Marine and Coastal

National Environmental Science Program

RESEARCH OVERVIEW 5.

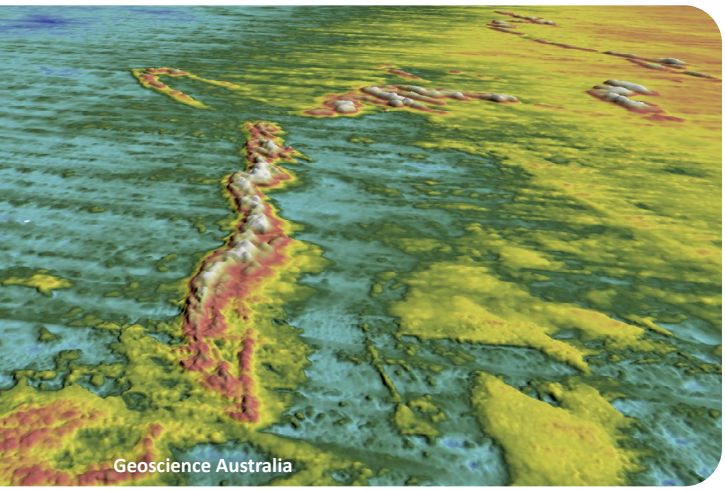
Protected places

Collaborative research is needed to manage and care for protected places such as Australian Marine Parks, National Parks and Indigenous Protected Areas.

Traditional Owners, communities and governments need research strategies attuned to environmental, economic, cultural and social goals.

The **Marine and Coastal Hub** works with research users to design, conduct and apply research that brings tangible outcomes for protected places.

Hub projects deliver priority information, develop options for effective management and support Indigenous knowledge and science.



Geoscience Australia

PRIORITY INFORMATION ON VALUES

- Survey natural values and significant features – such as fish and invertebrates on rocky reefs – at priority monitoring sites in temperate Australian Marine Parks (AMP).
- Report on monitoring priorities and improve information flows to support AMP management effectiveness.
- Partner with Wadandi Karri Karrak Cultural Custodians and Cultural Rangers to share knowledge and collaborate in AMP surveys on Wadandi Country, WA.
- Update and develop national standards and best practices – for drop cameras, socioeconomic surveys and marine microplastics – for monitoring priority marine values and pressures.
- Map Yanyuwa sea Country seafloor habitat in Gulf of Carpentaria to support seagrass monitoring and management by Traditional Owners and broader environmental decision-making.

University of Western Australia

OPTIONS FOR EFFECTIVE MANAGEMENT

- Develop a common language to define the AMP management system, identify priority monitoring sites and design protocols for a pilot monitoring process in the South-east Marine Park Network.
- Collate and analyse natural values and pressures data to extend the monitoring process across the remaining regional AMP networks and the Coral Sea Marine Park.
- Engage with recreational fishers to understand attitudes to zoning and sustainable fishing on the Great Barrier Reef and develop and test approaches to communicating management information.

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INDIGENOUS KNOWLEDGE AND SCIENCE

- Map the characteristics and blue carbon value of seagrass beds and establish knowledge and methods for monitoring and management by Traditional Owners in the proposed Tayaritja Sea Country Indigenous Protected Area, lutruwita (Tasmania).
- Identify marine and coastal issues in Kakadu National Park that require better understanding and develop a research strategy to meet Traditional Owner economic and cultural needs.
- Assess priority values, threats and viability of Tebrakunna Country supporting Traditional Owners to improve and protect the health of Country and Tebrakunna people.

COLLABORATIVE RESEARCH

OUTCOMES FOR RESEARCH USERS

Priority information on values

Seafloor habitat surveys in AMPs

Updating mapping of southern rocky reef ecosystems

Data collation and synthesis, best-practice data collection, knowledge transfer systems

Stereo-video surveys in Geographe Marine Park, with Cultural Custodians and Cultural Rangers

Parks Australia > a scientific evidence base and methods to identify and monitor AMP key natural values

Parks Australia and Wadandi Karri Karrak Cultural Custodians and Cultural Rangers > biodiversity surveys guided by Traditional knowledge; Traditional Owners credentialled to survey fish and shark assemblages across Wadandi Country

Baseline mapping of seafloor habitat in Yanyuwa sea Country (ma-lhanngu), Gulf of Carpentaria

li-Anthawirriyarra Sea Ranger Unit > skills and knowledge to monitor Yanyuwa Indigenous Protected Area (IPA)

Options for effective management

A common language defining the components of the AMP management system

Analysis of AMP natural values and pressures to identify monitoring priorities

Protocols for monitoring priority sites

Parks Australia > a conceptual and technical framework for adaptive management of AMPs

Behavioural research and communication products tested through management interventions

Great Barrier Reef Marine Park Authority > evidence-based options to improve recreational fisher compliance with park zoning

Indigenous knowledge and science

Progressing a National Indigenous Environmental Research Network in partnership with the North Australian Indigenous Land and Sea Management Alliance

Traditional Owners, communities, researchers and management agencies > coordinated national support for Indigenous-led environmental research and participation

Mapping seagrass habitat at Tasmania's Furneaux Islands in partnership with Tasmanian Aboriginal Centre and in Gulf of Carpentaria with Traditional Owners

Pakana Community and Pakana Rangers, Yanyuwa sea Country Traditional Owners > capacity for Aboriginal-led management of the proposed Tayaritja Sea Country Indigenous Protected Area; Indigenous-led seagrass management in the Gulf of Carpentaria and knowledge for regional planning

Identify issues and develop a research strategy for Kakadu National Park

Bininj and Mungguy Aboriginal people and Parks Australia > a strategy for research to meet Traditional Owner economic and cultural needs

Healthy Country Planning collaborative research for Tebrakunna Country, north-eastern Tasmania

Melythina Tiakana Warrana Aboriginal Corporation and Tebrakunna Rangers > equipped to better advocate for and protect the health of Country and Tebrakunna people

Top panel images left to right: Geoscience Australia, NSW DPI, NSW DPI, Antonia Cooper, Geoscience Australia

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