National Environmental Research Program

NORTHERN AUSTRALIA HUB

Improving biodiversity conservation in northern Australia

Partnerships and tools to support biodiversity monitoring by Indigenous land and sea managers

New opportunities for monitoring in northern Australia

Indigenous communities in northern Australia have a significant body of Traditional Ecological Knowledge and maintain strong cultural links to the environment. There is also a growing workforce of Indigenous land and sea managers and an expanding area of land and sea country under active Indigenous management, which presents an unprecedented opportunity to better manage and monitor biodiversity across northern Australia.

Much of northern Australia is typified by its remoteness, sparse population, and seasonal inaccessibility resulting from the wet-dry tropical climate. There are many areas with high biodiversity values in the relatively undeveloped northern landscape. There is currently a lack of research on the populations of many species and a lack of baseline data on important ecosystems.

The growing Indigenous environmental workforce situated across remote northern Australia is growing in capacity and becoming increasingly skilled, adopting new techniques and technology to better manage and monitor biodiversity. To support this effort Indigenous land and sea managers, such as rangers, need access to scientifically robust methods and techniques that are directly relevant to the work they are doing on the ground.

Monitoring programs that deliver data useful to regional and national planning will be of the greatest benefit to national and state planners and policy makers. However if monitoring programs and tools are not also practical and relevant to local needs and aspirations, they are unlikely to be supported and implemented in the long term.

Project approach

This North Australian Indigenous Land and Sea Management Alliance (NAILSMA) led project took a collaborative research approach that brought together Indigenous communities, rangers, researchers and other stakeholders. Three case studies formed the central focus of the project. In each case study, researchers or other relevant experts worked with an Indigenous community to develop new tools that both support the needs of the local land and sea management group, and were also relevant to other communities in northern Australia. The project included extension activities like workshops and practical on-ground activities to share tools with other relevant groups.

Partners

Primary collaborative research partners across the case studies included:

- NAILSMA
- Wunambal Gaambera Aboriginal Corporation's Uunguu Rangers
- Kimberley Land Council supported Nyul Nyul Rangers
- Yintjingga Aboriginal Corporation's Lama Lama Rangers
- CSIRO
- The University of Western Australia
- Griffith University
- South Cape York Catchments.

The support of the Kalumburu, Beagle Bay and Port Stewart communities was instrumental in project implementation.

Project outreach and sharing also occurred with many Indigenous ranger programs across northern Australia.

Data collection and monitoring tools

Developing data collection and monitoring tools that would be relevant to communities in the long term was a key objective of all case studies. Building on the (NAILSMA)'s I-Tracker program, all case studies developed data collection applications and associated mapping and reporting capabilities using CyberTracker™ software. These applications were used on rugged mobile data collection devices to suit the remote conditions in which rangers operate, including extreme weather. Community friendly support tools, such as field training handbooks were created with input from all project partners to complement these applications.

Lessons

A number of factors make the participatory collaborative research approach taken in this project effective for implementing research and conservation, particularly in remote northern Australia. On a local level, the research was driven by Indigenous community priorities and supported the implementation of community-based plans. This results in research outcomes that are of immediate relevance as well as ongoing interest.

Many areas of environmental research, particularly in places where little or no baseline data exist, require long-term monitoring. In addition, undertaking research in remote areas within the wet tropics presents significant logistical challenges. Project design that uses traditional and local knowledge and involves the community significantly improves research design and outcomes for short-term research projects. It also builds local capacity to implement long-term monitoring, which is essential in the northern Australian context to improve knowledge about biodiversity, species and associated habitats.

Future directions

This project has demonstrated the success of developing environmental monitoring tools practical for long-term implementation across northern Australia through collaborations between Indigenous land and sea management groups and experts; especially when co-ordination and communication support underpin projects. There is great scope to expand this approach to the other Indigenous land and sea management organisations operating across the vast and varied northern Australian landscape. Monitoring and management tools for other marine and terrestrial wildlife species of national and cultural value, other landscape-scale issues such as erosion and climate change, and issues relating to land use and development, are just some examples of areas outside this project that this approach could be applied to in the immediate term.

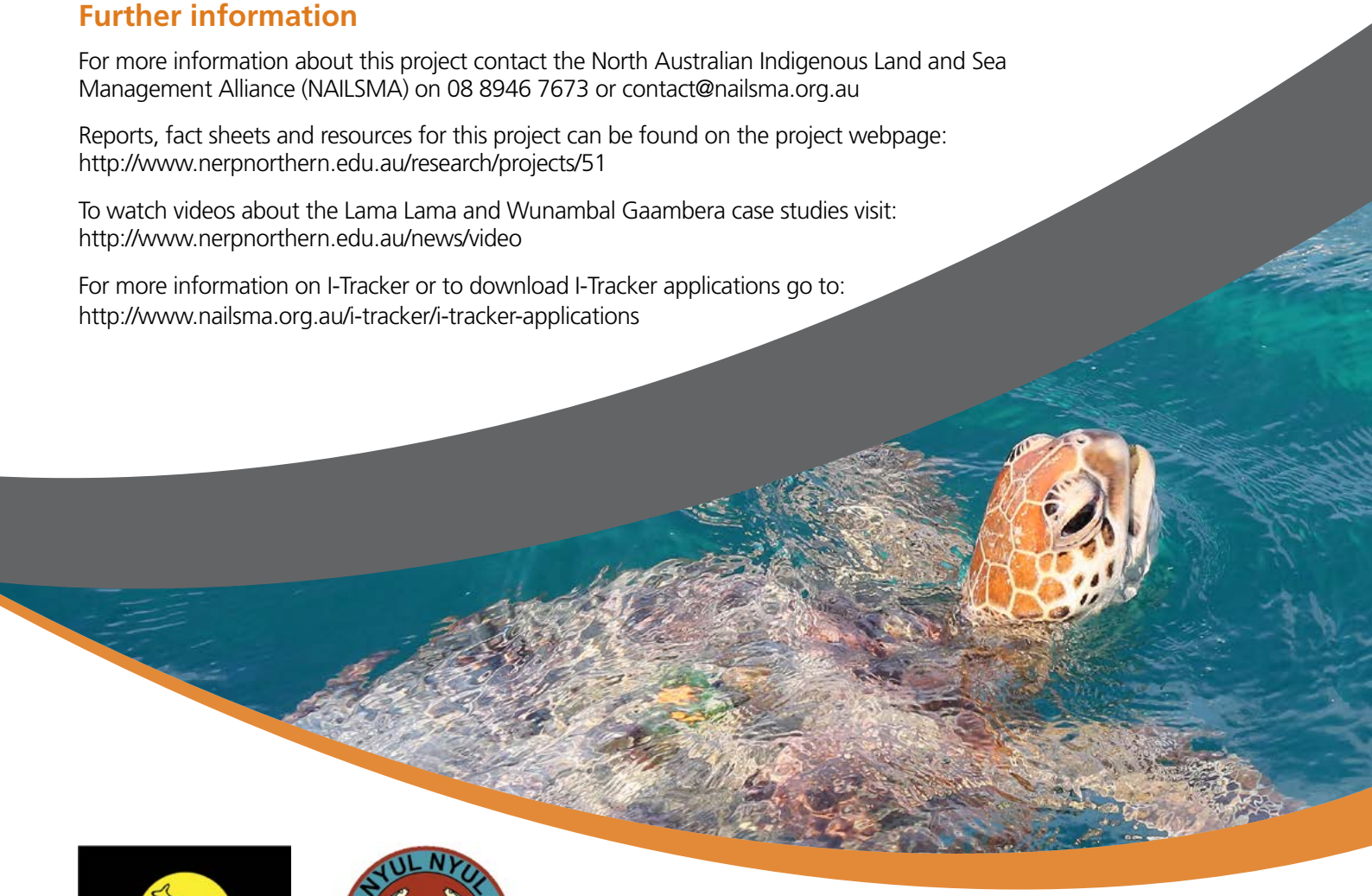
Further information

For more information about this project contact the North Australian Indigenous Land and Sea Management Alliance (NAILSMA) on 08 8946 7673 or contact@nailsma.org.au

Reports, fact sheets and resources for this project can be found on the project webpage: http://www.nerpnorthern.edu.au/research/projects/51

To watch videos about the Lama Lama and Wunambal Gaambera case studies visit: http://www.nerpnorthern.edu.au/news/video

For more information on I-Tracker or to download I-Tracker applications go to: http://www.nailsma.org.au/i-tracker/i-tracker-applications



Kimberley Land Council

Nyul Nyul Rangers

Griffith University

Yintjingga Aboriginal Corporation

Lama Lama Rangers

South Cape York Catchments

Wunambal Gaambera Uunguu Healthy Country

CSIRO

National Environmental Research Program

NORTHERN AUSTRALIA HUB

Improving biodiversity conservation in northern Australia

NAILSMA North Australian Indigenous Land and Sea Management Alliance

The University of Western Australia

This research was supported by funding from the Australian Government's National Environmental Research Program.

Email: nerp.northern@cdu.edu.au

Phone: 08 8946 6761

NERPNorthern

Northern Biodiversity

@NERPNorthern

Northern Biodiversity