



Conservation, crime and communities:

The Ploughshare Tortoise Protection Project, Madagascar

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At a glance

COUNTRY	Madagascar
LOCATION	Baly Bay National Park
SPECIES	Ploughshare tortoise (<i>Astrochelys yniphora</i>)
ILLEGAL WILDLIFE TRADE CONTEXT	Increased poaching levels resulting from government instability, and further threatened by nearby mining development
TYPE OF POACHERS	Locals often the first link, either by collecting and selling tortoises themselves or turning a blind eye to poachers from outside
TYPE OF COMMUNITY ENGAGEMENT IN TACKLING IWT	Community rangers/eco-guards
CONSERVATION INCENTIVE MECHANISM	Conservation jobs Investments in community development projects

The story so far

Community patrols, recruited from some of Madagascar's poorest communities, are giving much needed support to national authorities to protect the critically endangered ploughshare tortoise.

Endemic to Madagascar, the ploughshare tortoise is a victim of its exotic appearance. Its high domed golden shell is much sought after by collectors and rare animal enthusiasts whose demands drive an illegal trade that has pushed the tortoise to the brink of extinction in the wild.

In spite of the highest level of protection status at national and international levels, the wild population of ploughshare tortoise is now thought to be less than 600 adults – all occurring in the Baly Bay National Park. Poaching is seen as the main threat to species survival, although bush fires are also a threat.

The trade chain for the ploughshare tortoise is a familiar one. Animals are taken from the park opportunistically, or to order, by locals who then pass them on to traffickers who arrange their illegal shipment out of the country. Smugglers also come down from the regional town of Mahajanga and enter the park clandestinely.



Ploughshares and radiated tortoises siezed in Bangkok (Panjit Tansom, TRAFFIC)

The absence of law enforcement

In the context of local poverty, the payment they receive from traffickers encourages local villagers to get involved in poaching. However, the main reason is the absence of law enforcement at national, regional, local and 'traditional' levels.

Poaching levels are directly linked to political stability. The downfall of the Madagascan government in 2009 led to a contested regime which lacked international recognition. Bilateral aid was cut and weak internal legitimacy led to increased corruption levels and unemployment.

This weak governance, and the resulting reduction in tax revenues and aid, has not helped efforts to prevent illegal exploitation of the country's unique natural resources – including the ploughshare. During the past five years, the tortoise population has dropped by a third.

As poaching levels have risen, so too has the value of tortoises traded. In 2009, an animal would sell locally for US\$2. Today, villagers are offered between US\$20–40 by traffickers. The value depends on the size and age of the animal, and increases rapidly along the trade chain: ploughshare tortoises have been advertised for sale on the international black market for as much as US\$50,000.

Adding to the threat, a major mining project is underway 50km south of the national park which includes plans for a large port in Baly Bay and an access road that will cut through the park. In the absence of support from the mining consortium – and the government – the mining will raise poaching pressure and facilitate smuggling by introducing new exit routes.



Adult male ploughshare tortoise
(L. Woolaver)

The key to better protection

While villagers in the bay area have been identified as the first link in the illegal trade chain, local communities are also the key to better protection. Engaging with these communities, the Durrell Wildlife Conservation Trust has built a trusting relationship over 20 years that is the foundation of today's community participation in protecting the tortoise.

Working with 18,000 people in 52 villages, the DWCT has helped to raise living standards and develop opportunities for income. Durrell has built 47 wells, supplied 1,500 fishing nets, and improved education for 1,500 children by building and rehabilitating 18 schools.

The current project began in 2010 to give these communities a stronger stake in tortoise protection. In partnership with the Madagascar National Parks and Baly Bay communities, the project supports community-led anti-poaching patrols which reinforce the park staff's own operations, and fits into national policy for community involvement in conservation.

Rangers are selected from local villages, and trained in using GPS, radio-receivers and camera equipment. With a strong focus on safety, rangers learn how to call for help and report incidents rather than engage with poachers.

Although they are the only people physically present in the National Park, neither community rangers nor park rangers are authorised to stop, search or arrest poachers. Their role is limited to reporting suspicious behaviour or illegal activity to state enforcement authorities, namely the police, gendarmes and forestry department.

Inherent in the project's approach is respect for tradition and custom, including its support for the development of a regional Dina, the forum for traditional Malagasy law. The Dina can enforce fines for poaching activities which are paid back to the community. It also raises social pressure not to poach.

What works and why?

It is still early days to be able to judge how effective the community-led patrols will be as a deterrent to poaching in the long term. However, the project has raised patrolling presence on the ground through a regular routine around five permanent field sites, and interest levels suggest that the rewards currently outweigh the risks for rangers.

The Baly Bay project has so far enlisted 165 community rangers, drawn from 11 of the 28 main villages surrounding the bay. Together, they patrol one third of the ploughshare habitat, and spend 1,400 hours per month on duty.

Results from the first three years of this extra presence include five arrests for poaching, and raised community awareness of legal and illegal activity in the ploughshare habitat. The community patrols generate daily reports to the park authorities: 2,888 per year.

The project offers a degree of modest income stability in an area which is among the poorest in Madagascar. Wages for community rangers – paid for by the project – work out at US\$2 per patrol, plus meals, with rangers working an average of 15 days per month. Additional payments – up to US\$200 – for information leading

to successful arrests provide further incentive, and a scheme is being developed to offer rangers rewards linked to wild tortoise numbers in the park.

Ranger selection is an important element in the project's success. Village elders help the DWCT to choose suitable candidates, which both strengthens community support for the patrols, and gives the rangers a degree of respect from their villages.



Ploughshare Guardian Fidelis (Henri Rakotosalama, DURRELL)

Challenges

- The size of the National Park (57,142 ha) and difficulty of access raise the cost and challenge of effective patrolling.
- Fear of reprisals by poachers has been a disincentive for some communities to engage in the programme.
- Slow government response to reports of poaching activities risks reducing morale and sense of purpose among community rangers.
- The lack of conviction and sentencing for poaching offences raises doubts in the communities about the project.
- Demonstrating the impact of the project on tortoise populations is difficult, which poses a challenge for incentive-based reward schemes.

Lessons learnt

- A trusting relationship, based on a long term and permanent presence of partners in the project area, is pivotal to engaging local communities.
- Successful implementation depends on project partners agreeing a shared vision.
- In very poor communities, the participation of local people in project activities depends on distributing funds, through wages and incentives, and on development programmes to raise living standards.

COULD THIS WORK ELSEWHERE?

It already does. The DWCT adopts a similar approach to community-based conservation in four other sites in Madagascar. The hallmarks of the project — seeking shared goals and engaging local communities in the management of natural resources — are widely replicable, and being used elsewhere in the world.