

Using Technology to Stop Poaching: Some thoughts and lessons learned

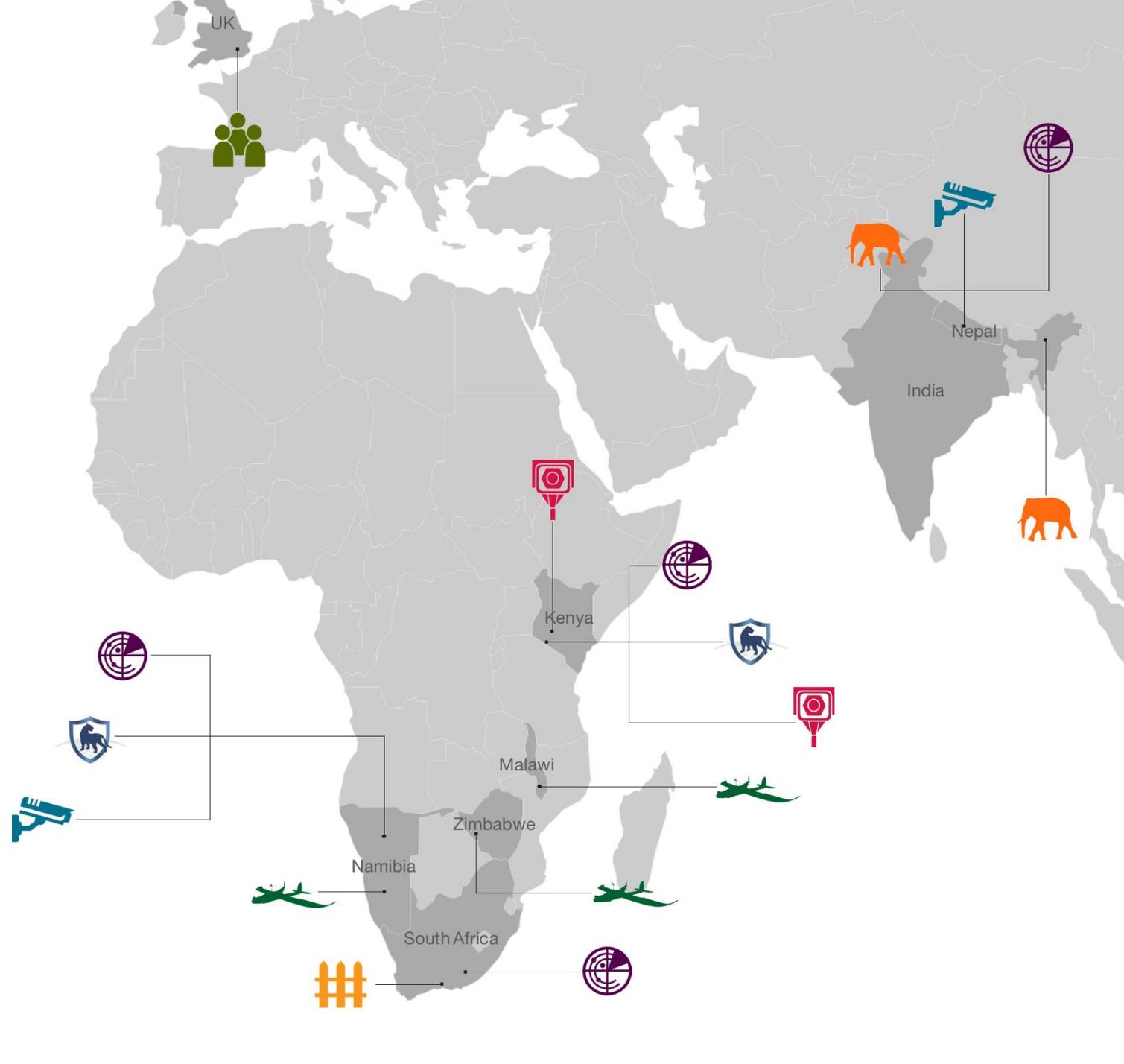
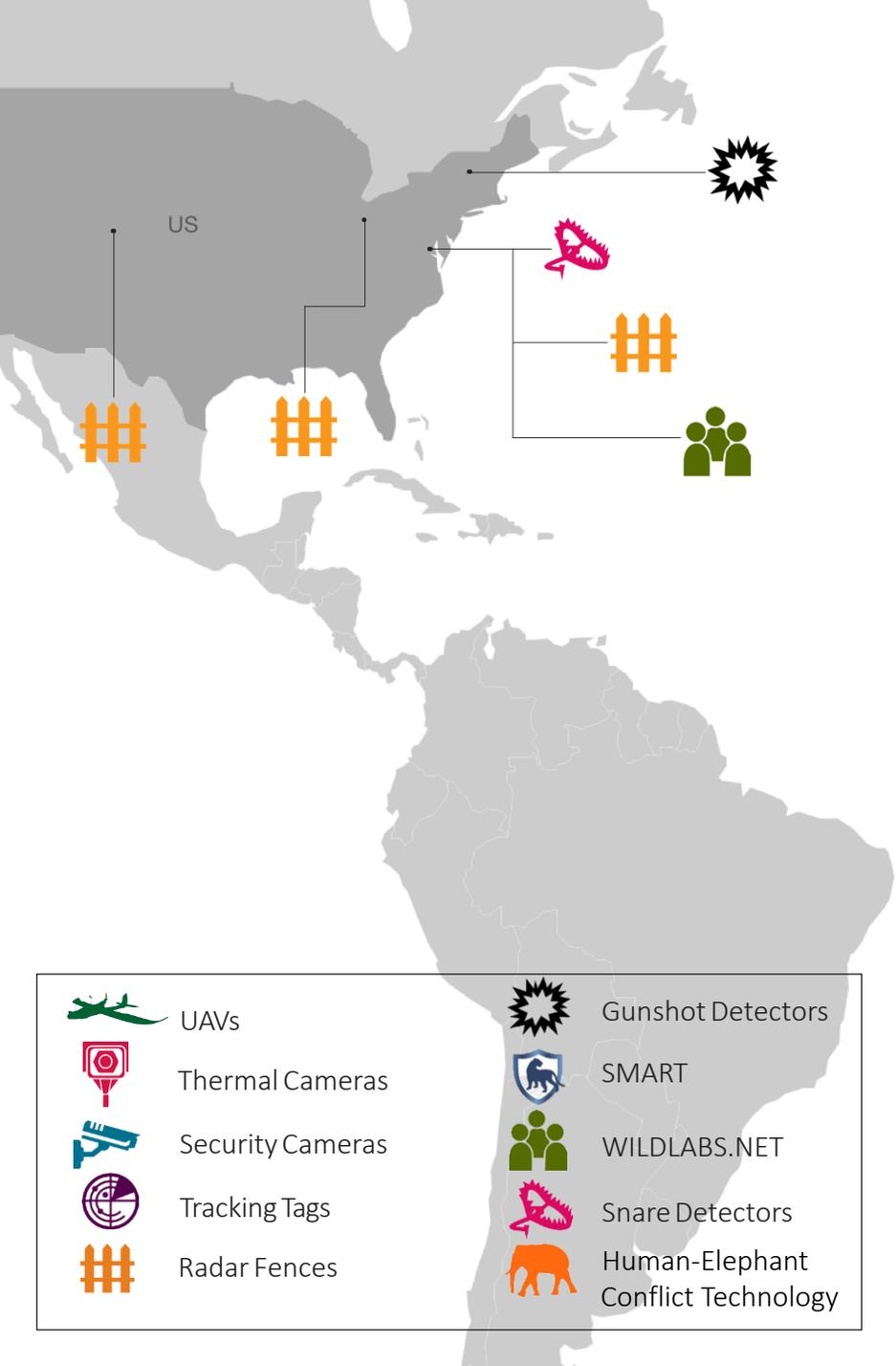


Colby Loucks
Deputy Lead Wildlife
WWF-US
January 23, 2018

Wildlife Crime Technology Project (WCTP)

- Google.org \$5M – use technology to stop poaching and test the role of drones in that effort
 - 2013 – 2018
 - Test drones for use in anti-poaching operations
 - Explore use of other new and innovative technologies
 - Learn more: <https://www.worldwildlife.org/projects/wildlife-crime-technology-project>





WCTP Areas of Focus

1. Testing drones for anti-poaching (Rob)
2. Solving two of the primary challenges to poaching (in Africa)
 - Finding a technology that can help rangers apprehend poachers at night – when most of the poaching occurs: FLIR (Jeff)
 - Lack of real-time connectivity and sensors to alert rangers when there are intrusions
3. R&D new technologies
 - Radar, gunshot detector, tracking tags
4. Scaling up learning



WILDLABS.NET

[The conservation technology network]

JOIN THE COMMUNITY

united
for
wildlife

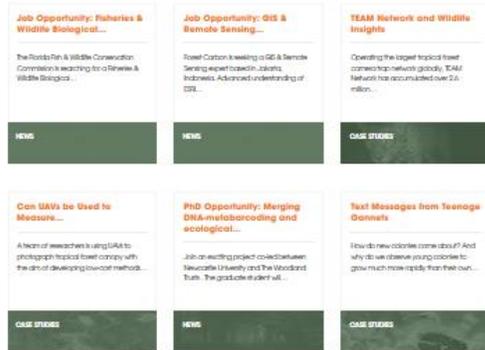
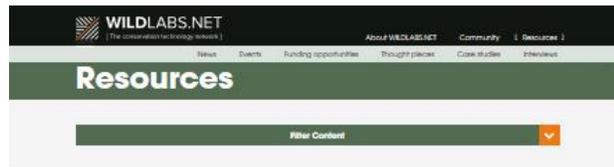
CONSERVATION
INTERNATIONAL



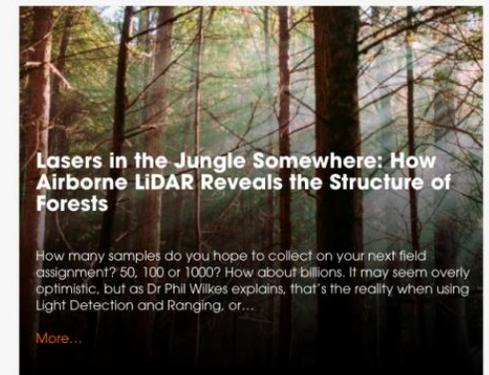
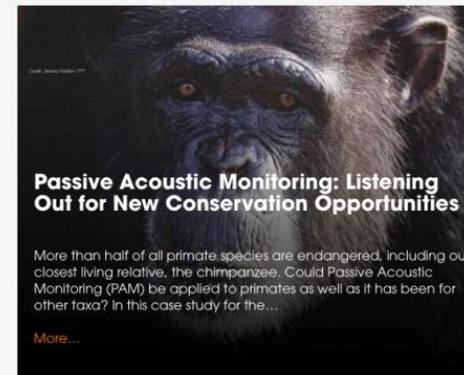
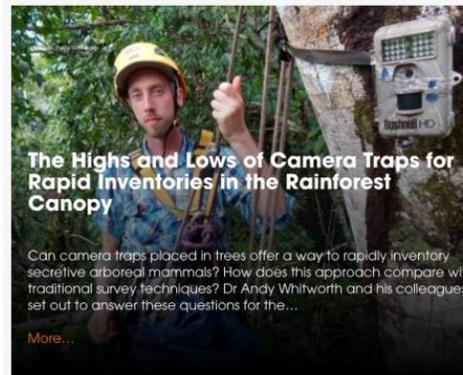
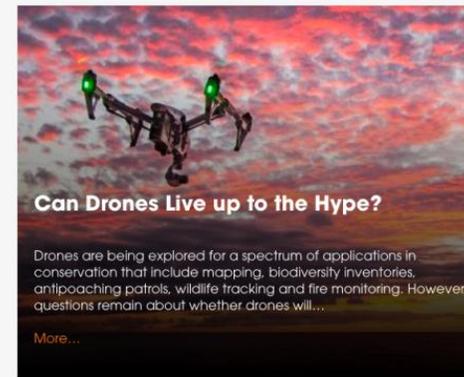
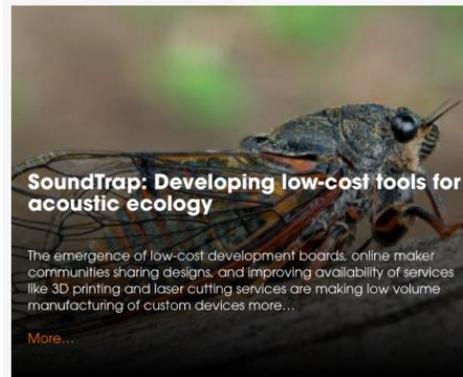
ZSL
LET'S WORK
FOR WILDLIFE

SOLUTION

Crowd-source information in a central, open space & create groups to share information on lessons learned, product reviews, resources and more



View map

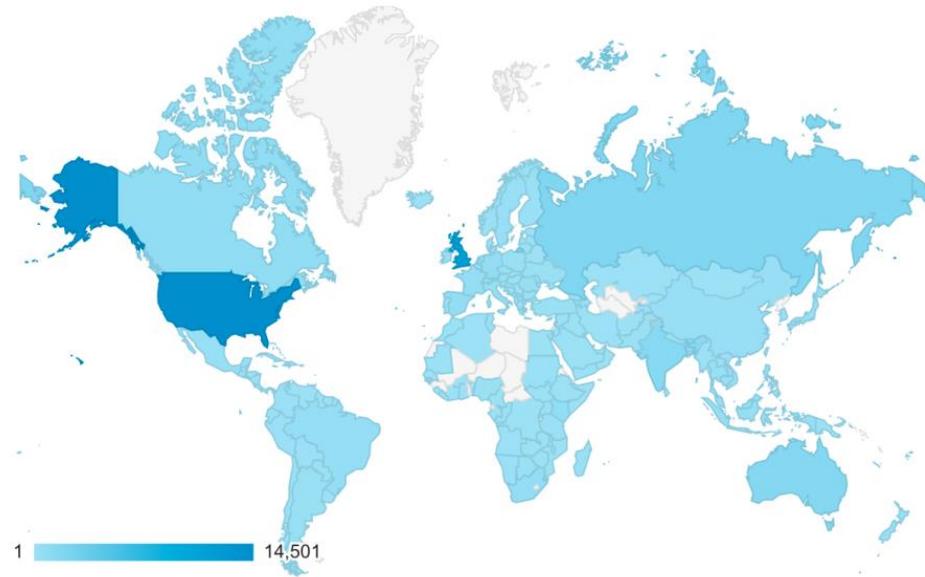


BY THE NUMBERS...

2,000+ members

110+ countries

The **WILDLABS.NET** community has over 1,300 active discussion threads in 24 groups, with content accessed from 110+ countries.



Designed for mobility

Developed for users in the field and on the go, the community can be accessed anywhere with an internet connection.

Parting Thoughts: Lessons Learned

- Government partnership and internal buy-in are vital for sustainable deployment of technologies (esp. drones)
- New technology may take time to win support over established processes
- GSM coverage is still a limiting factor to the development of sensor networks, but wide area networks (LoRa) and others are emerging pathways
- The total cost of technology solutions that work in the field is likely much greater than anticipated
- Ensure any technology solution is easy to maintain in the field
- Parts used in a design should be locally sourceable or spares need to be provided
- Power supply remains a hurdle (solar, battery, other)
- Game proofing is critical to the lifetime of technologies
- Machine learning – (artificial intelligence) is the next tech frontier to advance wildlife conservation

PROJECT TEAM

**Colby Loucks, WCTP
Project Lead**



Colby led the WCTP Project from 2014-2017, guiding the overall direction, focus, and implementation of the project.

**Crawford Allan, Phase 1
Project Development Lead**



Crawford was overall project lead in Phase 1 from 2013-2014, creating the original conceptual approach leading the successful demonstration of the proof of concept of UAVs and mesh networked audiovisual communications in Namibia.

**Eric Becker, Conservation
Technology Engineer**



Eric led the design and development of the thermal camera systems, supported and advised on UAVs, piloted and created various sensors related to human-elephant conflict, wildlife tracking, and wildlife vocalizations.

**George Powell, Senior Advisor
on Wildlife Technology**



George led field research to identify potential project sites, partners, and challenges, was project lead on UAV testing and evaluation in Phase 2 and co-led work on tracking tags and snare detectors.

**Rachel Kramer,
Coordinator Phase I**



Rachel led the UAV evaluation and testing process in Namibia in Phase 1, and was the project lead on the design and development of WILDLABS.NET.