

Estuaries and Coasts: adaptation options for a changing climate



Project Background

Australia's estuaries and coasts are important habitats. However, both Climate Change impacts (e.g. sea-level rise, changing rainfall and increased storm frequency/intensity) and various human impacts have detrimental influences on such areas, putting them at risk. Much Climate Change research has concentrated on mitigation strategies, which involve trying to offset or reverse their effects, but recently the focus

has begun to shift towards adaptation strategies, with the purpose of minimising the negative impacts of Climate Change. Consequently, this project focuses on developing and assessing adaptation strategies for estuaries and other coastal ecosystems to optimise ecosystem functions, fisheries outcomes and biodiversity values in a changing world.

Project Outline

The project is aimed at producing a framework to facilitate Climate Change Adaptation Strategy decision-making that is relevant across

Australia's estuaries and coastal ecosystems. We will investigate tools for making decisions and test the benefits of the framework on a number of case studies.

Outcomes

The framework will be generally applicable across Australia, but also adaptable to regional differences. The project will provide a range of strategies and tools to facilitate management that is sensitive to:

- (a) regional differences;
- (b) the complex nature of estuaries and their various habitats;
- (c) the implications that adaptation strategies could have on the services and values of estuaries;
- (d) the competing needs, scales of influence, impacts, outcomes, consequences and costs across the sectors affected by Climate Change and adaptation responses (policy, management, environment, social/urban, financial/industry).



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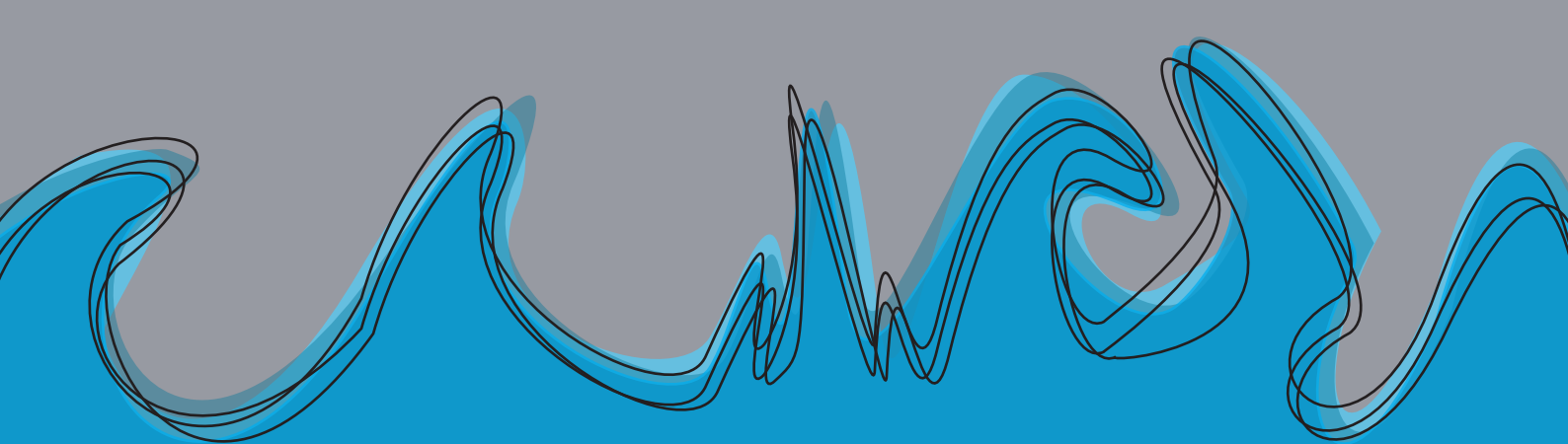
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Benefit to the Community

The project will develop a framework to assist coastal managers make informed, appropriate adaptation strategies that are sensitive to the diverse end-users needs, including; recreational and commercial fishers, aquaculture farmers, and

recreational users of Australian coasts. Minimising the negative influences of Climate Change on estuarine and coastal habitats is vital for the continued health and wellbeing of the environment which communities such as those rely upon.



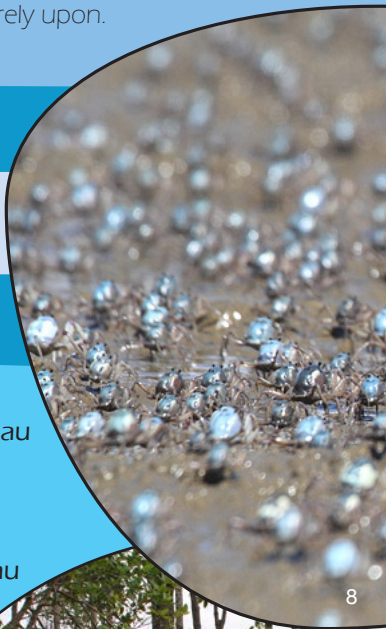
More Info

National Climate Change Adaptation Research Facility
<http://nccarf.jcu.edu.au/terrestrialbiodiversity/>



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Images

1. Destruction of mangrove habitat after tropical cyclone YASI in 2011;
2. Coastline, Dawson Inlet, WA.
3. White-Bellied Sea-Eagle with a fish at Blacksoil Creek-Old;
4. Stranded loggerhead turtle at Lucinda Beach-Old;
5. Estuarine habitat at Parry Inlet WA;
6. crocodile resting on the mangrove banks in the Daintree-Old;
7. The mouth of the Moore Estuary, WA;
8. Soldier crabs on the intertidal banks of the Ross River-Old;
9. Flooded mangrove forest.



The National Climate Change Adaptation Research Plan (NARP) for Marine Biodiversity & Resources identifies research priorities in five sectoral areas: marine aquaculture, commercial & recreational fishing, conservation management, tourism & recreational uses, and cross-cutting issues.

