National Environmental Research Program

MARINE BIODIVERSITY hub

Classifying Australia's submarine canyons

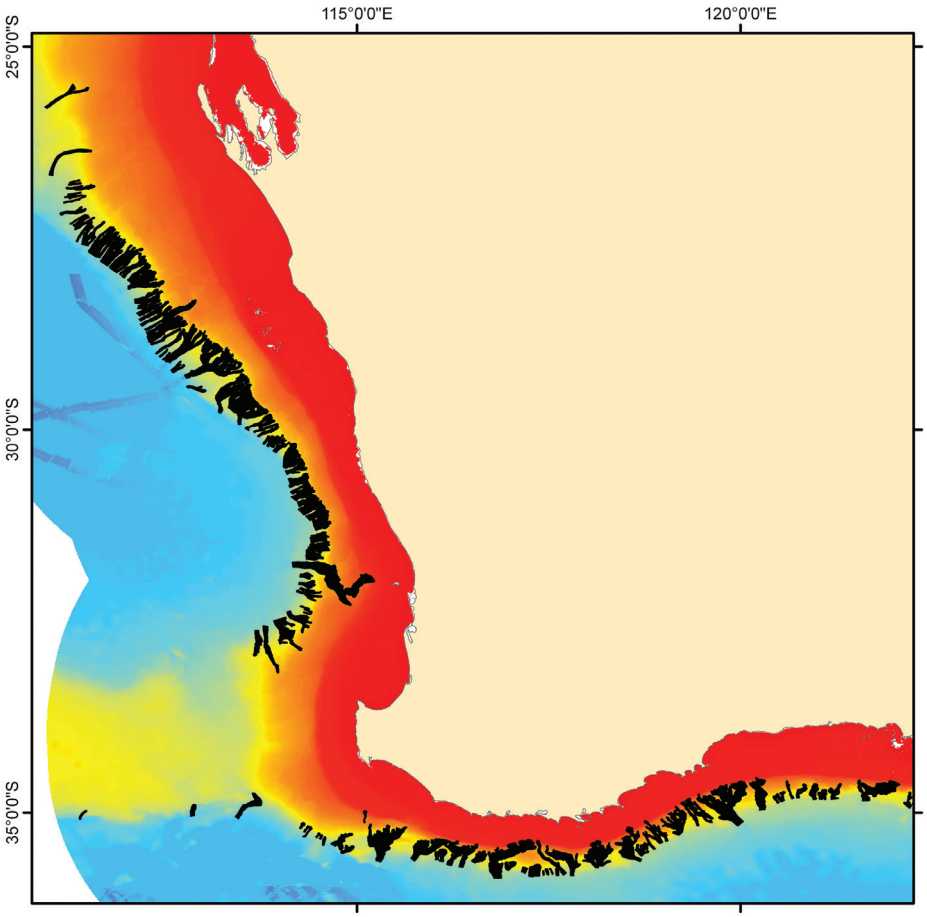
Submarine canyons have been identified in marine bioregional plans as areas of high productivity and marine life aggregation, ranging from deep water corals to iconic species such as blue whales. Surprisingly we do not know the number of canyons around Australia, how they vary, nor how this changes their biodiversity value.

The NERP Marine Biodiversity Hub is classifying Australian canyons to identify their physical variation and biodiversity potential. Importantly for managers, this will show how unique a particular canyon is – in a local, regional and national context – and how likely it is to support a higher level of biodiversity than surrounding areas.

The classification will draw on the national bathymetry grid compiled by Geoscience Australia (GA) at a spatial resolution of 250 metres and will incorporate finer resolution data collected by CSIRO and GA for many years from the Marine National Facility Research Vessel *Southern Surveyor*.

It will derive a range of metrics that describe canyon form (location and exposure to large-scale ocean currents), and which may influence biodiversity through processes such as upwelling. These physical parameters will be tested against available biodiversity data that describe communities on the seafloor through to large charismatic megafauna.

Results from this work will be available as digital maps showing the location of canyon types for the entire continental EEZ and associated biodiversity values.



Submarine canyons off south-western Western Australia. The Marine Biodiversity Hub is evaluating the physical variation and biodiversity potential of Australian canyons.

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