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Adaptive management of living marine resources by integrating different data sources and key ecological processes (ADMAR): A joint effort by IMR and CEES

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The Norwegian Ocean Resource Act (Havressursloven) of 2009 is a formal implementation of the Ecosystem Approach to Fisheries. This requires explicit management action towards data rich stocks, as well as for data poor stocks, including those of minor commercial importance. The ADMAR project is a partnership between CEES at the University of Oslo and the Institute of Marine Research designed to collaboratively address these challenges. The main objective of ADMAR is to develop an adaptive approach for providing the best possible advice for ecosystem-based management. This includes models to derive key ecosystem parameters, including their error structures, using survey data, fisheries statistics, life history traits, multi species considerations etc. Further, we plan to combine this approach by developing eco-system models which incorporates food-web interactions and provide basic understanding of the ecosystem functioning. The ultimate goal of the project is to use these models to test ecosystem-based harvest control rules (eco-HCRs) for exploited stocks under varying amounts of information and under different ecological scenarios. In this paper we describe some of the main principles of the ADMAR concept and illustrate our approach through examples that demonstrate some of the key features of the project. ADMAR is designed to synthesize the breadth of data already collected in Norway to develop more cost-effective ways of providing ecosystem-based advice to meet the needs outlined in the Norwegian Ocean Resource Act.

Keywords: Ecosystem management, ecosystem modeling, ecosystem parameters, harvest control rules

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