



Nature-based opportunities for climate adaptation in the coastal zone

Tuesday 19 June 2018, 2.30–3.30 pm (AEST)

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Climate change is driving an increased threat of erosion and flooding along coastlines globally. Engineering solutions (e.g. seawalls and breakwaters) in response to protecting coastal communities and associated infrastructure are increasingly becoming economically and ecologically unsustainable. This has led to recommendations for creating or restoring natural habitats, such as sand dunes, saltmarsh, mangroves, seagrass and kelp beds and coral and shellfish reefs, to provide coastal protection in place of (or to complement) artificial structures.

Coastal managers are frequently faced with the problem of an eroding coastline, which requires a decision on what mitigating approach to take. A barrier to the wider use of nature-based coastal defence is stringent evaluation of their effectiveness in comparison to artificial protection structures.

In this webinar, Professor Stephen Swearer will discuss the current evidence for the efficacy of nature-based approaches in comparison to artificial coastal protection. He will then present several current and developing on-ground activities with local councils and land managers in Victoria as case studies to illustrate the types of collaborative interdisciplinary projects needed to encourage the wider use of ecologically engineered shoreline protection schemes in Australia.



Dr Stephen Swearer is Professor of Marine Biology and Director of the National Centre for Coasts and Climate (NCCC) at the University of Melbourne. His research focuses on the impacts of environmental variability and change on fish population dynamics, fisheries productivity and the resilience of marine and coastal ecosystems. NCCC's research on climate mitigation and adaptation in the coastal zone is funded by and contributes to ESCC Hub project 2.11: *Establishment of the National Centre for Coasts and Climate*.

The Earth Systems and Climate Change Hub science webinars are open to the research community and anyone interested in the Hub's research (noting that the content may assume some understanding of climate change science and the fields being discussed).