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Mapping UNSW Impact
Global Development

Primary SDG	**15: LIFE ON LAND**
Broad theme	Conserving wildlife in Botswana
Research	Creating communication signals to keep wildlife away from farmed cattle, conserving wildlife and cattle numbers
Impact region	Botswana
Faculty	Science
School/Institute	School of Biological, Earth and Environmental Sciences
Academic	Dr Neil Jordan
Project partners	Botswana Predator Conservation Trust
	Taronga Conservation Society Australia
	Wild Spy Inc
	Department of Wildlife and National Parks (Botswana)
Related SDGs	8: Decent Work and Economic Growth

Elevator pitch

UNSW is simulating wildlife communication signals to minimise wildlife and cattle conflict around the Okavango Delta, reducing the killing of both to ensure to the sustainability of local farming and the local tourism sector that relies on the presence of wildlife in country where tourism is the second biggest industry after mining.

The Challenge: Human-wildlife conflict is affecting farmers and threatening wildlife and tourism

Tourism is Botswana's second largest industry after diamond mining. The Okavango River basin is home to one of Botswana's biggest wildlife tourism parks. The basin is surrounded by hundreds of small cattle stations that are preyed upon by wildlife – such as lions, leopards and wild dogs – harming cattle numbers and farmer budgets. Farmers retaliate with guns and poison, reducing carnivore numbers and tourism appetite to visit the area.

UNSW's solution: Simulate wildlife signals to deter wildlife away from cattle

In collaboration with local NGOs and government, Neil and his team investigate communication signals used by carnivores and try to replicate them to deter animals away from farmed livestock. For example, lions rely on the element of surprise to capture their prey and often attack from the rear. Neil and his team are painting eyes on the backsides of cows using a stamp to convince the lions they have been seen by the cows. Early results suggest the technique is working with control cows (ones without painted behinds) incurring losses, while those in the same herd with painted eyes remain untouched.

The team is also using lion sounds in an attempt to ward off predators from cattle-intensive areas. Remotely Operated Repellent stations (ROARs) play the sounds of territorial lions roaring at specified intervals during the night. They are also working on imitating the scent marks used naturally by wild dogs to keep them away from areas of risk and conflict.

The Impact: Reduce animal conflict, helping farmers and protecting carnivores and the tourism sector

Neil's interventions are helping local farmers to preserve their cattle and they are minimising retaliatory killings of carnivores, preserving the ecosystem around the Okavango Delta and the tourism sector that relies on it.

Applied signal research is novel and, if proven successful, could be adopted by other African countries where animal conflict has serious ramifications. For example, Neil is working with dingoes and the Tasmanian Devil in Australia to see what benefits his scent and signal research can offer for both populations.

Researcher

While completing his PhD on mongoose communication at Cambridge, Neil Jordan became interested in animal scent and communication signals and their influence on animal behaviour. Realising that signals can be used to conserve animal species, he teamed up with the Botswana Predator Conservation Trust to put his signal theory into practice. He is passionate about large carnivores and promoting their coexistence with humans.

Ben Falkenmire 23.10.17