

Managing fisheries in a changing climate

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A new climate adaptation handbook supports Australian fisheries managers and operators to identify and respond to climate risks. Image: A Northern Prawn Fishery vessel off Northern Australia. Credit: Australian Fisheries Management Authority (AFMA)

Australian fisheries are now better equipped to plan for climate change thanks to a new adaptation handbook launched today at the World

Fisheries Congress.

The Adaptation of Fisheries Management to Climate Change Handbook is designed to help fisheries managers and operators identify effective responses to climate change by working through an evidence-based process developed by CSIRO, Australia's national science agency, with the Institute for Marine and Antarctic Studies (IMAS) and the Australian Fisheries Management Authority (AFMA).

CSIRO researcher and lead author of the handbook, Dr. Beth Fulton, said Australia's marine environment was changing faster than ever leading to a complex set of challenges for the [fishing industry](#), including on ecosystems, fish biology, operations, infrastructure, and safety.

"Our science shows that many marine species, including fished species, are facing threats due to climate change, like changes to water temperatures, ocean chemistry or habitat distribution," Dr. Fulton said.

"The combined pressures of climate change mean that fisheries are likely to become more variable, affecting when, where and how many fish are caught," she said.

The handbook was developed through collaboration between fisheries researchers, managers, and operators to create a process that uses the best available information to explore adaptation options and determine which could be the most feasible and effective.

Australian Fisheries Management Authority (AFMA) CEO, Mr Wez Norris, said the handbook was designed to be used by industry, management, and other fisheries stakeholders to establish a shared understanding of climate risks and develop robust adaptive management options.

"Fisheries managers want to know how climate change affects aspects of management like sustainable catch limits, fishing rules, or the methods and gear used. The handbook provides a logical step by step process for exploring these questions and will greatly assist us in working through these issues with industry," said Mr Norris.

"The handbook, will assist AFMA in delivering climate change resilient fisheries management so that Australia's Commonwealth fishing industry remains a sustainable and economically viable industry, now and into the future."

While this project was developed for Commonwealth fisheries, the process described in the handbook can be equally applied to fisheries managed by all jurisdictions.

Dr. Fulton said that responding to [climate change](#) was a cross-jurisdictional and multifaceted issue for fisheries management that would require different stakeholder groups to come together to identify and minimize cumulative risks.

"Climate change information, like the regional summaries provided through this project, needs to be used with monitoring and forecasting information to understand system change, support evidence-based decision making, and ensure fishery sustainability and profitability," said Dr. Fulton.

The handbook sets out a three-step process for understanding climate risks and managing the response:

1. Consider the [climate](#) sensitivity of a fishery's management to physical and ecological change
2. Consider how fishery operators are likely to respond and adapt
3. Determine potential management responses and the cost and

speed of response.

The project team from CSIRO and AFMA are developing a user-friendly tool to assist fisheries managers and operators step through the risk assessment process described in this [handbook](#).

The project, "[2016-059 Guidance on Adaptation of Commonwealth fisheries management to climate change](#)," is supported by funding from the FRDC on behalf of the Australian Government, and is informed by past investment.

More information: Climate Adaptation Handbook:
[research.csiro.au/cor/home/cli... adaptation-handbook/](https://research.csiro.au/cor/home/cli...adaptation-handbook/)

Provided by CSIRO

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