



National Environmental Science Programme

Project 2.3.4 Working with Traditional Owners and local citizens to better manage GBR estuarine wetlands

Project Summary

Traditional Owner rangers and local citizens of the Port Curtis Coral Coast (PCCC) TUMRA are engaged in the development of a Mangrove Management Plan (MMP) that provides a strategic basis for estuarine repair activity and maximizes water quality outcomes for the southern Great Barrier Reef (GBR). The program is lead by mangrove specialists from James Cook University TropWATER Centre, as part of the Australian Mangrove and Saltmarsh Network (www.amsn.net.au). Development of this MMP will build capacity within the Gidarjil Development Corporation (GDC), the Burnett Mary Regional Group (BMRG), the Fitzroy Basin Association (FBA) and the local community to undertake scientifically-rigorous, ecological monitoring, assessment and rehabilitation of the vital organs that maintain healthy corals and seagrass beds in the southern GBR region. Estuarine wetlands are an integral component of the local sea country, comprising sites of immense cultural heritage significance, including middens, fish traps, and traditional fishery resources.

Problem

While estuarine wetlands provide essential ecosystem services protecting the southern GBR, including water quality improvement, these shoreline habitats have suffered badly from human development coupled with recent extreme flood events. Existing anthropogenic stressors have reduced the recovery potential of these impacted estuarine wetlands, depleting their resilience to imminent extreme events – as predicted with global climate change. A national strategy is needed for prioritising sites for rehabilitation where proven methodologies might minimise anthropogenic stressors and improve ecosystem services generally.

How Research Addresses Problem

The whole-of-system approach incorporates socio-cultural, ecological and economic considerations for a cost-effective investment in shoreline habitat monitoring and rehabilitation. Tidal wetland specialists have partnered with Traditional Owners, local citizens and NRM agencies to develop a MMP that will identify, prioritise and detail shoreline repair strategies based on ecological criteria, cultural values and knowledge, for regional NRM and government priorities. To achieve this, participants are trained in MangroveWatch monitoring methodologies with assessments by JCU TropWater specialists.



Gidarjil rangers use video cameras to monitor the health of estuarine shorelines boarding the southern Great Barrier Reef

Photo: N C Duke



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Scientists collaborate with Gidarjil rangers to monitor the health of the Burnett and other major river estuaries in the southern GBR region

Traditional Owners do what comes naturally – protecting sea country and the Reef!

Traditional knowledge and cultural heritage values are being incorporated into broad ecological assessments give holistic and pragmatic views of estuarine wetland condition, values and threats. These data form the basis of the MMP also identifying likely mitigation strategies. A series of workshops conducted with GDC rangers, local citizens, management agencies and end-users will inform a more strategic approach to estuarine wetland management and repair.

In this project, the partnership with GDC supports the practical implementation of this strategy for protection and enhancement in environmental values of estuarine wetland sea country. The MMP development process started with capacity building amongst Indigenous Rangers to monitor, assess, manage and rehabilitate estuarine wetlands within their PCCC TUMRA region. The projected outcome will have ongoing immense benefits: for water quality improvement within the southern GBR region; and, as Rangers gain respect and a career path. It's a win-win outcome!

This project provides a blueprint for how citizen science partnerships and traditional values can contribute successfully to robust environmental monitoring in the GBR region; providing a cost-effective and socially beneficial way of undertaking long-term environmental monitoring required for the immense challenge of maintaining shoreline habitat health throughout the entire Great Barrier Reef region. Only in this way will the immense cultural and economic values of GBR natural environments be preserved.

Further information
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