



HACK THE  
PLANET

TECHNOLOGY FOR GOOD

PRODUCT OVERVIEW · 2026

# Smart Deterrent

An AI-triggered, non-lethal deterrent that keeps wildlife — and the people sharing their landscape — out of harm's way.

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[hack-the-planet.io/products/smart-deterrent](https://hack-the-planet.io/products/smart-deterrent) · Rotterdam, Netherlands

ABOUT HACK THE PLANET

*Tech for good across three pillars: wildlife conservation, social impact, and innovation. We're a non-profit foundation working alongside rangers, NGOs and communities worldwide.*

THE PROBLEM

Across the world, wildlife and people increasingly share the same landscapes — elephants raiding crops, brown bears entering mountain villages, hippos walking through fishing camps. The result is destroyed livelihoods, injured people and, too often, retaliatory killings. Fences and traditional deterrents either fail or harm the animal. Communities and wildlife both pay the price.

## What it does

Smart Deterrent is an autonomous, multi-sensory deterrent system that activates light and sounds when an AI camera detects wildlife approaching populated areas, reducing human-wildlife conflict without harming the animal.



HOW IT WORKS

## What it does

Human–wildlife conflict is one of the most urgent challenges in conservation today — between communities and elephants, brown bears, hippos and many other species. Smart Deterrent is our answer: an **automated, non-lethal deterrent** that protects villages, farms and wildlife alike.

When a paired AI camera detects an animal near a known conflict zone, Smart Deterrent activates a **varied combination of light and sound** designed to attract the animal's attention and create distance — without causing harm or panic.

## Built to stay unfamiliar

Wildlife habituates. Show an elephant the same flash pattern or play the same recorded sound twice, and within a few weeks they ignore it. The Smart Deterrent's secret is a **large on-board sound library** — music, human voices, animal calls and more — that cycles unpredictably, paired with light flashes.

What actually works depends on the species and the landscape, so we test and tune the mix in the field: an elephant in Zambia doesn't respond to the same stimulus as a brown bear in the Carpathians. The result: the deterrent stays unfamiliar, and animals keep their distance.

## How it works

The system runs in two parts, fully autonomous:

1. **Detection** — AI camera systems (typically [Instant Detect](#)) continuously monitor known wildlife movement corridors.
2. **Response** — When the target species is detected, the Smart Deterrent activates automatically — light, sound, redirect away from settlements and crops.

Because the entire chain is self-contained and solar-powered, Smart Deterrent works in unfenced landscapes where building infrastructure isn't an option.

[ CAPABILITIES ]

## Designed not to be ignored

Wildlife habituates fast. A predictable warning gets ignored within weeks. Smart Deterrent is built so that never happens.

01

### Varied sound library

Plays from a large library of music, human voices and other sounds. We test and tune the mix per species and region — what unsettles an elephant in Zambia isn't what works for a brown bear in the Carpathians.

02

### Light flash patterns

Combined with sound, the light makes the deterrent multi-sensory and harder to dismiss.

03

### AI-triggered

Pairs with Instant Detect or compatible AI cameras — the deterrent only fires when the right species is actually detected.

04

### Solar-powered, autonomous

Designed for unfenced rural landscapes — runs entirely off-grid with minimal maintenance.

05

### Modular & deployable

Lightweight units that can be installed where they're needed and relocated as conflict patterns shift.

06

### Field-validated

Operating against elephants in Zambia and brown bears in the Carpathians, with partners on the ground in both regions.

[ WHAT SETS IT APART ]

## Why Smart Deterrent?

Most deterrents either become background noise or harm the animal. Smart Deterrent is built differently.

### 01 Defuses human–wildlife conflict before it starts

Elephants raiding crops, brown bears entering mountain villages, hippos crossing fishing camps — the moment one of these animals is detected near a settlement, Smart Deterrent fires up light and unpredictable sound to steer them away. No retaliation, no destroyed livelihoods, no injured animal.

### 02 Built to outsmart habituation

Variable patterns and a deep sound library — music, human voices and more — mean the response is never the same.

### 03 Non-lethal, non-harmful

No fences, no shots fired, no chemicals. Just unpredictable stimuli that politely tell the animal to go elsewhere.

## What you can use Smart Deterrent for

Anywhere a species has learned to ignore the static stuff — fences, flashing lights, recorded shouts — and you need something that stays unfamiliar.

### Elephant crop-raid prevention

Keep elephants out of farms and villages without harm. Proven in the Kafue ecosystem, Zambia, with Conservation South Luangwa and Game Rangers International.

### Bear–village coexistence

Live in the Romanian Carpathians, keeping brown bears at distance from mountain settlements alongside Foundation Conservation Carpathia.

### Hippo–people separation

Defuse dangerous encounters around fishing camps, waterways and village walkways.

### Early warning system

The Smart Deterrent can also be used to alert people that potentially dangerous animals are in the vicinity.

### Any species that has learned to ignore the rest

The varied sound library is the secret — music, voices and more, mixed unpredictably so habituation never quite catches up.

[ FIELD DEPLOYMENTS ]

## Where Smart Deterrent is deployed

Smart Deterrent pairs with AI cameras to keep wildlife and people apart — light, sound and unpredictable patterns, fired only when the right species is detected.



2023 · KAFUE NP, ZAMBIA

### Keeping elephants out of villages without harm

Preventing dangerous encounters between elephants and nearby villages with AI detection and non-lethal deterrents.

With Game Rangers International



2023 · CARPATHIAN MOUNTAINS, ROMANIA

### Keeping brown bears out of mountain villages

15 AI cameras and 15 Smart Deterrents to keep brown bears out of mountain villages — without harming them.

With Foundation Conservation Carpathia



2025 · GONAREZHOU NP, ZIMBABWE

### Reducing dangerous hippo-human encounters

Camera-based behavioral monitoring to reduce dangerous hippo-human encounters and refine deterrent technology.

With University of Leeds · Gonarezhou Conservation Trust

[ FROM THE FIELD ]

## In the field



## Working on human–wildlife conflict?

Smart Deterrent is currently deployed against elephants in Zambia and brown bears in the Carpathians. If you're tackling crop-raiding, village incursions or any other species-driven conflict, get in touch.

[Contact us](#)

[Support our work](#)

Email [info@hack-the-planet.io](mailto:info@hack-the-planet.io)

Web [hack-the-planet.io](http://hack-the-planet.io)

# Ten years of innovation

Hack The Planet was founded in 2016 on a clear conviction: the right technology, in the right hands, can move the needle on the world's biggest problems. We bring engineering expertise to the field — for wildlife, for communities, and for the people who protect them.

Ten years later we've worked across **9+ countries** with **34+ partners**, and in 2025 we became an official Dutch non-profit foundation. The mission has not changed: build technology that helps wildlife, communities and the people who protect them.

Our work is funded by donations, grants and partnerships. Because we are an **ANBI** (Algemeen Nut Beogende Instelling), donations from the Netherlands are tax-deductible.

**Q42** is our **founding donor** — and has made Hack The Planet possible. From the start they have contributed funding, engineering time and a home to grow from. Hack The Planet now operates as an independent foundation, but Q42 remains a long-term supporter — and the place where it all started.

LEGAL NAME	STATUS	KVK	IBAN
Stichting Hack The Planet	ANBI-registered	98279238	NL79 TRIO 0321 1304 05

## Where our technology makes a difference

Where our technology makes a difference — from wildlife rangers in remote national parks to local communities.

### 01

#### Conservation

Anti-poaching, wildlife monitoring and human-wildlife coexistence — built with rangers, NGOs and research partners on the ground.

### 02

#### Social impact

Tech serving people — from VR experiences for elderly care to digital interventions tackling youth violence.

### 03

#### Innovation

New concepts that prove what's possible — affordable medical devices, autonomous drones, immersive humanitarian training.

# 01 · Conservation

## Technology that protects wildlife

Most of our conservation work happens in protected areas across the globe — places where rangers patrol thousands of square kilometres without cell coverage, where poachers move silently at night, and where an elephant or a brown bear stepping into a village can change lives in seconds.

We build the hardware and software that ranger teams, NGOs and research institutions rely on in exactly those conditions. Solar-powered, satellite-connected, ruggedized for heat, dust, rain and curious wildlife — and refined every season by the people who actually use it in the field.

The result is a small set of three field-proven platforms — and the deployments that prove them.



### [ OUR PRODUCTS ]

Three field-proven platforms, deployed in collaboration with our conservation partners worldwide.



Product 01

### ScannerEdge

Passive radio-frequency detection that warns rangers about people in places they shouldn't be.



Product 02

### Instant Detect

Protect wildlife faster, smarter, anywhere — AI camera traps that send images via satellite, in near-real-time.



Product 03

### Smart Deterrent

An AI-triggered, non-lethal deterrent that keeps wildlife — and the people sharing their landscape — out of harm's way.



[ WHERE WE WORK ]

# Field deployments worldwide

From mountain valleys in Romania to rainforests in Gabon and ranger stations in Zambia — our work runs wherever rangers, NGOs and communities need it.



ROMANIA

GABON

THE NETHERLANDS

ZIMBABWE

ZAMBIA

UGANDA

NAMIBIA

INDONESIA

CANADA

[ GET IN TOUCH ]

## Help us build technology that matters

Donations directly fund hardware, deployment and maintenance of our work in the field. If you're a ranger team, NGO, researcher or partner — we'd love to hear what you're working on.

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