

# Growth opportunities & critical elements in the value chain for wild fisheries & aquaculture in a changing climate



## Project Background

Much of climate change research on fisheries to date has been on the species biology and the perceptions of fishers. Climate change impacts can spread from the wild catch end of the chain, or impact directly on higher elements of the value chain. Therefore opportunities for improvement, efficiencies and adaptation may occur at different points along the value chain

or through different industry activities. The adaptation options and efficiency suggestions are directly linked to policy and management agencies with the inclusion of senior departmental staff from Western Australia, New South Wales, Victoria, Queensland, Tasmania, South Australia, and AFMA.

## Project Outline

Analysis of all activities within a sector known as value chain analysis will reveal climate-related adaptations for a selected set of fisheries representing commercial (e.g. southern rock lobster, prawn), indigenous (Torres Strait lobster) and aquaculture

sectors (oyster, prawn). Information on the existing conditions and prospective opportunities and barriers will form the basis to develop adaptation strategies through life cycle analysis, demand analysis and social perception studies.

## Outcomes

This project's outcomes will include:

- Value chains (present and future) for the case study fisheries and aquaculture businesses and life cycle analysis (LCA) for selected value chains will identify inefficiencies and potential points for increasing profitability.
- Market integration and demand analysis for each case study will identify strengths and weaknesses in the value chain, and together with the life cycle analysis, contribute to the development of adaptation options.
- Development of realistic adaptation management and policy options will enhance cost-effectiveness along the supply chain. We expect to generate targeted recommendations in relation to efficiencies and reduction of the carbon footprint. Consultation and interaction with stakeholders (industry and policy) via social research methods (interviews and workshops) will evaluate the feasibility of adaptations across the fisheries value chain.



## Benefit to the Community

Potential impact of the research:

- Stakeholders engaged in planning their future;
- Future strategies that take advantage of opportunities identified in the LCA, demand and market integration analysis;
- Pathways for policy and management support of fisheries adaptation are constructed. Planning documents can now include a climate adaptation strategy for major fisheries; and
- Development of approaches to aid fisheries adapt to climate change across the value chain.

## More Info

<http://www.cmar.csiro.au/climateimpacts/index.htm>

<http://www.imas.utas.edu.au/>

<http://www.dpi.vic.gov.au/fisheries>

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Hobday, AJ and Lough J (2011) Projected climate change in Australian marine and freshwater environments. *Marine and Freshwater Research* 62(9), 1000-1014. DOI: <http://dx.doi.org/10.1071/MF10302>

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Norman-Lopez A, Pascoe S and Hobday AJ (2011) Potential economic impacts of climate change on Australian fisheries and the need for adaptive management. *Climate Change Economics* 2, 209-235. DOI: <http://dx.doi.org/10.1142/S201000781100027>

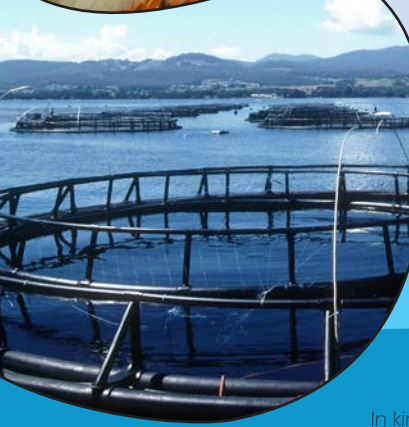
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The National Climate Change Adaptation Research Plan (NARP) for Marine Biodiversity & Resources identifies research priorities in five sectoral areas: marine aquaculture, commercial & recreational fishing, conservation management, tourism & recreational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



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