



**Marine
and Coastal**

National Environmental Science Program



RESEARCH OVERVIEW 3.

Indigenous research leadership

Economic, social and cultural development across Australia's Indigenous estate requires leadership and partnerships in environmental research that improve management of Country to ensure broader community benefits.

Increased research and development support is needed to explore culture-based economies on Country aligned with better management of ecosystem services. Indigenous people seek to lead and implement research and on-ground actions relevant to their needs.

Marine and Coastal Hub research supports and works towards improved community outcomes and self-determination for caring for Country.

This involves collaborating with Indigenous leadership to prioritise, design and deliver projects that value Indigenous knowledge and experience, and protect Indigenous Cultural and Intellectual Property.

INDIGENOUS LEADERSHIP AND KNOWLEDGE

A National Indigenous Environmental Research Network is being developed for inclusive engagement and research through coordinated regional governance.

An Indigenous-led project is promoting understanding of cultural connections to southern right whale, humpback whale, orca, dolphins and sharks in southern Australia.

Outcomes for research users

- Coordinated national support for Indigenous-led environmental research and participation.
- Strengthening of Indigenous cultural connections to sea-kin and better use of Indigenous knowledge.

CULTURALLY IMPORTANT SPECIES

Hub researchers are partnering with Indigenous rangers to tag Australian sea lions and study their habitat use.

Indigenous-led dugong monitoring is being developed in the Kimberley through knowledge and data sharing, and training ranger groups to conduct drone surveys.

Indigenous rangers are being trained and equipped to monitor sawfish in southern Gulf of Carpentaria.

Outcomes for research users

- Knowledge and skills for recovery of Australian sea lions.
- Indigenous-led dugong monitoring and data for dugong management and regional planning.
- Indigenous-led sawfish monitoring.

Top images overleaf, from left: Justin Perry, Shutterstock, Shutterstock, Justin Perry, Christophe Cleguer.



Jock McKenzie

Elevating Indigenous leadership in environmental research

The hub is supporting the establishment of the National Indigenous Environmental Research Network. The purpose of this network is to enable and empower Indigenous Australians by providing greater opportunity to participate in and benefit from the environmental research that occurs on their land and sea Country. This will be grounded in an active network of Indigenous organisations and researchers working to elevate and sustain Indigenous-led research priorities, methods and management practices of benefit to Australia's natural and cultural environment.



Holly Raudino

Partnering to survey sea lions

A better understanding of Australian sea lion abundance, biology and habitats is needed to evaluate recovery actions for this Endangered species. A hub project co-designed with Indigenous partners is working to improve methods for acquiring this information. The partners are Yalata Anangu Aboriginal Corporation, Far West Coast Aboriginal Corporation and Esperance Tjaltjraak Native Title Aboriginal Corporation (ETNTAC). Initial surveys alongside ETNTAC visited 16 offshore colonies. They recorded 100 pups at five colonies and confirmed pupping at Spindle Island east of Esperance for the first time in decades.



CULTURALLY IMPORTANT PLACES

Habitats are being mapped along the coastlines of Kakadu and Garig Gunak Barlu National Parks and on Yanyuwa sea Country in the Gulf of Carpentaria to support monitoring and management by Traditional Owners.

A research strategy is being developed to meet Traditional Owner economic and cultural needs relating to the marine and coastal areas of Kakadu National Park.

Hub researchers partner with Cultural Custodians and Cultural Rangers in Australian Marine Park surveys on Wadandi Country, WA.

Researchers are working with Tebrakunna Country Rangers and community members to identify priority values, threats and viability of Tebrakunna Country and the surrounding Coastal Plains Nation (north-eastern Tasmania).

Outcomes for research users

- Skills and knowledge to monitor, manage and realise cultural and economic values in the Northern Territory.
- A marine research strategy to meet Traditional Owner economic and cultural needs for Kakadu National Park.
- Biodiversity surveys guided by Traditional knowledge; Traditional Owners credentialled to survey fish and shark assemblages on Wadandi Country.
- Indigenous community equipped to advocate for, manage and protect Tebrakunna Country.

COASTAL RESTORATION AND PROTECTION

Hub researchers are supporting participation in Australian Carbon Credit Unit Scheme and Nature Repair Market frameworks to enable Indigenous-led feral animal management in northern Australia.

Integrated pest management of feral pigs is being developed for Indigenous implementation at coastal sites.

The characteristics and blue carbon value of seagrass across northern Australia is being mapped in collaboration with Indigenous rangers.

Hub researchers and Indigenous rangers studied the extent, ecology and blue carbon value of seagrass beds at Furneaux/Tayaritja Islands to establish methods for monitoring and management by Traditional Owners.

Outcomes for research users

- Facilitation of Indigenous involvement in blue carbon markets and protection of coastal wetlands.
- Better turtle hatchling survival and less wetland damage.
- Comprehensive seagrass map for improved regional planning on Northern Australia.
- Capacity for Indigenous-led management of seagrass habitat around the Furneaux/Tayaritja Islands and in northern Australia.



Retracing Wadandi Boodja ancient shoreline

Wadandi, People of the Sea, are the Custodians for the far southwest region of this continent, with obligations to protect, manage and monitor their sea Country. Cultural knowledge provided through partnership with Wadandi Traditional Owners and Cultural Custodians guided the discovery of remarkable biodiversity at South-west Marine Park. Wadandi Cultural Rangers took part in visual sampling of submerged wetlands that would have existed along and behind the ancient shorelines, providing guidance for managing the park's cultural and natural values.



Exploring seagrass beds at Furneaux/Tayaritja Islands

Hub researchers and Pakana Rangers have been working to establish a Pakana Ranger-led seagrass monitoring program, recognising the cultural significance of seagrass beds around Tasmania's Furneaux/Tayaritja Islands. Rangers have learned to use a drop camera to photograph the seafloor and intertidal sampling methods to monitor seafloor habitats throughout the proposed Tayaritja Milaythina Muka Indigenous Protected Area. The seagrass beds here are some of the most extensive in south-eastern Australia. Imagery and habitat classifications from this project's extensive surveys can be viewed on Seamap Australia.



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