QUARTERLY REPORT: 01

THANK YOU FOR YOUR GENEROUS SUPPORT TO COMMUNITY–LED CONSERVATION AND EQUIPPING NATURE'S DEFENDERS WITH ESSENTIAL TECHNOLOGIES AND HUMAN CAPACITY TO PROTECT SOUTH AFRICA'S THREATENED SPECIES.

ACTIVITIES – SOUTH AFRICA

Since your wonderful donation in mid-January 2024, in three months we have:

1) Unlocked match–funding from tech companies

CCF has successfully triggered an extra $1,000,000 in crucial technology equipment and cloud services from companies like CISCO, Actility and Dimension Data for essential 2024 projects. These resources will revolutionise the data-driven conservation efforts of significant, intact ecosystems, enabling targeted interventions and species recovery.

2) Mobilisied resources

To expand our impacts and implement the planned range of conservation projects, we have acted swiftly by recruiting three new team members: a GIS and Data Analysis Specialist, a Capacity Building Project Manager and a Field Engineer. They have started their roles to carry out our programs through a comprehensive strategy and our holistic approach. This guarantees sustainable species rehabilitation and efficient management of protected regions, benefiting wildlife and local communities alike.

HOLISTIC ECOSYSTEM APPROACH

Right infrastructure & technologies
Design, procure and land donated or non donated tools, implement and support teams.

Enabling communities & human capacity
Supporting community-led conservation and livelihood beneficiation. Developing ICT careers in data-driven conservation. Creating jobs for locals.

ENABLERS
Positive impacts on biodiversity

Catalyzing investment & private sector contribution
Help scope suitable solutions, secure donated tech, fundraise and measure impacts

Connected Conservation FOUNDATION

3) Allocated resources to new projects and maintained existing ones

We have begun delivering essential new technologies to various locations for species and landscape conservation. Additionally, we are enhancing our field training and capacity-building programs to safeguard critically endangered rhinos, as well as lions, cheetahs, pangolins and wild dog populations.

Learn more about these projects below.

LAPALALA GAME RESERVE
A new project made possible with your funding

OUR MISSION: Enable technology to safeguard biodiversity and empower community outreach.
PROJECT: Bring internet connectivity to the youth environmental education centre, through the Lapalala Wilderness School and provide advanced equipment to support rangers against poaching.

Lapalala Wilderness Nature Reserve resides in the Waterberg Biosphere Reserve in Limpopo Province. Currently spanning 41,700 hectares, an expansion of an additional 7,000 hectares is in progress. **The reserve boasts a variety of wildlife including black and white rhino, wild dog, cheetah, honey badger and many other fascinating species.**
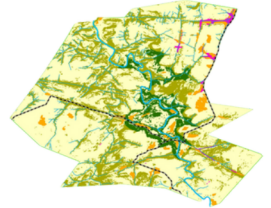
In the past three months, we have secured donations of landscape-scale network connectivity equipment from CISCO, data integration software from ACTILITY, for this reserve and their education initiatives. **These innovative tools will enable Lapalala to identify conservation issues, provide data for decisions, and implement targeted interventions.** The central operations room will be equipped to integrate and visualise new wildlife and security data from various parts of the nature reserve. Additionally, **the education campus and school will benefit from enhanced enterprise-level connectivity, expanding educational activities,** and reducing operation and support costs to allocate more funds directly towards education and conservation.

Wildlife poaching remains a constant threat in this area. We have planned and organised the importation of a new surveillance digital infrastructure, which covers any importation taxes and duties. This system will **provide early warnings of poaching activities, allowing rangers to swiftly respond and prevent poachers from harming rhinos**. The technology is scheduled to clear customs by May 24. Swabir Abdulrehman, CCF's Technical Director, will travel to Lapalala during the following period to implement this system in the field. We will also be training local technical staff to operate and maintain this crucial equipment.

MADIKWE GAME RESERVE
Your new funding will strengthen technical support and capacity building

OUR MISSION: From ground to the sky, converging technologies to protect precious wildlife and support rewilding.

PROJECT: Implement landscape-scale technology solution, satellite imagery and capacity building.

Madikwe Game Reserve has undergone an incredible transformation. Fragmented farmland has been united and fences have been removed, whilst invasive sickle bush cut back to create rich grasslands. These recovering landscapes are supporting species reintroductions, with 30 lodges establishing tourism infrastructure, supporting over 1,000 jobs and a wealth of community benefits.

Over time, CCF has collaborated with the local conservation not-for-profit, Madikwe Futures Company (MFC), to **utilise a range of technologies including long-range thermal cameras, camera traps, fence alarms, drones and tracking devices to help tackle poaching**. These tools operate round the clock, alerting security teams to incursions and threats and aiding anti-poaching efforts.

Additionally, **CCF has integrated ground sensors with 30cm Pléiades Neo Satellite Imagery** of Madikwe's 750km2 landscape, generously provided by the Airbus Foundation. Poachers have started targeting previously unmapped areas within Madikwe. Swiftly capturing new imagery within four hours of reported poaching incidents has allowed the anti-poaching team to pinpoint blind spots, and entry and exit routes used by poachers, **strengthening their security responses.**

> **POACHERS ARE PROFESSIONALS. THEY'RE VERY EXPERIENCED. SO IT'S EXTPFMELY VALUABLE TO SEE HOW THE POACHERS ARE GETTING IN AND OUT OF THE RESERVE AND HOW LONG IT TAKES THEM.**
>
> *-- Koos Potgieter,*
> *Manager at Madikwe Futures Company*

NEXT STEPS: HELP MADIKWE EXPAND THEIR SENSORS AND START A DRONE-ENABLED SECURITY PROGRAMME TO RESPOND TO ALERTS. YOU CAN READ MORE HERE.

SABI SAND NATURE RESERVE
Your new funding will strengthen the monitoring of relocated white rhinos

Africa Parks has acquired the world's largest captive rhino breeding operation to save and reintroduce white rhinos into secure, well-maintained protected regions. This initiative aims to relocate some of the 2,000 white rhinos (representing 15% of the remaining population) to safe sites. The team is currently focused on planning the transfer of these rhinos. We are collaborating to identify and procure the necessary tools and technologies to monitor the rhinos after transfer.

The secret rewilding project that could save the white rhino

Poachers have driven the species to the edge of extinction – but an ambitious programme hopes to permanently secure its future

Ben Farmer, AFRICA CORRESPONDENT and Simon Townsley, PHOTOGRAPHER, IN JOHANNESBURG
5 February 2024 · 1:02pm

The farm is home to an extraordinary 2,000 white rhinos, equivalent to one in seven of the world's entire population | CREDIT: Simon Townsley/The Telegraph

SCOPING SUPPORT FOR NEW RESERVES

CCF has been approached by different reserves for technology-focused support, to help transform protected area management. These reserves include Imfolozi Park, Tembe Elephant Park and Kwandwe Game Reserve. We have been invited to conduct technical surveys for each park to assess their challenges and needs and design suitable solutions to save rhinos and other threatened species in their region.

DEVELOPING CONSERVATION TECHNOLOGY CAREERS AND LOCAL COMMUNITY EDUCATION AND DIGITAL SKILLS

Cleo Graf was appointed to lead our capacity building programme, focusing on outreach education and technology training projects. She has started collaborating with partners for content creation, educational activities and outreach efforts. The programme consists of two main workstreams:

DEVELOPING ICT CAREERS IN DATA-DRIVEN PROTECTED AREA MANAGEMENT

Conservation tech has proliferated and become a fundamental part of achieving and measuring positive impacts on biodiversity. However, the human resources and capacity to manage and maintain it has lagged, creating a capacity gap and barrier.

In the last month, **we've began designing and scoping our new programme to develop professional ICT capacity for conservation**, to enable parks to harness modern digital infrastructure (Cloud, data analysis, remote sensing AI) to scale up nature protection and restoration, whilst **building job opportunities for local people.**

INSPIRING YOUNG PEOPLE TO BUILD CAREERS IN CONSERVATION AND TECH

To attract individuals to ICT and conservation education and capacity-building programs, we must ignite fresh enthusiasm among new learners. This initiative will utilise interactive educational materials to **captivate young minds, encouraging their interest in the responsibilities of rangers, wildlife conservation and technology.** By providing the younger generation with the necessary technical and conservation expertise, we aim to involve them in impactful conservation efforts and inspire them towards potential careers.

With the programme and online evaluations to monitor comprehension, we aim to:

01: Reach 1,000 students across field locations for training mentorship and opportunity development.
02: Seek a 100% change in perception rate on matters of conservation among this audience.

NEXT STEPS:
BUILD PARTNERSHIPS WITH ACADEMIA AND LOCAL NPO ORGANISATIONS TO CREATE CONTENT AND HELP SET UP, DELIVER AND SUSTAIN THE PROGRAMME.

ABOUT OUR NEWLY HIRED TEAM

Thanks to your generous contribution, we've welcomed...

Japheth, GIS & Data Science Specialist

Japheth is now supporting the operations and technical aspects of our collaborative programs. His expertise boosts our capabilities, allowing us to work closely with partners such as the Airbus Foundation, CCF's in-field project partners, and award grantees. Japheth has started implementing technical improvements with our Round 1 Award winners, assisting in reporting on analysis, methodology and results. This is preparing us to share valuable information with the conservation community for the benefit of our partners.

Swabir Abdulrehman, Technical Director

Swabir has impressive experience in designing and leading in-field deployments of a range of conservation technologies including large-scale communications networks, LoRaWan connectivity, Earth Ranger integrations and a full range of wildlife monitoring technologies. CCF has worked closely with Swabir, through 51 Degrees, to deploy LoRaWan networks across 28 conservancies in Kenya. We are thrilled he has now joined the CCF team.

Cleo Graf, Education Programme Project Manager

Cleo has worked in conservation areas across Sub-Saharan Africa for the last 24 years and has experience in all aspects of protected area management and functions. For the last 9 years, she has been working at the Southern African Wildlife College designing and implementing education and capacity building programmes for a wide range of conservation-related skills including conservation technology.

This is a thrilling moment to grow our team, and we believe it will enhance our partnership even further. Your donation provides us with crucial technical skills such as GIS, remote sensing, machine learning and cloud technologies. These capabilities allow us to collaborate with partners, outline project needs and assist conservation groups and scientists in making data-informed decisions.

ACTIVITIES BEYOND SOUTH AFRICA

This month, the Connected Conservation Foundation and the Airbus Foundation are excited to support these four projects with access to cutting-edge satellite technology alongside funding to apply machine learning to their data, coupled with training and technical support to safeguard endangered species.

Coexisting with Andean Bears in the heart of Peru

Our project with Conservacion Amazonica is harnessing spatial data and community engagement to conserve the Andean Bear in Peru. The collaborative team plans to map intricate bear habitats, monitor movement patterns, understand human-wildlife conflict hotspots and develop conflict management strategies for informed community-led action ensuring the survival of this iconic species.

Sustaining suitable habitats for the greater one-horned rhino

Our pioneering collaboration with the Zoological Society of London, within Nepal's Chitwan-Parsa Complex will harness satellite data to refine grassland management strategies tailored to the conservation of the critically endangered greater one-horned rhinoceros. Chitwan is home to almost all of Nepal's remaining rhinos (697 out of 752).

Conserving critically endangered Ethiopian Wolves

With only 366 individuals remaining, the project aims to safeguard this critically endangered species and its habitat. The teams at Chulalongkorn University & Ethiopian Biodiversity Institute will utilise satellite imagery and ground data to monitor wolf habitats to understand the complex relationship between habitat dynamics and human impacts from livestock and agriculture activities, to inform targeted conservation.

Protecting wildlife in South Sudan's untouched terrain

Fauna & Flora is utilising satellite imagery to conduct thorough landscape-level assessments in South Sudan's Bangangai, Bire Kpatuo and Mbarizunga Game Reserves. These assessments aim to map land use and land cover, identify core forest patches, pinpoint deforestation drivers and map out connectivity pathways vital for the survival of several endangered species.

About Connected Conservation Foundation

Connected Conservation Foundation unites the capabilities of technology companies to equip local partners with game-changing tools for nature protection and restoration. CCF brings essential connectivity, communications and sensing devices to vast landscapes, enabling conservation managers and local communities to pre-empt and stop poaching, habitat loss and human-wildlife conflict in protected areas.

About Connected Conservation Foundation NPC

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