

# Open session

## Integrated Ecosystem Assessments: Highlights, challenges and ambitions

Conveners: Mette Skern-Mauritzen (Chair, IEASG)

The Steering Group on Integrated Ecosystem Assessments (SSGIEA) includes 15 Expert Groups (EGs) working on integrated ecosystem assessments (IEAs), and methodologies and approaches that allow the use of both qualitative and quantitative data to address specific advisory questions and broader ecosystem issues. This Open Session aimed to bring forward and discuss highlights, challenges and ambitions of this work, and to identify topics of broader interest to progress on which could be facilitated by workshops, joint EG meetings, or ASC sessions. Short presentations were provided from each of 13 EGs and followed by an open discussion.

The topics of broader interest identified during the session were:

- Scoping, stakeholder involvement and identifying objectives for Integrated Ecosystem Assessments. Several of the IEA EGs are currently working on these aspects, also jointly. Social scientists in WGNARS and SIHD are facilitating the work by bringing in transdisciplinary work processes. A workshop on scoping and identifying objectives for the North Sea will be held in November (WKSIED-BESIO). Also, the workshop WKECOFRAME organized by ACOM identified the need for such scoping, and ICES Secretariat is exploring options for having a part time position at ICES to facilitate the follow-up of WKECOFRAME. WGNARS/WGMARS/WGINOSE are currently using Mental Modeller to construct semi-quantitative conceptual ecosystem models, by letting different science disciplines identify the important links from their perspective. WKIRISH uses the Ecopath model in a similar way, bringing in different stakeholder groups to parameterize the model from their perspectives. It was recognized as a general challenge to bring stakeholders into the IEA and scoping processes.
- Improvements of methods – next generation Integrated Trend Analyses (ITAs). Several IEA EGs are working on providing ITAs for sub-regions within ecoregions, and WGIAB also put functional traits into the ITAs. A presentation by Planque and Arneberg (CM Code: L:133) argues strongly against the use of PCA in ITAs, as the approach is inappropriate for time series data with trends and autocorrelation. The work presented fostered much discussion during the ASC. At the Open Session it was decided to organize a workshop to bring in statisticians to help develop appropriate objectives and approaches for improving the ITAs and the information obtained from the large data matrices put together by IEA EGs. The IEASG chair will establish WK planning team after the ASC.
- Incorporating the use of ecosystem models, and socioeconomic models and indicators. It was recognized that sharing data and parameters among EG would facilitate the parametrization and use of models and indicators. Also, it was suggested to have a joint effort on identifying how model output can be used to support IEAs, both as tools for running scenarios and testing MSE's, but also to fill in gaps where data or indicators are missing. A guidance from WGIPEM/WGIMM would be valuable.

Collaboration with SIHD is required to help include socio-economic indicators. No concrete plans for follow-up were made.

- Sharing of functional traits data. Several groups are working on functional characterizations of the systems. A sharing of data bases of species' functional traits, and how the traits are used in the characterization, will both increase efficiency and increase consistency of results across ecoregions.
- Risk and vulnerability assessments. It was noted that climate vulnerability assessments are carried out in several ecoregions and by several institutes and EGs that are relevant for the IEA groups.
- Relationships between WGLME and other EGs in IEASG. A concern was raised that having a separate EG following up the global LME assessments by IOC/UNESCO rather than using experts from the regional IEA EGs in the global processes created unnecessary overlap between EGs. The IEASG chair argued that the regional IEA EGs likely have a limited capacity to follow the global processes and bring ICES approaches into these, and that the goal of WGLME is also to ensure that regional expertise, including regional IEA EGs, are used in global assessments. Also, regional experts are welcome to join WGLME.

Around 50 persons attended the Open Session.