

## Indigenous Management of Marine Turtles Coordinated Across the North of Australia

Lorrae McArthur

*North Australian Indigenous Land and Sea Management Alliance,  
Tropical Savannas CRC, Charles Darwin University, Darwin, Australia.  
Email: [lorrae.mcarthur@cdu.edu.au](mailto:lorrae.mcarthur@cdu.edu.au)*

### Introduction

Traditional Owners (TOs) are working together to develop a community-driven approach towards the sustainable management of dugongs and marine turtles across the north of Australia. This approach has been the participation in the Dugong and Marine Turtle Project (DMTP) that is coordinated by the North Australian Indigenous Land and Sea Management Alliance (NAILSMA). Communities extending from the Kimberley, across the Top End of the Northern Territory, Gulf of Carpentaria, and Cape York to the Torres Strait are taking a “bottom-up approach” in which Traditional Owners identify their concerns and aspirations and the corresponding research and management activities they wish to undertake through the DMTP. The DMTP provides a foundation on which to fulfil Indigenous cultural obligations in looking after dugongs and marine turtles, which is also in the national and international interests.

The NAILSMA was developed by the Kimberley Land Council, Northern Land Council and Balkanu Cape York Development Corporation in response to the ever-increasing need to have effective communication to support community driven management action by Traditional Owners across the wet-dry tropics of northern Australia. The membership of the alliance is steadily growing to include other regions within North Australia. The Dugong and Marine Turtle Project is one of many initiatives that NAILSMA is currently undertaking across the north.

NAILSMA, which is hosted by the Cooperative Research Centre Tropical Savannas Management, started the DMTP in 2005 and expects to complete the project by 2008. The project has been funded by the Australian Government’s Natural Heritage Trust and receives significant contributions from the project partners. Project partners include the

Kimberley Land Council, Northern Land Council, Carpentaria Land Council Aboriginal Corporation, Balkanu Cape York Development Corporation and the Torres Strait Regional Authority. Technical and scientific advice is provided to the DMTP by a Technical Reference Group, which is made up of about 24 members – researchers, government, non-government organisations and industry representatives.

### The significance of marine turtle management

Northern Australia is regarded as one of the great strongholds for marine turtles in the world. It is home to six of the seven species of marine turtles. The vast coastline and beaches in this region support globally significant rookeries for green (*Chelonia mydas*), olive ridley (*Lepidochelys olivacea*), hawksbill (*Eretmochelys imbricata*), loggerhead (*Caretta caretta*), and the Australian endemic flat back (*Natator depressus*) turtles.

Marine turtle populations face a range of global and local impacts, including habitat loss and modification, the significant impact of disused fishing nets (ghost nets) and pest species (i.e. feral pigs) and over-harvesting eggs and turtle meat. TOs are concerned with the long-term survival of marine turtles as it affects their culture, social systems and subsistence. TOs are also seeking recognition and protection of their cultural obligation of protecting marine turtles. TOs seek support and engagement in contemporary management and research for the long-term management of marine turtles.

One of the great strengths of the DMTP is that it provides for coordination of marine turtle management across a vast geographic area given the migratory behaviour of marine turtles, and hence, the need to understand impacts on populations across their range. Sound partnerships

between Indigenous people and communities and non-Indigenous scientists and managers allow Indigenous knowledge and contemporary research and management techniques and understandings to be combined.

*Indigenous concerns and aspirations for the management of marine turtles:*

The types of concerns and aspirations shared among TOs across the north of Australia include:

- the importance of Indigenous knowledge and customary practices as the basis for sustainable management plans;
- the need to build the capacity of Indigenous Land and Sea Management organisations and ranger programmes to engage in contemporary management and research;
- a lack of information including data on population sizes and distribution;
- improved working relationships and partnerships among TOs, researchers, government and industry;
- stronger linkages between coastal Indigenous communities responsible for dugongs and marine turtles; and,
- improved public understanding of the many threats to dugongs and marine turtles, and of the rights, roles, responsibilities and activities of Indigenous Australians in managing dugongs and marine turtles.

*Indigenous management of marine turtles:*

The coordinating role of NAILSMA includes activities such as:

- facilitating communication amongst participating Indigenous communities;
- developing standardised information recording and storage;
- training and coordinating information exchange among participating communities;
- commissioning relevant reviews and analyses, such as socio-economic studies of the 'value' of dugongs and turtles to Indigenous livelihoods;
- ensuring Indigenous representation in government initiatives, planning and committees; and,

- implementing communication activities to improve public understanding of the rights, roles, responsibilities and achievements of Indigenous people in managing dugongs and marine turtles.

NAILSMA's project partners oversee the local delivery of the DMTP through Regional Activity Plans (RAP) in selected 'pilot' communities. Each RAP is developed through community consultation, and identifies the needs and aspirations of TOs and community members on issues and threats facing dugong and turtle management, and identifies the types of management and research activities that communities wish to undertake.

**Regional activities in turtle management**

Through the Land and Sea Unit of the Kimberley Land Council <[www.klc.org.au/landsea.htm](http://www.klc.org.au/landsea.htm)>, the Bardi Jawi people of Western Australia are working in key areas along the Dampier Peninsula (Ardyaloon, Lombadina/Djarindjin). The Regional Facilitator is working with Head Rangers to coordinate implementation of their Regional Activity Plan (RAP). Their RAP provides scope for setting up a ranger programme that undertakes cultural mapping, catch management, beach nest surveys, coastal clean ups, management of tourism and access to significant breeding sites, as well as conducting community workshops to increase awareness of customary laws and the management of resources. Their RAP also functions to build relationships and share information among government agencies and scientific institutions, and, provide training to rangers in Land and Sea Management.

The Dhimurru Land Management Aboriginal Corporation employs Yolngu Aboriginal Sea Rangers across the coast of North East Arnhem Land in the Northern Territory. Dhimurru's Senior Ranger for Sea Country and Sea Country Facilitator are working with Sea Rangers to manage dugongs and marine turtles as part of their Yolngu Monuk Gapu Wanga – Dhimurru Sea Country Plan <[www.dhimurru.com.au/sea.html](http://www.dhimurru.com.au/sea.html)>. As a part of this plan, rangers are conducting turtle nesting surveys on Bremer Island, an important breeding site for hawksbill, olive ridley and green

turtles. In addition to this, sea rangers conduct turtle rescue flights each dry season to regularly survey the beaches for turtles caught in ghost nets. The Dhimurru Sea Rangers are also coordinating a satellite tracking programme to monitor the health of turtles that are rescued from nets, and, developing community management plans for the long-term protection of turtles.

The li-Anthawirriyarra Ranger Group is piloting a RAP across the east coast of the Northern Territory that was developed through the Northern Land Council <[www.nlc.org.au/](http://www.nlc.org.au/)>. Although dugongs and marine turtles are harvested on a customary hunting basis, communities have strongly expressed a wish to control the development and implementation of management and monitoring regimes. The li-Anthawirriyarra Ranger Group has already proven experience, and has developed their marine and coastal management and administrative capacities over many years. The li-Anthawirriyarra Sea Rangers have worked collaboratively with the World Wildlife Fund (WWF) in tracking the daily movements of marine turtles and gathering information from satellite tracking to help protect these species.

In the Southern Gulf of Carpentaria, the Regional Facilitator of the Carpentaria Land Council Aboriginal Corporation works in consultation with the TOs of the Wellesley Islands and adjacent mainland. This region comprises the traditional land and waters of the Lardil, Kaiadilt, Yangkaal and Gangalidda peoples, whose native title over the sea was recognised by the Federal Court in 2004. Dugongs and marine turtles are central to the culture, identity and economy of all the Indigenous groups of the Wellesley Islands region. Through their RAP, the TOs of this region have indicated their commitment to the long-term management of dugongs and marine turtles, which they have harvested sustainably for thousands of years.

In Cape York, the Regional Facilitator of Balkanu – Cape York Development Corporation <[www.balkanu.com.au/](http://www.balkanu.com.au/)> works with communities at Injinoo and Pormpuraaw on the west coast and Lockhart and Hopevale on the east coast. Injinoo and Pormpuraaw are busy recording knowledge of customary law and biology of dugongs and marine turtles as part of the Traditional Knowledge

Revival Pathways project <[www.tkrp.com.au/](http://www.tkrp.com.au/)>. This knowledge will form the basis of community based management plans. In Lockhart River and Hopevale, information and data that scientific researchers have collected on dugongs and marine turtles is being collated and given back to those communities.

In Torres Strait, and unlike anywhere else in Australia, both dugong and marine turtles are considered Fisheries under the Torres Strait Treaty and are managed through the enactment of the Torres Strait Fisheries Act, 1992. Dugongs and marine turtles are a traditional food source of 19 Torres Strait Islander and Aboriginal communities within the Maluiligal (Western Islands), Guda Maluiligal (Top Western Islands), Kulkalgal (Central Islands), Kaurareg (Inner Islands), Kemer Kemer Meriam (Eastern Islands) Nations and of adjacent coastal communities in Papua New Guinea and the Gudang Nation of Cape York Peninsula. The Treaty recognises the harvest of dugongs and turtles as a traditional right of all traditional owners and inhabitants in the region. Sustainable use and management of dugongs and turtles will, therefore, require the active involvement of, and collaboration between, all of these communities, particularly at a national level.

The Regional Facilitator & Project Liaison Officer of the Torres Strait Regional Authority <[www.tsra.gov.au/www/index.cfm?ItemID=1](http://www.tsra.gov.au/www/index.cfm?ItemID=1)> (TSRA) is working with Project Officers for communities on the Iama, Boigu and Badu Islands. Additional resources have also allowed five new island communities, Mer (Murray Island), Erub (Darnley Island), Dauan, Mabuiag and Ngurapai (Horn Island), to participate in the community-based project. Activities in these regions focus on the cultural management of turtles and dugongs, recording catch sizes, monitoring nesting sites, as well as providing training and education on the management of these resources. The Australian Government is presently working in conjunction with Torres Strait Regional Authority and the Papua New Guinea (PNG) Department of Environment and Conservation to engage western province PNG villages in raising awareness about the sustainable management of dugongs and marine turtles.

### **Cross organisational marine turtle management activities**

NAILSMA also works closely with other major Indigenous sea country management initiatives in North Australia, such as the Carpentaria Ghost Nets Programme <[www.ghostnets.com.au/index2.html](http://www.ghostnets.com.au/index2.html)>.

Ghost nets found in north Australian waters predominantly come from foreign fishing vessels. These disused fishing nets pose significant risks to the environment due to their entanglement with and subsequent stranding of marine wildlife on coastal beaches.

Four of the marine turtle species listed as either endangered or vulnerable under Australian legislation have been found entangled in ghost nets. Indigenous communities around the Gulf of Carpentaria and the Torres Strait are monitoring and removing nets from beaches, as well as providing valuable data to national and international activities to assist in fixing this issue at its source.

### **Conclusion**

NAILSMA, the project partners and communities are working together towards a long-term vision of healthy and sustainable populations of dugongs and marine turtles that sustain Indigenous livelihoods across North Australia. Successful community-based management plans built on long-held Traditional Knowledge and Customary Law that are integrated with contemporary knowledge, research and management planning, are essential to achieving this goal. Scientific research will continue to improve the understanding of the complex life histories of marine turtles and dugongs, but research alone cannot ensure the survival of these populations.

#### *For further information:*

Contact the NAILSMA Project Coordinator Rod Kennett, email <[rod.kennett@cdu.edu.au](mailto:rod.kennett@cdu.edu.au)> or visit the NAILSMA web site. Log on to, <[www.nailsma.org.au](http://www.nailsma.org.au)> from this site, the PDF version of the Marine Turtle Knowledge Handbook is available for all those interested.