

Session P

Ecological foodweb and network analysis: a tool for ecosystem-based management?

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The concept of an ecosystem approach to management (EAM) of marine ecosystems and their resources has been broadly accepted. Sound management within the EAM includes considering not only the direct effect on the exploited resource, but indirect effects on adjacent trophic levels and the whole foodweb as well. Furthermore, questions on stability of foodwebs in the contexts of overexploitation, species extinctions and climate change have to be considered.

Network Analysis has developed into an interdisciplinary search for generalities in the topology of different kinds of network and their resistance to change, i.e. stability. Within this framework Ecological Network Analysis (ENA) has become an important field of research mainly in terrestrial and freshwater ecosystems. Network research in marine areas remains fragmented yet, mainly because of the enormous sampling effort needed for reliably constructing comprehensive networks of marine ecosystems.

Nevertheless, the research programme of ENA is considered to have a large potential in delivering lacking knowledge needed for an EAM as well as in delivering insight into general ecological principles. It can especially help in defining baselines (indicators) for a sustainable use of healthy marine ecosystems.

The goal of this theme session is to synthesize the existing knowledge on marine networks and compare them to e.g. terrestrial habitats as well as lakes and streams. We invite papers and posters dealing especially with the effects of global change such as climate and human exploitation on both temporal and spatial structure and function of marine foodwebs.

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