



# Snapshot

## Climate change and remote Indigenous coastal communities: Insights from South Goulburn Island, Northern Territory

### Summary

A remote Indigenous community in coastal northern Australia has already noticed that changes to their local environment are occurring and they are concerned about future uncertainty. A study in 2012 developed resources that helped to facilitate the community's members to share their extensive knowledge, ideas and preferences that will help future adaptation and decision-making. The community linked the loss of traditional knowledge with a reduced resilience to change in the future. The community expressed a desire to be included in decision making about their community. These findings provide a starting point for other indigenous communities to think about adaptation. In particular, some of the facilitation tools could be adapted by other groups.

A study in a remote aboriginal community developed facilitation tools that helped to illustrate the depth of understanding of change held by the community and their desire to be involved in decision making for their future.

A research project on South Goulburn Island explored physical and biological changes people had noticed in their local environment. It asked how the Indigenous community felt about these changes and if the changes affected how people used the ocean for food and cultural practices. The community were also asked how they wished to navigate through these changes and the type of support that would be helpful to respond and adapt to them. See other examples of Indigenous adaptation to climate change [here](#).

### Keywords

Coastal, indigenous adaptation, uncertainty, Waruwi



Figure 1: Map of the location of South Goulburn Island and the community of Warruwi. Source: Modified from Petheram et al. 2013.

The small settlement of Warruwi on South Goulburn Island (Figure 1), 280 km northwest of Darwin, is home to fewer than 400 residents of which 95% are Aboriginal. Maung is the most common language, with few residents using English as a first language. Local people rely on the coastal and marine environments and resources of the region. Climate change poses a number of risks for the Warruwi people: since 1990 sea-level rise in northern Australia has been two to four times greater than for coastlines of southern Australia. Twice in 2015 the community was evacuated due to cyclone threats.

Through the research project, stories and ideas were shared through drawings and interpretations of the landscape, as well as participatory photography, video, a locally made electronic book, and a board game (Figure 2). Find full details in the report: [here](#).

The members of the Warruwi community said they had noticed both dramatic and subtle patterns of environmental change on their country. Once conversations began on this topic, changes such as sea level rise and beach erosion were commonly mentioned: 'the water is coming up and swallowing up the beach', 'a lot of trees getting washed away'.

They also spoke of warmer air and sea temperatures: 'sea is hotter – some fish are going deeper into the water to stay cool there during the day, so we need to catch them when they come up at night (maybe when the water is cooler they come up to the surface more)', and strange weather patterns: 'Sometimes we get early wet or late wet, funny kind of weather. Sometimes really hot and then all of a sudden cold. Seems to be a lot more wind blowing'.

They also spoke of plants and shellfish dying unexpectedly or changing: 'some oysters and mussels don't taste the same'.



Figure 2: Participant playing the aquaculture, climate change board game. Photo: © Lisa Petheram 2007.

When asked about the future, the Wurrawi community commonly spoke of their concerns about the loss of local knowledge and customary practices among younger generations. They considered the loss of this knowledge as highly interconnected with poor resilience, especially for the younger generations. While the community generally were more concerned about other issues, such as income, housing and way of life for the younger generations, they were also fearful of how climate change would impact on these more general issues and create an uncertain future.

Local people perceived the health of country (land and sea) to be strongly tied with people's actions. They showed a strong concern about the effects of sea-level rise and threats from worsened beach erosion, saltwater intrusion into creeks and billabongs, and surges becoming worse during cyclones and storms. There was also concern that people would become 'grumpy', 'have more health worry', and become 'annoyed' and 'fight more' and 'people wouldn't move around much' and there would be more 'sadness'. They expressed concern that there might not be enough fresh food or water for good health. Also, there might not be enough fresh bush food to be able to supplement unhealthy shop food in their diet which may lead to 'more diabetes'.

It is clear that traditional knowledge, particularly of the marine environment, is a highly valued part of community identity.

The community wanted to learn more about climate change and to investigate options to mitigate and adapt, from both customary knowledge and scientific knowledge. Actions to adapt to the coming changes included promoting local ecological knowledge, such as traditional fire management. Most people also spoke of the need to include flexible mobility in adaptation plans, such as to travel to safer areas and to resource rich locations when needed. Community-driven solutions were perceived to be highly important to enable greater self-sufficiency and independence, as well as better communication and sharing of lessons with scientists, policy makers and neighbouring Indigenous communities.

The challenges facing remote coastal communities, like South Goulburn Island, are significant and growing. However, community members have extensive knowledge, ideas and preferences that will be helpful with future adaptation and decision-making (Figure 3). Inclusiveness in decision making is desired by communities and it will be essential to have it in any approach to adaptation.



Figure 3: Member of the Wurrawi community in South Goulburn Island. Photo: © Lisa Petheram.

## Reference

Petheram, L., A. Fleming, N. Stacy, and A. Perry, 2013: Indigenous women's preferences for climate change adaptation and aquaculture development to build capacity in the Northern Territory. National Climate Change Adaptation Research Facility, Gold Coast, 70 pp. Accessed 25 May 2017. [Available online at [www.nccarf.edu.au/publications/adaptation-intertidal-marine-resources-indigenous-women](http://www.nccarf.edu.au/publications/adaptation-intertidal-marine-resources-indigenous-women)].

## Further reading

Fleming, A., L. Petheram, and N. Stacey, 2015: Australian Indigenous women's seafood harvesting practices and prospects for integrating aquaculture. *Journal of Enterprising Communities: People and Places in the Global Economy*, **9**(2), 156-181. Accessed 25 May 2017. [Available online at [www.emeraldinsight.com/doi/pdfplus/10.1108/JEC-08-2014-0013](http://www.emeraldinsight.com/doi/pdfplus/10.1108/JEC-08-2014-0013)].

Petheram, L., N. Stacey, and A. Fleming, 2014: Future sea changes: Indigenous women's preferences for adaptation to climate change on South Goulburn Island, Northern Territory (Australia). *Climate and Development*, **7**(4), 339-352.

**This Snapshot was prepared by Lisa Petheram.**

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