



**Marine
and Coastal**

National Environmental Science Program



RESEARCH OVERVIEW 1.

Regional planning in northern Australia

Northern Australia is a place of significant economic opportunity and the growth of existing and new industries – agriculture, grazing, mining, energy, and tourism – is linked to community wellbeing.

Economic development requires adopting a comprehensive approach that considers people, culture, the environment and the economy through effective planning, development assessment, management and community engagement.

Research is needed to facilitate such sustainable development in northern Australia. It will provide a knowledge base for decisions based on robust scientific data, relevant information, and community aspirations.

Marine and Coastal Hub research focuses on improving methods for regional planning, development assessment and engagement. It covers three broad areas: better governance, improved Indigenous outcomes, and regional datasets.

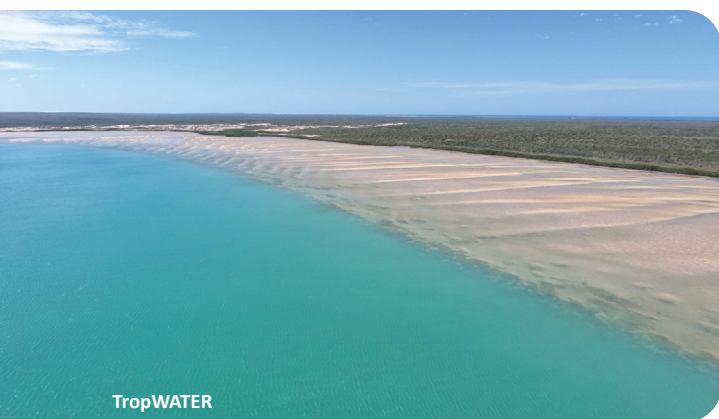


IMPROVED GOVERNANCE

Hub projects are reviewing planning and development assessment practices and the environmental impacts of developments. They are establishing a strong community of practice to inform policy for future regional planning, at jurisdictional and commonwealth scales. This will promote improved integration of environmental decision-making, investment attraction, and Indigenous interests.

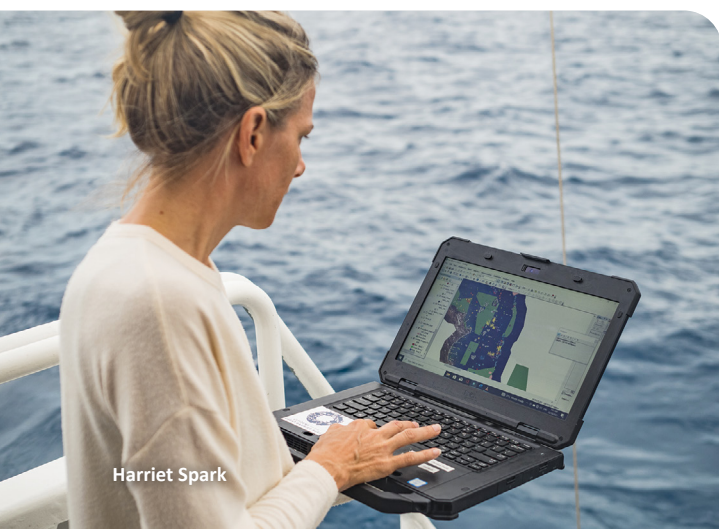
IMPROVED INDIGENOUS OUTCOMES

Aboriginal and Torres Strait Islander communities hold legal rights to a substantial portion of this region. Careful and comprehensive planning is critical given its cultural and environmental significance. Traditional Owner support for development decisions is important. The hub promotes Indigenous-led biodiversity conservation and environmental management, and respectful incorporation of Indigenous values and knowledge. For example, the proposed development of a National Indigenous Environmental Research Network is intended to facilitate inclusive and relevant engagement and research through coordinated regional governance.



COMPREHENSIVE REGIONAL DATASETS

The coastline of northern Australia has remarkable biodiversity, including threatened and migratory marine species that require protection (dugongs, marine turtles, sawfish, sea snakes) and globally significant seagrass meadows, mangroves and coral reefs. Reliable estimates of their condition, population size, distribution, status and trends are crucial to protect these species and their habitats effectively. Hub researchers, in collaboration with Traditional Owners, industry and others, are taking innovative approaches to investigate species and habitats across large spatial scales. For example, they are mapping seagrass, coral reefs, shellfish reefs and dugong distribution across northern Australia. These comprehensive datasets will inform decision-making that minimises environmental impact.





COLLABORATIVE RESEARCH

Reviewing Northern Australian planning processes and practices

Building a community of practice to improve regional planning

Studying regional governance systems for ecologically sustainable development

Analysing development impacts such as run-off in three northern catchments

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

Identifying issues and developing a research strategy for Kakadu National Park

Supporting Indigenous people's participation in environmental markets

Progressing Indigenous-led feral-ungulate control in Northern Australia

Mapping the distribution of seagrass habitat in Northern Australia in collaboration with Indigenous rangers

Mapping reefs and shellfish reefs in northern Australia

Assessing dugong populations across northern Australia in collaboration with Indigenous rangers

Monitoring sawfish populations in collaboration with Traditional Owners and industry

Surveying the condition and distribution of mangrove at historical dieback sites in the Gulf of Carpentaria

Understanding sea snake distributions through improved fisher bycatch data

Better governance

Improved Indigenous outcomes

Comprehensive regional datasets

OUTCOMES FOR RESEARCH USERS

Regional, state and federal governments > a roadmap to improve regional planning

Regional, state and federal governments > a strong regional planning network to increase capacity and enhance communication

Regional, state and federal governments > improved approaches to sustainable development

Regional, state and federal government > better design and planning of irrigation developments

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

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

Traditional Owners > Facilitation of Indigenous involvement in Blue Carbon markets

Traditional Owners, communities and managers > better turtle hatchling survival and less wetland damage

Traditional Owners, communities, researchers and management agencies > comprehensive seagrass distribution map for improved regional planning

Traditional Owners, communities, researchers and management agencies > improved methodology and data for regional planning

Traditional Owners, communities, researchers and management agencies > Indigenous-led dugong monitoring; data for regional planning

Traditional Owners, industry, researchers and management agencies > sawfish monitoring and population data for regional planning

Traditional Owners, researchers, management agencies > new methods for accelerated mangrove recovery

Industry, researchers and management agencies > stakeholder-designed monitoring and population data for regional planning



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