mitigation Coordinator Dennis Zimba describes various methods of lion conflict mitigation.

Large Landscape Conservation

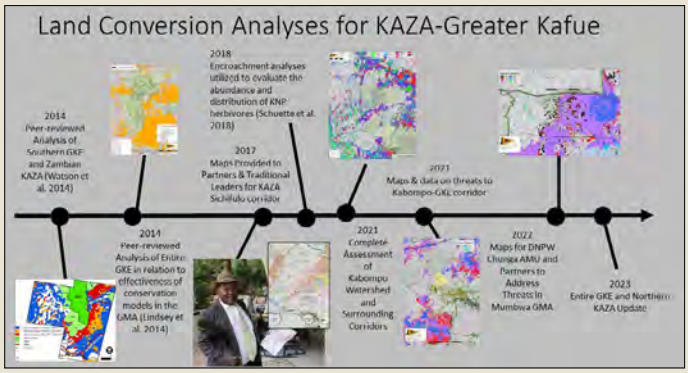
Zambia is characterized by large landscapes, and the viability of its ecosystems for wildlife and people is a result of their size and connectivity. Bordering eight countries and containing multiple Transfrontier Conservation Areas, and numerous unfenced, connected areas of over 50,000 km² each, Zambia is the "Crossroads of Connectivity." Nevertheless, these landscapes are threatened by an array of human impacts. Utilizing an integrated, multi-disciplinary approach in 2022 we continued to work collaboratively to help conserve Zambia's large landscapes and connectivity.

The development of cutting-edge genetic tools – known as SNP Chips – for lion, leopard, wild dog, and spotted hyena (cheetah in development) allow for non-invasive, high-quality genetics data from low-quality samples such as scat, a game-changing development for assessing connectivity.



Trends and Patterns of Land-Use Change

Using cutting-edge methods we developed to address the accuracy challenges inherent in assessing land-use change, we have evaluated all of Zambia's protected area networks and provided accurate and current assessments of land conversion rates and impacts to help guide and evaluate land-use planning for community areas, corridors, and protected area networks.



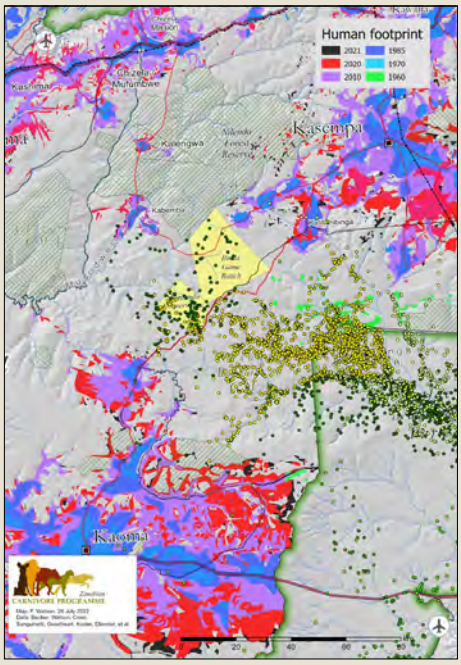
Evaluating Climate Change Impacts on Ecosystems and Species

We continued to utilize long-term environmental data to conduct assessments to identify feasible and climate-change-resilient opportunities for expansion of the protected area networks in Zambia and the region.

PRIMARY IMPLEMENTING PARTNERS

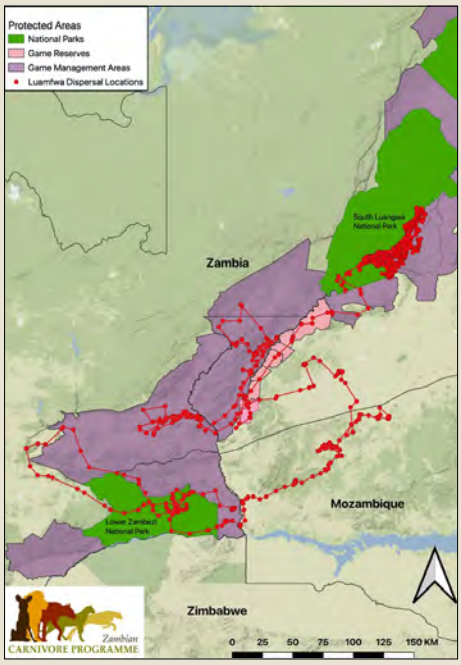
Utilizing Spatial and Movement Data from Dispersing and Resident Carnivores

We utilized data from collared wild dog, cheetah, lion and spotted hyena dispersals, as well as from resident groups, to identify corridors and areas of connectivity, assess the drivers of different carnivore movement patterns through human-impacted landscapes characterizing the remaining range in much of Africa and the globe.



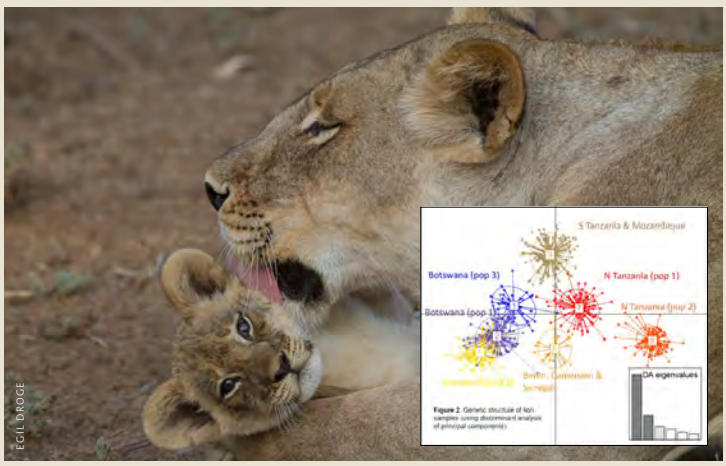
Left: Wild dog, lion (colored circles) land-use change data assist in evaluating and protecting connectivity between the Kafue-Kabompo Ecosystems.

Right: In 2022 a dispersal group of wild dogs from our Luangwa Project embarked on the longest dispersal ever recorded for the species (see Media page 43).



Assessing Genetic Connectivity Between Ecosystems

Together with partners we have developed tools to assess genetic connectivity within and between ecosystems, including pioneering new non-invasive methods utilizing scat, particularly useful for low density carnivore populations in human-impacted ecosystems.



Conservation Leadership

Helping current and aspiring conservationists acquire the skills, training, education and employment to reach their potential is a core aspect of our work, and Conservation Leadership is intertwined with all aspects of our organizational pillars.

Opportunities for building technical and leadership skills in field-based conservation are rare however, due to the scarcity of projects that both conduct such work and that are able to offer leadership training opportunities as part of their organizational objectives.

Taking advantage of our unique programme structure of long-term, field-based projects across Zambia, we embraced 2022 as year of growth and development in our conservation leadership programmes.

Currently, we have the country's largest and most comprehensive capacity-building programme for field-based conservation – supporting educational and training programmes beginning at the primary school level up through the PhD level.

2022 highlights include:

- 9 trainees in the Women in Wildlife Conservation Training Programme
- 22 trainees in the Conservation Biologist Training Programme
- 10 trainees in the Wildlife Vet Training Programme
- 32 participants from 4 organizations in the Professional Development Training Programme
- 6 trainees in the Integrated Field Conservation Course
- Field-based training provided to three individuals from three organisations in Angola, Benin, and Ethiopia

Leadership Training Programmes

PRIMARY IMPLEMENTING PARTNERS

Women in Wildlife Conservation Training Programme

With the majority of our ZCP management team women, we continued to expand opportunities for aspiring female conservationists through our Women in Wildlife Conservation Training Programme across sites, pairing 9 trainees with female mentors from ZCP senior management to provide one-on-one training in all aspects of field-based conservation.

Conservation Biologist Training Programme

Field-based conservation biology requires a lot of different skills, well beyond the coursework students take at university, and thus our Conservation Biologist Training Programme provides the key skills and experience needed for students to understand both the theory and practice of conservation work. We attached 22 trainees to the programme in 2022, and students underwent extensive training in the spectrum of work ranging from carnivore ecology, research and monitoring techniques, to human-carnivore conflict mitigation and community outreach, to field vehicle maintenance and repair.

Wildlife Vet Training Programme

Wildlife conservation work is often a desired field for Vet School graduates in Zambia; however, opportunities for gaining practical field experience and employment in this field are few, given the small number of field-based projects able to provide this. With three experienced field-based vets across three ecosystems we were able to provide training and mentoring for 10 aspiring wildlife veterinarians in 2022.

Professional Development Training Programme

We typically focus on training for fieldwork during the dry season and use the wet season as an opportunity to further refine and develop broader skill sets. This was accomplished through our Professional Development Training Programme (PDT). With the support of multiple professionals in the field of leadership and conservation we facilitated 20 sessions given to 32 participants from ZCP and 4 organizations on a diversity of relevant conservation topics and disciplines, but also on wellness, leadership, communication, and management fundamentals. These were recorded and added to our ever-expanding training library for new team members and trainees.

Team members in our Greater Kafue Ecosystem attend a PDT session during the rainy season to further their carnivore knowledge and equip them with the leadership skills necessary to advance as a conservation professional.

Integrated Field Conservation Course

With support from the Wildlife Conservation Network (WCN) we initiated an exciting new programme in 2022 aimed at increasing conservation participation of Zambian university graduates from urban areas. ZCP's Senior Field Ecologist and WIWC mentor, Bridget Mayani Nkhoma led the inaugural Integrated Field Conservation Course (IFCC) in the Luangwa Valley, and promoted the work at Copperbelt University. The IFCC provided a comprehensive overview of field-based conservation work to 2 men and 4 women trainees interested in pursuing careers in the conservation sector.

WCN Wildlife Conservation Network

Aspiring Conservation Leaders' Programme

We hosted 4 students from our partner Chipembele Wildlife Education Trust's Aspiring Conservation Leaders' Programme at our Luangwa Valley field site. The students were exposed to field work – data collection and monitoring of carnivores, and accompanied our carnivore conflict mitigation team as they conducted outreach and sensitization work with local community members.

CHIPEMBELE Wildlife Education Trust

Training and Collaboration with Partner Organizations and Agencies Across Africa

As part of our Strategic Plan for Conservation Leadership, ZCP aims to increase our impact by utilizing our existing long-term projects to facilitate collaborative training and synergies with partner organizations and agencies across the continent. In 2022 we welcomed colleagues from Angola, Ethiopia and Benin to visit our projects and learn about our work, while sharing information and insights from their own projects.

EWCP Conserving Ethiopian Wolves

AFRICA RANGE-WIDE CHEETAH CONSERVATION INITIATIVE
FUNDED BY THE HOWARD G. BUFFETT FOUNDATION

Advanced Education and Training

Together with the support of our donor partners we continued to help provide opportunities for advanced education and training in conservation. These opportunities were provided for ZCP and DNPW team members as well as partner organizations and graduates of our various training programmes. In 2022 we supported three graduate students, three students for certificate programmes, and eight students for university degrees. As part of our Strategic Plan we are currently positioning to significantly upscale this work going forward.

Clive Chifunte
DNPW Kafue Ecologist, Masters Research on Big Cat Genetics, SLU-Sweden

Clive spent 2022 working on his Master's Degree at Swedish University of Agricultural Sciences (SLU) with ZCP's Dr Göran Spong. Utilizing lion and leopard genetics data collected by DNPW, ZCP, Wildlife Crime Prevention and other conservation partners as part of collaborative anti-trafficking work (see Conservation Action page 18), Clive's research focuses on genetics of Greater Kafue big cats and the development of genetic tools for anti-trafficking. Once finished with his studies next year, he will be equipped with the knowledge and skills to be a genetics specialist for the DNPW.

"Having come to the end of my first year of the master's program at the Swedish University of Agricultural Sciences, I'm thrilled by the quality of education I have received so far. In this year, my studies revolved around solving real world problems that challenge current conservation efforts using modern techniques, and with a greater emphasis on sustainability. Beyond academics and key to my professional growth, I have formed a functional and diverse professional network with my course mates of various nationalities."

Nomsa Kamanga
WIWC Graduate, Undergraduate in Conservation, Catawba College, United States

Nomsa completed her first year pursuing a Bachelor of Science Degree in Environment and Sustainability with a concentration in Community-based Natural Resource Management with a Minor in Geographic Information Systems.

"I believe that having more female leaders will help create peaceful and more democratic environments in different workplaces as well as nations. Having more female leaders will promote inclusivity, encourage open participation, information and power sharing, and allow people to be free in their working spaces. Because of the nurturing and empathetic hearts that women have, we will also bring change by providing solutions to some of the most global challenges like climate change. This can only happen if females around the world are given a chance to be educated through sponsorships."

Mathews Mumbi
DNPW Principal Wildlife Police Officer, Kafue National Park, Bachelor of Arts, Development Studies, Livingstone International University of Tourism Excellence and Business Management

Margret Mwale
WIWC graduate, ZCP Field Ecologist, Bachelor of Science in Wildlife Management, Copperbelt University, Zambia

"Through my studies I am learning how to understand animal behaviour and the importance of preserving natural habitats for endangered species. I am also improving my communication skills so that I can eventually work with communities – to educate them on the importance of natural resources and the need to conserve them."

Dean Banda
ZCP CBTP graduate and ZCP Field Ecologist, Bachelor of Science in Wildlife Management, Copperbelt University, Zambia

"My education is so important to me; I am studying so that I can have enough knowledge about wildlife. I would like to apply this knowledge to the work I am doing with ZCP, especially community sensitization."

ERIC NJOBVU

Coexistence

Our Coexistence pillar focuses on reducing the costs for communities of living with wildlife, but also on increasing the benefits and appreciation of wildlife and conservation. Fundamental to this is human-carnivore conflict mitigation work, given that local communities typically bear the costs of successful wildlife conservation, but often do not enjoy the benefits. However, a core part of our work also focuses on increasing awareness and understanding of conservation benefits, and this work is conducted through numerous mediums including community theatre, radio shows, football tournaments, community game drives, and primary and secondary school conservation clubs.

A woman poses in Luangwa's Nsefu sector with solar lights provided by ZCP and partners. The lights are designed to deter lion predation on livestock as part of improved husbandry techniques aimed at reducing conflict.

2022 highlights include:

- Carnivore conflict mitigation work conducted with 267 livestock owners across 4 chiefdoms
- 3175 domestic dogs vaccinated against rabies in two ecosystems
- 86 educational programmes for 313 students across four ecosystems
- 104 Community Game Drives conducted for 753 community members
- 102 Community Clean Sweeps conducted with 305 community members, and 144 snares removed
- 122 theatre, sports and radio shows for an estimated 33,500 community members

The ZCP/CSL/DNPW Human-Carnivore Conflict Mitigation Team passes a herd of goats in Nsefu Chiefdom, South Luangwa Valley. Changing dynamics of people, livestock and lions in the area have created unprecedented challenges with lion conflict, necessitating an integrated and collaborative approach to addressing the problem for communities and wildlife.

Human-Carnivore Conflict Mitigation

Human-Carnivore Conflict Mitigation Coordinator Dennis Zimba inspects a newly-improved goat enclosure to prevent lion predation.

Human-Carnivore Conflict Mitigation Officer Sandrum Mwale (R) works with livestock owners to improve husbandry and reduce the costs of living with lions.

Together with our organizational partners we continued to improve and expand our Human-Carnivore Conflict (HCC) Mitigation work.

In the Luangwa Valley we worked across 4 chiefdoms with 247 livestock owners to reduce conflict primarily with lions. We continued to increase our team and intend to expand intensive work into two additional chiefdoms in 2023.

The HCC activities primarily focused on improving livestock husbandry through boma construction and reinforcement, early warning systems, and aversive conditioning of lions near or in community areas. Actions were guided through the newly-completed Luangwa Human Wildlife Conflict Mitigation Plan developed and approved by all partners.

In Liuwa we assisted African Parks and DNPW conflict mitigation teams working across 12 chiefdoms with 126 livestock owners. ZCP-AP Vet Dr. Brian Musalo played a key role in this work and activities were guided by the newly-implemented Liuwa Predator Management Plan developed by all partners.

His Royal Highness Chief Mnkhanya (seated) poses with teams from ZCP, CSL and DNPW during meetings on lion-conflict mitigation work for Mnkhanya Chiefdom.

Conflict Mitigation Success in Mnkhanya Chiefdom, Luangwa Valley

Chief Mnkhanya has been a consistent long-term supporter of ZCP's conservation related programs in his chiefdom located in close proximity to South Luangwa National Park. In 2022, Chief Mnkhanya lost 9 cows and 16 goats to predation by lions. He came to the ZCP offices to request guidance and support on how to best mitigate this problem. Dennis Zimba, ZCP's Human-Carnivore Conflict (HCC) Coordinator responded with a site-based conflict assessment which identified enhancements that could be made to his cattle and goat enclosures. Dennis and his ZCP HCC team along with members from CSL, DNPW and Community resource Boards worked with Chief Mnkhanya to build reinforced predator-resistant bomas. Since then no more livestock have been lost to predation.

A new and improved boma in Mnkhanya Chiefdom resulting from collaborative conflict mitigation work.

CSL CONSERVATION SOUTH LUANGWA

CHIPEMBELE Wildlife Education Trust

AFRICAN PARKS AP AFRICAN PARKS

PRIMARY IMPLEMENTING PARTNERS

Together with long-term partner Chipembele Wildlife Education Trust, ZCP works with Conservation Club students to offer Ecology Club, whereby students learn valuable skills for post-graduate employment and education while getting out into the bush to conduct research and enjoy the area's wildlife in a different context.

Primary and Secondary School Programmes

In 2022 we conducted 86 educational programmes to 313 students across 4 ecosystems.

Conservation club students in the Luangwa Valley create sand plots with ZCP team members to look for animal spoors or footprints on one of the sand plots they monitored for the presence of wildlife.

Luangwa: In the Luangwa Valley we expanded our work in collaboration with Chipembele Wildlife Education Trust at Mfuwe Day School and we included two additional schools – Nsefu Day School and Matula Day School to participate in our redesigned Field Ecology curriculum.

As well as student game drives, this new curriculum focused on a biodiversity project involving the set-up and observations of sand plots to study the presence of animals in the GMAs and student game drives. Each club learned how to present their project findings to an audience by creating PowerPoint presentations and travelling to present their findings to other conservation club students in the district at Chipata's Chizongwe Technical Secondary School.

Conservation-related activity booklets were distributed and enjoyed by students as a part of the curriculum at our Kafue and West Lunga field sites.

Liuwa: At our Greater Liuwa Ecosystem site, field ecologists worked with students at the Sibemi Primary School's conservation club. ZCP Greater Kabompo Ecosystem field ecologists based in West Lunga Conservation Project's headquarters continued to facilitate lessons with Jivundu Primary School's conservation club.

In addition, they worked with local school administrators to create two new clubs at Kalende Secondary School and Mufumbwe Boarding School. Some of the topics covered included introductions to the work of ZCP, WWF and WLCP, wildlife and its importance, ecosystems, and pollution.

Kafue: Our Kafue team continued their work with conservation clubs at the Chunga and Mukambi schools, conducted conservation club activities at the Treetops Educational Facility, and with support from Mukambi and Ila Safari Lodges hosted game drives for conservation club members into the Greater Kafue Ecosystem.

PRIMARY IMPLEMENTING PARTNERS

ROSHNI LODHIA

ERIC NJOBVU

Boys carrying their dogs to a rabies vaccination clinic held by Conservation South Luangwa and ZCP in the Luangwa Valley.

Protecting Communities and Wildlife from Disease Outbreaks

PRIMARY IMPLEMENTING PARTNERS

Disease, particularly virulent ones such as rabies, pose a serious threat to communities and wildlife alike. Given that the vast majority of rabies outbreaks originate from populations of unvaccinated domestic dogs, disease mitigation work by ZCP and partners focused on vaccination campaigns in the communities in and around protected area networks.

In the Luangwa we worked together with Conservation South Luangwa to conduct this work. This was also the final year of ZCP Women in Wildlife Conservation graduate Mercy Njobvu's National Geographic Young Explorer grant. With these funds she worked with CSL-ZCP vet Dr Mwamba Sichande and teams to conduct a multi-year rabies vaccination programme with domestic dogs in communities across the South Luangwa Valley. In 2022 767 dogs were vaccinated in the Luangwa.

Similarly, in Liuwa AP/ZCP vet Dr Brian Musalo once again led AP-DNPW's rabies campaign in the vaccination of 2408 domestic dogs and 212 domestic cats across Liuwa Plain National Park and the surrounding Game Management Areas as part of the Liuwa Predator Management Plan.

ERIC NJOBVU

A boy holds his dog and vaccination certificate.

"The project gave me an amazing opportunity to conduct work that is of value to both people and wildlife in the Luangwa Valley. We vaccinated over 1,000 domestic dogs in the GMA bordering SLNP in an effort to reduce the prevalence and risk of the disease. Through the project, we were able to teach people in the community about the impact of rabies on their pets, wildlife and the general public at large."

Mercy Njobvu

National Geographic Young Explorer, ZCP Women in Wildlife Conservation graduate and vet school student at the University of Zambia

CSL
CONSERVATION
SOUTH LUANGWA

Community Clean Sweeps

Another pandemic relief initiative was continued in 2022 through Community Clean Sweeps. In partnership with CSL and the DNPW, community members were supported to conduct trash and snare removal work throughout the Game Management Areas bordering South Luangwa National Park. A total of 102 clean sweeps were conducted in 2022, providing financial support to 305 community members and removing 144 snares.

Community Game Drives

Continuing community support initiatives developed during the pandemic, we supported partner organization Conservation South Luangwa (CSL) in continuing Community Game Drives. Together with the Luangwa Guides Association, the initiative supports local safari guides to take community members on safari, given that many community members have not visited South Luangwa National Park, and often see only the negative aspects of wildlife through conflict. In 2022, 134 community game drives were conducted, with 1,003 community members participating.

Community Outreach & Education

Community Theatre

SEKA (Sensitization and Education through the Kunda Arts) Community Theatre uses performance to engage local community members in seeking solutions to various conservation challenges such as human-carnivore conflict. Through a combination of humor, props made with locally sourced materials, and interactive communication, audience members leave feeling empowered to employ techniques that enable them to coexist with wildlife. In 2022, we worked with SEKA to conduct 56 shows to an estimated total audience of 14,280 in the communities of the Luangwa Valley.

Community Radio

In 2022 we continued to use radio programming as the best means of reaching out to the greatest number of people in the Luangwa Valley with conservation-themed shows. With partners Conservation South Luangwa, Chipembele Wildlife Education Trust, and Wildlife Crime Prevention we conducted 30 broadcasts focused on numerous conservation topics, including the role that women and young people play in carnivore conservation efforts; the effects of poisoning in an ecosystem; the importance of lions and wild dogs; the impacts of climate change on human-wildlife conflict; and unsustainable consumption of natural resources.

Conservation Ambassadors through Sports

Through 36 football events attracting an estimated total of 19,215 people, the Mimbulu (wild dog in the local language) Soccer Academy, created by ZCP Luangwa's Henry Mwape, shared conservation messages through music, theatre and banners. Due to the large numbers of local community members that attend the matches the beloved game of football provides an excellent opportunity to utilize sport as a vehicle for outreach on a wide range of conservation issues.

PRIMARY IMPLEMENTING PARTNERS

2022 Special Events

IUCN Africa Protected Areas Congress

ZCP Luangwa's Project Manager Thandiwe Mweetwa, Assistant Manager Henry Mwape, and Senior Ecologist Bridget Mayani Nkhoma joined over 3,000 delegates from across Africa and the world in Kigali, Rwanda as part of the African Protected Areas Congress. The event convened African government leaders, the private sector and non-profit groups to discuss how protected areas can help conserve nature, safeguard the continent's iconic wildlife, and promote sustainable development. It was the first ever continent-wide gathering of its kind.

Organizational Strengthening Plans with Maliasili

Following the finalization of our 2022–2026 Strategic Plan, we continued to work with our partner Maliasili to develop and implement an Organizational Strengthening Plan. This plan helped implement the Strategic Plan while addressing some of the organizational challenges and needs going forward, highlighted by a 5 day workshop with Maliasili leadership teams, our senior management and ZCP Luangwa team in late 2022.

Tusk Conservation Symposium 2022

ZCP CEO Dr. Matt Becker joined over 40 colleagues from 36 organizations and 12 countries for Tusk's bi-annual Conservation Symposium, in Kenya's Maasai Mara. Post-pandemic, the symposium themes were building resilience in conservation, and strengthening collaborations between Tusk-supported organizations across the continent.

African Conservation Leadership Network

In 2022 ZCP Kafue's Senior Ecologist Kachama Banda and CEO Dr Matt Becker completed their yearlong programme as part of the fourth cohort of the African Conservation Leadership Network (ACLN). Supported and developed by Maliasili and The Nature Conservancy, the ACLN objective was to achieve greater conservation impact in Africa by improving the quality and effectiveness of leaders of local organizations that work with communities. Eight locally-based conservation organizations across Africa were selected for this cohort, and in addition to a series of online work and meetings, sessions were held in South Africa and Namibia. ZCP continues to be active in ACLN.

African Wild Dogs United Virtual Conference

Team members attended the first International and Collaborative Virtual African Wild Dog Conference. We presented on a variety of topics, including prey depletion impacts on wild dog demography and a special session by Thandiwe Mweetwa and Henry Mwape on community engagement, education and awareness to build local and national capacity for African wild dog conservation.

On the Big Screen and in the News in 2022

The Incredible Journey of African Wild Dogs

Wild dogs can disperse over vast distances, and prior to 2022 the longest-recorded dispersal distance for the species was approximately 600 km. Our ZCP Luangwa Project documented three females leaving South Luangwa National Park and embarking on an epic, multi-country dispersal of over 2,000 km in 2022. Their story was captured by the New York Times and highlighted the importance of large, connected landscapes, and the important conservation work to conserve them.

Epic Adventures with Bertie Gregory

The popular new series "Epic Adventures With Bertie Gregory" aired in 2022, featuring buffalo-hunting lions of the Luangwa Valley, as well as our Luangwa Project's collaborative lion conservation work.

BBC's series Dynasties II

The lives of two iconic matriarchs – Kali and Suma – were shared with the world in two episodes of the BBC's Dynasties II in 2022. These amazing wildlife stories were filmed over three years in the Greater Liuwa Ecosystem with the help of our field teams. The episodes followed Kali, the queen of Liuwa's recovering cheetah population and her cubs, and Suma, the leader of the South Clan hyena dynasty.

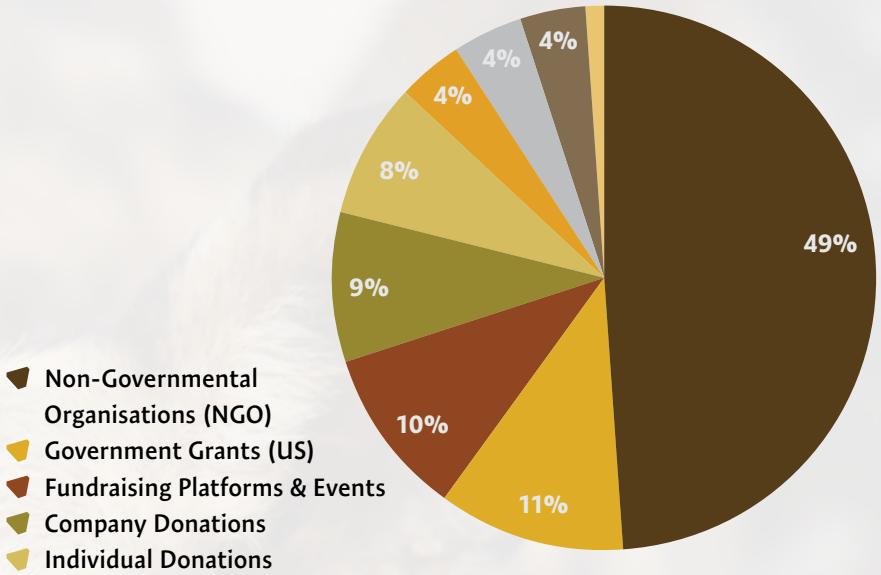
Running with the Pack

In 2021 we worked with Love Nature, wildlife cameraman Julz Braatvedt and his film crew to follow the lives of three African wild dog packs for six weeks during the dry season in the Luangwa Valley. This 6-part series gave people around the world a glimpse into the challenges and complexities of life in a wild dog pack, and the conservation threats facing them. Later in 2022 Season 2 was filmed with our Luangwa team and the dogs—stay tuned for the 2023 release!

Financials

2022 Income Categories

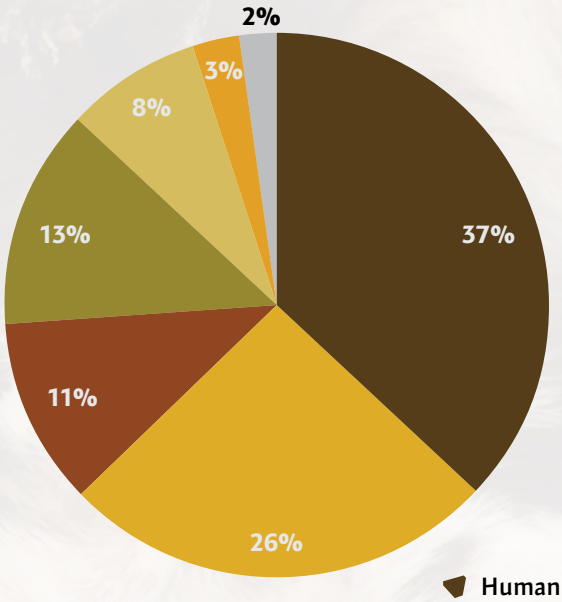
(Total $1,222,646)



- Non-Governmental Organisations (NGO)
- Government Grants (US)
- Fundraising Platforms & Events
- Company Donations
- Individual Donations
- Non-Profits & Foundations
- Government Grants (EU)
- Luangwa Community Conservation Fund
- Other

2022 Expenditures by Category

(Total $1,270,724)



- Human Resources
- Field Operations
- Camp & Office Running Costs
- Subgrants to Conservation Partners
- Capacity-Building, Outreach & HCC
- Travel and Accommodation
- Admin and Reporting

2022 Supporters

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2022 Partners

In Memory of Our Friend, Mentor, Leader, and Teammate

Wigganson Matandiko, DVM, Ph.D.

1965–2022

"I had the good fortune of working with Wigganson in Kafue for a season with ZCP and during that time he made a strong impression on me. I don't know that I have ever met someone who seemed so universally respected as Wigganson. It didn't matter if it was a safari operator, ranger, or academic – those who knew him just seemed to carry themselves a little straighter, to be a better version of themselves, when he was near. He always had a smile and time for everyone, no matter your station in life. I think that spirit of goodness will be carried forward by those who knew him and continue (to) act as a force for good in the world. Go well, Dr. Matandiko!"

—Brandon Nickerson

It is with deep sadness that we report the tragic passing of our dear friend, mentor and teammate, Dr. Wigganson Matandiko in 2022.

Dr. Matandiko was an incredibly kind and knowledgeable person, a beloved father and husband, and a positive force, role model, and inspiration to anyone who had the good fortune of knowing and working with him.

As the former DNPW Head of Veterinary Services, Dr. Matandiko received a Fulbright Scholarship in 2011 to pursue his goal of obtaining a Ph.D in wildlife management. He worked with ZCP's Dr. Scott Creel at Montana State University, conducting his graduate work on large herbivores and carnivores in the Kafue ecosystem for many years while mentoring numerous young professionals in the organization and DNPW before receiving his degree in 2016.

A life taken too soon. Our deepest condolences to his family and all who knew and loved him. MHSRIP. He will be sorely missed and leaves a hole in our hearts.

EGIL DROGE

Zambian
CARNIVORE PROGRAMME

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