NERP Tropical Ecosystems Hub
Project 11.1 Final Factsheet
Torres Strait Futures: Results and Recommendations

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The issue

The low-lying islands of the Torres Strait form the bridge between Australia, Papua New Guinea (PNG) and Indonesia. They are located within the Torres Strait Protected Zone, established by the Torres Strait Treaty with PNG (see map). Many islands are highly vulnerable to sea level rise. The region is also experiencing other rapid changes, including increased shipping traffic, a growing population in neighbouring PNG, and potential pollution as a result of rapid mining and resources development in PNG and Indonesia. In order to achieve a sustainable future for Torres Strait communities, it is important to make predictions of potential environmental and economic changes and proactively plan for them. While there have been detailed studies on sea level rise, there is little other information available to explore the combined potential impacts of change on Torres Strait island communities. Also, no planning processes exist in the region to pro-actively anticipate these impacts and design appropriate adaptation strategies.

This fact sheet summarises the results and recommendations of a collaborative project between CSIRO and the Torres Strait Regional Authority (TSRA), funded by the NERP Tropical Ecosystems Hub. The project engaged Torres Strait communities, national, state and local government, NGOs and businesses in participatory planning to design adaptation strategies that would build the resilience of communities to long term change and sudden shocks. The project aimed to test a multi-stakeholder planning approach that could be applied by the TSRA's Community Adaptation Program, and also in vulnerable coastal villages of neighbouring PNG.

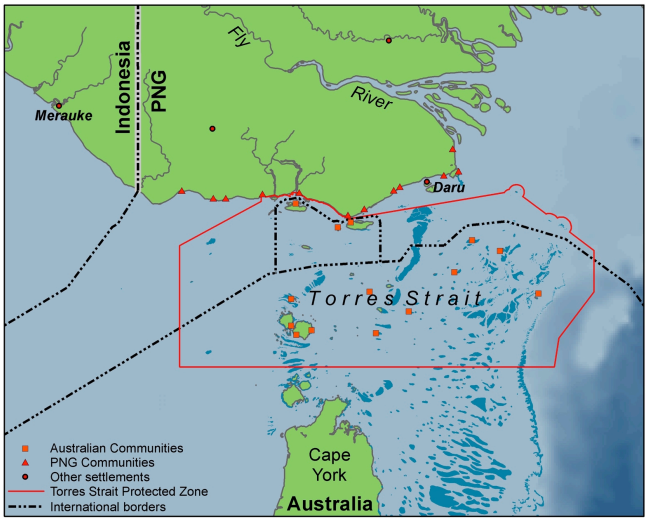

Photo: J. Butler

A Torres Strait island

Key results and recommendations

- Government, science and community stakeholders have different perspectives on community problems and solutions, which justifies multi-stakeholder planning to integrate their views and ideas
- In the communities of Masig, Erub and Mabuiag loss of traditional culture was considered a greater threat than climate change
- For Masig, the most important adaptation strategies were a cultural renewal program, and improved garden production to promote food self-sufficiency and health
- Most development programs are not yet prioritising strategies identified by the project
- Multi-stakeholder planning greatly enhances resilience by catalysing innovation, new partnerships and empowering communities
- Stakeholders wish to extend the planning process to other communities in the Torres Strait and PNG, and to establish 'demonstration sites' of resilient communities.

National Environmental Research Program

Australian Government
Department of the Environment

CSIRO

What did the project deliver?

A novel multi-stakeholder participatory planning method and tools were developed by the CSIRO and TSRA research team, which integrated the data and facilitation skills necessary for adaptation planning. Tools developed included participatory models to project impacts of change on ecosystem goods and services, future scenarios and historical timelines, a community resilience scorecard, and causal loop analysis to understand complex problems. The method and tools were successively applied and refined by the team through workshops at the regional level and with three island case studies, Masig, Erub and Mabuiag.

'No regrets' adaptation strategies (i.e. strategies which are flexible enough to deliver benefits under any future conditions of change) were developed with case study communities and other stakeholders, based on their specific local needs. These are being incorporated into programs planned by the TSRA, Queensland Government, Commonwealth Government, and the Torres Strait Island Regional Council.

A resilience model of the Torres Strait region highlighted variables that contribute to resilience. Key factors included the use of local language; fisheries income; livelihood diversity; independence from welfare; freshwater supplies; renewable energy supplies; healthy status of seagrass, mangrove, fish stocks, dugong and turtles. 'Thresholds of Potential Concern' were identified which if passed could reduce the resilience of the system. These variables and thresholds could inform State of the Region monitoring and reporting.

Photo: T. Greenwood

Workshop participants, July 2014

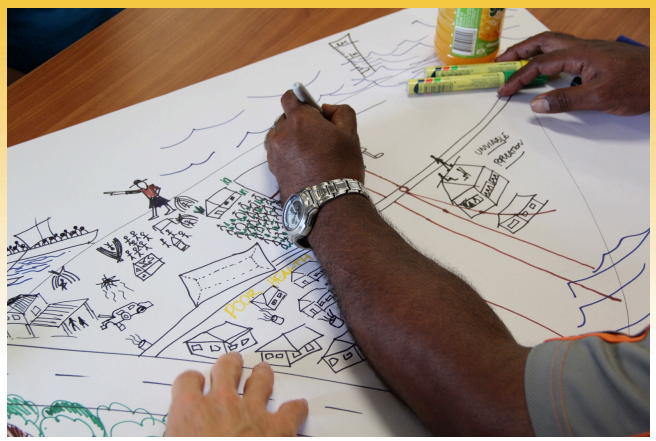

Photo: J. Butler

Future scenario drawing, May 2014

Project evaluation and impact

In November 2014 an evaluation was undertaken to assess the project's influence on participants' adaptive capacity. Results showed that the multi-stakeholder participatory planning had built leadership and trust amongst the research team and participants. New social networks and innovative ideas were also generated by the process. There was less evidence of the project's impact on policies and programs due to the limited time that had elapsed since the workshops. However, the TSRA is applying the project's tools and processes in its Community Adaptation Program, and the Queensland Government's Department of Aboriginal and Torres Strait Islander and Multicultural Affairs has recommended a modified community consultation process for the State's Torres Strait Planning Scheme to include adaptation strategies. The Joint Advisory Council of the Torres Strait Treaty has also endorsed the planning approach.

Stakeholder reflections

"The project has brought a new way of working together – different stakeholders coming together and working together from community to high government levels" (TSRA Board Member)

"Communities are more conscious around the whole issue of change and how certain things have impacted them and can impact them in the future. The project's given them ideas about things to improve their ability to adapt to change" (Queensland Government participant)

"Everything from PNG development, importance of culture, roles of the Land and Sea Rangers, we've all understood a lot more as a result of the participatory learning" (Councillor, Torres Strait Island Regional Council)

Find this project at **www.nerptropical.edu.au**
Theme 3: Managing for resilient tropical ecosystems
Program 11: Resilient Torres Strait communities
Project: 11.1: Building resilient communities for Torres Strait futures

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