MARE Conference

Title: Breaking down the barriers between Ecosystem services and the Fisheries Socio-Ecological System

Evangelia G Drakou[1], Jörn Schmidt[2], Camino Liquete[3]

[1]Université de Brest, UMR M101, AMURE, CNRS, OSU-IUEM, Brest Cedex 3, France.

[2] Kiel Marine Science and Cluster of Excellence, Future Ocean, Kiel University, Environmental, Resource and Ecological Economics, 24118 Kiel, Germany.

[3]Joint Research Centre, European Commission, Ispra, Italy.

Conference theme:

Stream 4: Fisheries management

Optional Stream 2: Maritime governance

Keywords
Ecosystem services ; fisheries management ; socio-ecological systems; integration

Abstract
Fisheries research gives scientific advice towards informing the management of different types of fisheries, mainly on the basis of the biology of a single stock, i.e. how much can sustainably be harvested from this stock every year. Implicitly, some ecosystem functions of this stock are taken into account through specific natural mortality analyses to assess the stock status and to derive advice on total catch for the following year. Indeed the ecosystem-based management is becoming more and more used on the assessment of fisheries, for instance in the last update of the European Common Fisheries Policy. Still there are several issues and conflicts emerging in different fisheries-related cases around the globe. This highlights the need for a holistic approach of the the marine/fisheries system where ecological, social, economic and institutional aspects are taken into account.

We go beyond the standard fisheries or ecosystem-based approach and see the fisheries "system" as a complex, dynamic socio-ecological system, with a variety of interaction types and a broad range of ecosystem services and beneficiaries. Our goal is to highlight the complex nature of this system, give emphasis on different types of ecosystem services generated by this system (from the standard food provisioning ones, to regulating and cultural) and use this approach as a means to incorporate fisheries management in broader decision-making strategies. We highlight research areas where fisheries and ecosystem services science share common grounds and explore ways to improve scientific knowledge around this topic. This work is a conversation starter, aiming to bring together researchers from both communities in order to improve research and practice around the topic.

Keywords
Ecosystem services ; fisheries management ; socio-ecological systems; integration