

Impact Challenge INITIATIVES

Sue Watt reports on four creative projects that are having significant impact

In December last year, Wilderness, the safari and conservation company, launched the Wilderness Impact Challenge on a quest for bold, innovative conservation projects, offering a prize of US\$100,000 for the winning entry. Based on Wilderness' three pillars — Educate, Empower and Protect — this brief emphasised the 'Protect' element, seeking game-changing solutions to improve human-wildlife coexistence. They received more than 140 entries, each bringing inspiring approaches to conservation, and announced the finalists and winner in April.

"We are amazed at the overwhelming interest in this inaugural Impact Challenge — not just in the number of entries but also in the positive feedback from projects on the ground," Wilderness Group Head of Impact, Vince Shacks, commented. "With so little finance available to explore and test new solutions, we're excited to see a wealth of innovative ideas and fresh concepts coming forward. Innovation is not the challenge — rather, it's the lack of access to the right kind of funding needed to turn these ideas into action."

Head start. Livestock herder Rra Kediseletse Legoa with a sheep fitted with a BioBoundary leopard-deterrent collar, a simple gadget that has been proven to stop predation.

WILDENTRUST

WILD ENTRUST AFRICA
SAVING LIVESTOCK
BY MIMICKING
PREDATOR SCENTS



BioBoundary Deterrents uses animal scents replicated chemically through groundbreaking techniques to discourage predators from attacking livestock. Wild Entrust Africa's Botswana Predator Conservation team, lead by biochemist Peter Apps, has developed a system of mimicking natural odours that mark the territories of spotted hyena, lions and leopards.

They distributed the synthetic version around boma fences or on animal collars to act as invisible barriers for predators on the hunt, communicating to them through scent — a language they understand. Sensing they're stepping

on another animal's patch, they move on elsewhere, leaving the livestock in peace.

In tests on cattle ranches and subsistence livestock areas where human-wildlife conflict is common, the BioBoundary project discovered that one component of predator urine released from goat collars immediately reduced killings by predators from around 28 per month to zero. The technique has huge advantages beyond its obvious success rate — it is simple to use, environmentally friendly, cost-effective, and minimally invasive to livestock, yet has a huge impact in protecting wildlife and promoting human-predator coexistence.

www.wildentrust.org



FINALISTS:

TERRASENSE
REINVENTING
WILDLIFE TRACKING

Terrasense founders

Jonathan O'Connell and Matthew Gee are working to remove the need for regular (and costly) tranquilising of animals in order to fit and maintain the bulky collars and often inefficient batteries currently used as wildlife tracking tools by conservationists.

Their aim is to "eliminate the trade-off between data collection and animal welfare" by using small, battery-free antennas with ultra lightweight tech and a non-invasive bio-adhesive to attach it to the animals.

Along with specially designed short-and long-range tracking networks that don't rely on cellular networks, they are developing a groundbreaking innovation to use impalas as a mobile detection system with small receivers to pick up signals from nearby wildlife wearing the tags. Why impalas? Because they roam far and wide, with predators following them, and share their grazing habitats with large herbivores such as rhino and elephants.

www.terrasense.org

Right: **Jonathan O'Connell**, Founder and CEO of Terrasense testing the tech in the field



ELE-COLLECTION
PURGING PLASTIC TO
PROTECT ELEPHANTS

Plastic waste has become an increasing problem around Victoria Falls, particularly when elephants ingest it as they search for food around the town. Following a fatal elephant attack on a local resident in 2021, the bull was euthanised and examined: myriad plastic items were found in its stomach, no doubt causing pain and leading to his unexpected aggression.

Urgent action was needed to clean up the area, and Ele-Collection was born, the brainchild of Ben Norton. Wanting to involve the whole community, a Trash-for-Cash scheme was launched, whereby anyone who collects plastic can obtain a price per kilo, thus giving waste a value. Corporate and residential collections are also arranged, and collection teams earn an income by clearing the worst problem areas.

The waste is then transformed into a building aggregate called Plazrok, which is suitable for structural construction and is internationally tested and approved. They also bale plastics to be recycled into pellets that are then used in place of virgin plastic. Ele-Collection's ultimate aim is to work across the entire Kavango Zambezi Transfrontier Conservation Area, helping to rid these wild areas of pervasive plastic pollution.

www.elecollection.co



Bales of collected plastic waiting to be recycled into pellets for alternative use.

XEROth AI
AI-POWERED SNARE DETECTION

Wire snares — a favoured tool for poachers — are vicious devices, causing pain to animals they trap and killing wildlife indiscriminately. They are also difficult to find, often hidden in undergrowth and requiring resource-heavy manual sweeps of areas to remove.

But Graham Wallington, Founder and CEO of Xeroth AI, has pioneered a cutting-edge method for detecting wire snares by combining Airborne Radar technology and AI data analytics.

Vast tracts of land can be scanned daily from the air, using high resolution radar from drones or planes. The data from that is processed into geo-referenced high dimensional images and computer vision models then use object

detection algorithms to search for the unique signatures of wire snares, delivering their locations to rangers.

This new technology will transform the work of conservation teams, vastly increasing the success rate of finding and removing lethal snares and effectively disrupting illegal poaching operations.

www.xeroth.ai



Scanning for snares using Xeroth AI's new technology

For more, visit www.wildernesstrust.com/impact-challenge