



Phisch Creative

APN Rangers working on a river in the Archer River catchment in Queensland.



**Northern Australia
Environmental
Resources
Hub**

National Environmental Science Programme



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IMPACT STORY 2021

Supporting Indigenous natural resource management and alternative economies

In Australia, Indigenous peoples' rights and responsibilities for their traditional territories have been recognised across almost half the lands and waters, and traditional custodial responsibility extends across most of the remainder. Indigenous land and sea managers draw on their knowledge, developed over tens of thousands of years, to make decisions about caring for Country. Working effectively and ethically with Indigenous peoples is central to addressing the nation's environmental challenges.

► **Find out more about these projects**



NESP Northern Hub

Standing woody debris burning after a savanna fire front has passed.

The Northern Australia Environmental Resources Hub is supporting Indigenous natural resource management and the development of sustainable business opportunities that benefit Indigenous people and are economically profitable. Indigenous-led guidelines are giving Indigenous peoples a voice about what is best practice in working with their knowledge in collaborative partnerships, and these guidelines are being taken up across Australia.

An Indigenous-led project in Kakadu National Park is mixing responsible artificial intelligence, modern science and traditional knowledge to solve complex environmental management problems. Improving the methods used to calculate carbon credits for savanna burning projects can further incentivise emissions reductions and carbon storage, supporting many Indigenous-owned carbon businesses. And research has demonstrated that – in addition to their environmental benefits – Indigenous land and sea management programs are a pathway to Indigenous economic independence and regional development, as well as providing significant wellbeing outcomes.

Impact snapshots

Strengthening and sharing knowledge for land and sea management

More than 100 Indigenous contributors have created Australia's first guidelines on how to best strengthen and share Indigenous knowledge in land and sea management. Our Knowledge Our Way in caring for Country Best Practice Guidelines feature 23 Indigenous-led, best-practice case studies identifying ways partners can support good knowledge practice through strong partnership agreements, support for

cultural governance arrangements, and protocols. A key takeaway for organisations interested in building partnerships with traditional custodians for land and sea management is to develop genuine partnerships that are founded on respect for Indigenous knowledge, culture and Country.

[Discover more project findings](#) or [read the guidelines](#).

Keeping Country healthy in Kakadu National Park

Invasive para grass threatens important cultural and ecological values of Nardab floodplains in Kakadu National Park. Hub researchers have built on long-term collaborations with Bininj/Mungguy Traditional Owners in the park to develop and apply *Bininj* indicators of cultural–ecosystem health for the floodplains. These indicators are being used to identify priority areas for targeted para grass control and monitor the effectiveness of treatments. Supported by innovative AI drone technology, rangers can easily survey the floodplains and *Bininj* have been excited to see the rapid recovery of floodplain habitat and the return of traditional foods such as turtles, magpie geese and other waterfowl.

[Discover more project findings](#) or [read the final report](#).



Our Knowledge Our Way Guidelines front cover including 'Sharing the knowledge for caring for our Land'
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This project has brought together Indigenous knowledge, western science and technology to help look after Country. Ranger Kadeem May and researcher Justin Perry fly a drone to assess para grass on the Nardab floodplain in World Heritage Kakadu National Park.

Supporting savanna fire management through carbon farming

Scientists and Traditional Owners have worked together for more than a decade to understand how to best calculate changes in greenhouse gas emissions and carbon storage in savanna landscapes due to changes in fire management. This research has, and continues to, improve these methods used to calculate carbon credits for savanna burning projects, leading to reduced greenhouse gas emissions and increased carbon storage. The credits in turn provide important income for remote Indigenous communities and more incentives for fire management across the north.

[Discover more project findings or read the final report.](#)



Fallen woody debris after a savanna fire.

Caring for Country and improving Indigenous lives

Indigenous land and sea management programs – which include Indigenous ranger, Caring for Country and Indigenous Protected Area programs – have well-documented environmental and ecological benefits.

This research demonstrated that these programs also deliver significant socio-economic and wellbeing outcomes to Indigenous people and communities beyond those employed by the programs. Moreover, just being involved in this research has had many positive impacts for communities in WA's Fitzroy River valley and north Queensland, including positive impacts for land management.

[Discover more project findings or read the final report.](#)



Natalie Stoeckl, Diane Jarvis, Celia Boxer, Jane Addison, Sharon Prior, David Hudson and Emile Boxer – researchers, co-researchers and collaborators – at the Department of Agriculture, Water and the Environment in Canberra during 2018 Reconciliation Week.

Research outputs

The [online version](#) of this impact story has a complete list of outputs from these projects.

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National **Environmental Science** Programme

The Hub is supported through funding from the Australian Government's National Environmental Science Program.