

Including human dimensions in integrated marine ecosystem models: Australian examples

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Abstract

With international efforts to develop ecosystem-based management of ocean uses, there has been a growing call for the development of integrated assessment tools, including the design of models which can be used to identify possible futures and evaluate alternative management strategies. Along with this, there is increasing recognition that such models should include explicit representations of human behaviour and its drivers, as this is key to understanding the potential responses to economic, ecological and regulatory changes. The presentation will use examples from Australia to illustrate the diversity of approaches and domains of application in which such modelling can be developed, and discuss some of the key issues which need to be considered in developing these models. Examples will include whole-of-system models, such as Atlantis in the Australian South-East Fishery and multiple use applications of the In Vitro platform in North-Western Australia, as well as the highly spatial multi-species and multi-fleet Effects of Line Fishing Simulator in the Great Barrier Reef and Ningaloo Reef (Western Australia).