



Turtle hatchling on Cape York Peninsula.

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**Northern Australia  
Environmental  
Resources  
Hub**

National Environmental Science Programme



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IMPACT STORY 2019

## Managing feral pigs on Cape York

Feral pigs are a threat to nesting marine turtles, which are culturally important species for the Southern Wik Traditional Owners on Cape York. Collaborative research between the Cape York Indigenous organisation Aak Puul Ngantam (APN) and the CSIRO is enabling Traditional Owners to more effectively manage feral pigs on their homelands.

► **Find out more about this project**



Peter Negus.

Feral pigs destroy critical habitats while searching for food.



Feral pigs were destroying critical habitats in the Southern Wik homelands on Cape York Peninsula. They turned clear-water lagoons into muddy bogs as they churned the soil searching for food. They fouled waterholes. And, of most concern to Wik Traditional Owners, they ate every single egg they uncovered from the marine turtle nests on the west coast's beaches.

Aak Puul Ngantam (APN) rangers had been controlling pigs by aerial culling, on-ground shooting, baiting and trapping. However, there had been no systematic monitoring of how effective each activity was and, as a small organisation working in a remote and challenging landscape, they wanted to ensure that their efforts were protecting the species and places most valued by their community.

“It was very important for APN to have a proactive partner who felt the same way about managing the environment, but who also understood what the Traditional Owners really wanted.”

– Mr Sandy Whyte, general manager of APN

APN invited CSIRO's Dr Justin Perry to help them fill their knowledge gaps on the effectiveness of their pig control. After a long-term relationship working on fire management and biodiversity, new funding under the Australian Government's National Environmental Science Program allowed them to expand their collaborative research program to questions around feral pig management.

The research partnership has led to a shift in the focus of APN's pig control towards places that are culturally important to Wik people, rather than simply targeting the areas with the greatest number of pigs.

“We weren't going to be able to solve everything. The research has helped us refine that thought process and our management techniques.”

– Sandy Whyte

Now, during peak turtle nesting and hatching periods, the APN Rangers focus their hunting efforts on the small number of pigs that raid turtle nests. Fewer pigs overall may be killed but the conservation and cultural outcomes are more significant.

A central part of increasing APN's capacity to better protect turtle nests from pigs was developing a data input and analysis system that provided near real-time feedback to the rangers.

Using a specially developed app, the rangers collect data on nest predation and nesting success, which they email to Dr Perry when they return to their base. Dr Perry then analyses the data and reports it back to the rangers using data visualisation tools that map predation statistics for the species that raids turtle nests (feral pigs, dingoes and goannas). The rangers are then able to respond with a management action appropriate for each predator.

“One of the real benefits of the research has been giving us the tools to communicate back to Traditional Owners – our internal stakeholders – and then to our external stakeholders such as the different funding bodies and policy development areas”

– Sandy Whyte

The data system has also captured the attention of staff from the federal Department of Agriculture, Water and the Environment's Northern Australian Quarantine Strategy (NAQS).



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Monitoring and protecting turtle nests on Cape York Peninsula.



Feral pigs are a biosecurity risk. They can act as reservoirs of diseases such as African swine fever and foot-and-mouth disease that may be transmitted to Australia's herd of domestic pigs, or rabies and Japanese encephalitis that are a direct risk to humans.

"We have a risk-based approach to our surveillance activities. We want to know where pigs are, and where they're more likely to come in contact with viruses that we don't want in this country."

– Dr Guy Weerasinghe, veterinary officer,  
Northern Australian Quarantine Strategy

Yet there is no good estimate of either the total number of pigs in northern Australia or how they are

Feral pigs can turn waterholes into muddy bogs.



Associate Professor Sam Setterfield

distributed across the landscape. Dr Weerasinghe says that the APN data on pig densities across different habitats and seasons will help NAQS refine their surveillance activities for that region.

"The environment of northern Australia varies so much – whether it's dryness or monsoon activity – and utilising better data will help improve our understanding of feral pigs and their home ranges and in turn, help to improve our understanding of the role they may play with exotic diseases that are at our doorstep."

– Guy Weerasinghe

## Research outputs

### Scientific paper

- [An evaluation of nest predator impacts and the efficacy of plastic meshing on marine turtle nests on the western Cape York Peninsula, Australia \(August 2019\)](#)
- [No sitting on the fence: protecting wetlands from feral pig damage by exclusion fences requires effective fence maintenance \(June 2019\)](#)
- [Thermal and asphyxia exposure risk to freshwater fish in feral-pig-damaged tropical wetlands \(November 2018\)](#)

### Factsheets

- [Defining metrics of success for feral animal management in northern Australia \(start-up factsheet, November 2016\)](#)
- [Defining metrics of success for feral animal management in northern Australia \(project update, October 2018\)](#)

### Video

- [Defining metrics of success for feral animal management in northern Australia \(video\)](#)

### Project webpages

- [Defining metrics of success for feral animal management in northern Australia](#)

## Attributions

- Project leader: Justin Perry (CSIRO)
- Sandy Whyte (APN Cape York), Dr Guy Weerasinghe (NAQS), APN Rangers
- Nathan Waltham (team leader), Jason Schaffer (James Cook University)
- Jon Marshall (team leader), Peter Negus, Alisha Steward, Sarah Clifford, Joanna Blessing (Qld Department of Environment and Science)



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