

Project Title: The deployment of EarthRanger, a data visualization and analysis software to strengthen Protected Area Management Effectiveness in Africa's National Parks.

Location: Regional (Botswana, Mozambique, Republic of Congo)

Target Protected Areas: **Botswana:** Chobe National Park National Park (NP)

Mozambique: Limpopo NP and Zinave NP

Republic of Congo: Nouabalé-Ndoki NP; Odzala-Kokoua NP; Conkouati-Douli NP

Implementing Agency: Conservation International (CIGEF)

Executing Agency: The Allen Institute for Artificial Intelligence (AI2)

Executing Partners: Conservation International; Botswana Ministry of Environment, Wildlife and Tourism through the Department of Wildlife and National Parks; The Mozambique Ministry of Land and Environment through The Mozambique National Sustainable Development Fund (FNDS); The Republic of Congo, Ministry of Tourism and Environment; Peace Parks Foundation (Mozambique), Wildlife Conservation Society (WCS) (Republic of Congo), African Parks (Republic of Congo), Noe (Republic of Congo)

GEF Grant Amount: US\$ 2,407,360

Co-financing (including commitment from CI): US\$ 4,801,400

Duration: 3.7 Years (July 2022- March 2026)

Status: Implementation Phase

Background

[EarthRanger](#) is an easy-to-use online software solution developed by Vulcan Inc. to help protected area managers, ecologists, and wildlife biologists stay informed and make operational decisions for wildlife conservation.

Barriers that will be addressed by the EarthRanger project

Barrier 1: In-adequate capacity (technical, financial, and human resources) for effective management of protected areas

Barrier 2: Inadequate response mechanisms to wildlife crime.

Barrier 3: Insufficient knowledge, awareness and access to useful information related to using conservation technologies to effectively manage Protected Areas coupled with weak coordination between authorities in charge of managing protected areas

Barrier 4: Weak monitoring system to track performance

Project Objective, Components and Outcomes

This project will address the barriers above through realization of the following:

Objective of the Earth Ranger Project: To strengthen management effectiveness of priority Protected Areas (PAs) in Africa to deliver global environmental benefits through deployment of the EarthRanger protected area management system and related technologies

COMPONENT 1: Installation of Earth Ranger software together with other required technologies and infrastructure to achieve Earth Ranger readiness

Outcome 1.1: Strengthened institutional and technical capacity of participating countries to effectively manage protected areas.

COMPONENT 2: Learning, knowledge sharing and scaling the EarthRanger technology across Africa

Outcome 2.1: Additional PAs in Africa are identified and the respective Countries commit to install the EarthRanger technology.

COMPONENT 3: Monitoring and Evaluation (M&E)

Outcome 3.1: An integrated monitoring and evaluation framework for the project

Benefits

Baseline practices in the Protected Areas (PAs)	Alternatives to be put in place by the Earth Ranger project that will improve PA management effectiveness	Global Environmental Benefits provided through the employment of Earth Ranger ¹
<ol style="list-style-type: none"> 1. Weak institutional and technical capacity of participating countries to effectively respond to current and future environmental, social and economic threats facing PAs. 2. Safety and security of rangers at risk due unpreparedness to respond to situations e.g., poachers 3. Human Wildlife conflicts 4. Low capacity (technology, human and financial) to protect and manage Biodiversity covering vast areas (which are mostly remote) drives further biodiversity loss and ecosystem degradation 5. Encroachment in search of agricultural land; logging resulting to deforestation 6. Low uptake and awareness about benefits of conservation technologies such as the Earth Ranger 	<p>Installation of the Earth Ranger Technology in the selected PAs resulting to strengthened management effectiveness of priority Protected Areas (PAs) to effectively respond to current and future environmental, social and economic threats.</p> <p>Earth Ranger technology will:</p> <ol style="list-style-type: none"> 1. Enhance safety and security of both Protected Area management field teams and Biodiversity: This technology has visualization capability which allows managers to gain real-time, in-depth understanding of activities related to poaching and other habitat threats. 2. Strengthen Ecosystem Management: Earth Ranger is able to monitor habitats including wildlife, forests, and other landscapes through sensors, reports, and field data which will ensure effective management of protected areas hence promoting ecological integrity and subsequent ecosystem services including carbon sinks, tourism etc. 3. Promote Human-Wild life Co-existence: Proactive mitigation through timely and seamless recording of incidents and geo-fence alerts will enable managers to reduce conflict incidents and help communities and human settlements coexist with wildlife (human wildlife conflicts will be significantly reduced). 4. Capacity of PA management teams is built to protect and monitor the PAs and prevent loss of biodiversity (including globally significant biodiversity and threatened species) 5. Greater public awareness about benefits of conservation technologies such as the Earth Ranger 6. Transboundary collaboration with neighboring countries to manage the PAs using conservation technologies 	<p>Biodiversity conservation</p> <ul style="list-style-type: none"> • Protection and conservation of globally significant biodiversity and threatened species within the Protected Areas. • 4,901,650 Ha of Protected Areas under improved management resulting to protection and conservation of biodiversity against poaching, destruction of habitats through human encroachment, illegal harvesting and trafficking of threatened species • Protection and conservation of forests and water bodies within the PAs hence increased carbon sinks which mitigate GHG emissions

¹ Global Environmental Benefits per GEF Focal Area: <https://www.thegef.org/documents/global-environmental-benefits>