

Marine ecosystems get a climate form guide

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The 'Marine Climate Change Impacts and Adaptation Report Card' for Australia. (CSIRO)

(PhysOrg.com) -- The first-ever Australian benchmark of climate change impacts on marine ecosystems and options for adaptation is being released in Brisbane today.

The *Marine [Climate Change Impacts and Adaptation Report Card](#)* for Australia, and an accompanying website, will provide a biennial guide for scientists, government and the community on observed and projected impacts of climate change on [marine ecosystems](#).

"The objective of compiling this information is to consider options available to environmental and resource managers in their response to changes in ecosystem balance," says project leader, CSIRO Climate

Adaptation Flagship scientist Dr Elvira Poloczanska.

"On both sides of the continent there is clear evidence of ocean warming and this is already bringing sub-tropical species south into temperate waters, and in the case of the giant kelp forests in Tasmania, appears to be having a severe impact in just a few years.

"This research is relevant for anyone with a recreational interest or financial investment in our coasts and oceans," Dr Poloczanska says.

The Report Card highlights observations over the past decade, projects forward to 2030 and 2100 with assessments of likely status and confidence ratings, and offers adaptation responses that can also inform policy makers.

Key concerns include; waters around Australia becoming warmer and more acidic, increases in strengths of major warm-water currents such as the East Australian Current, changes in the productivity of marine ecosystems and shifts in the distribution and abundance of species. The Report Card identifies where change is already occurring, likely trends and confidence levels in those trends depending on the state of knowledge.

The research team comprises scientists from CSIRO, Australian universities, State and territory environmental agencies, the Australian Institute of Marine Science and the Bureau of Meteorology.

The Director of the National Climate Change Adaptation Research Facility (NCCARF), Professor Jean Palutikof, says the Report Card reflects both the increased bank of knowledge about impacts, and the responses of government, industry and the community.

"[Australia](#) needs a guide to likely changes in the marine environment and

we feel well-positioned now to bring together the science and the latest climate projections to consider options for adaptation,” Professor Palutikof says.

Provided by CSIRO ([news](#) : [web](#))

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