2022-07-11

Mini-symposium during the 12th WIOMSA Scientific Symposium

Discussion workshop: **Launching the newly developed 'WIO Symphony' tool for regional cumulative impact assessment in the Western Indian Ocean – a transparent support for ecosystem-based Marine Spatial Planning**

CONVENERS

Harrison Ong'anda (HO, hochieng2003@yahoo.com), Kenya Marine and Fisheries Research Institute, Kenya.

Mr Ong'anda is a researcher with extensive experience in data management in the Western Indian Ocean region. He is part of the Kenyan Marine Spatial Planning (MSP) and is the chair of the Nairobi Convention technical working group for MSP. He heads the Kenyan task force for the WIO Symphony tool.

Dr Linus Hammar (LH, linus.hammar@havochvatten.se), Swedish Agency for Marine and Water Management, Sweden.

Dr Hammar is engaged in ecological and ocean energy-related research in the Western Indian Ocean (WIO) since more than 15 years. He's coordinating development cooperation programs between SwAM and WIO partners, including the WIO Symphony tool. Dr Hammar was responsible for the development of the Symphony tool in Sweden as part of Sweden's first marine spatial planning process.

Dr Birgit Koehler (BK, main contact person, birgit.koehler@slu.se), Swedish University of Agricultural Sciences, Sweden.

Dr Koehler conducted her PhD in tropical biogeochemistry in Panama, and has more than 15 years of international experience in ecosystem analysis, aquatic sciences and climate research. Dr Koehler is now an Associate Professor at SLU Aqua in Sweden where she focuses on coastal ecosystems, and uses mainly large-scale data analysis and modelling in her work, for example as part of the WIO Symphony development team.

Topic

This mini-symposium launches 'WIO Symphony', the product of a 4-year cooperation with contributions from over 50 members from Nairobi Convention member states and international partners. WIO Symphony is a practical tool for environmental assessment in support of ecosystem-based Marine Spatial Planning (MSP).

MSP is a recognized inter-disciplinary instrument and process for allocating space and priority to human activities in marine areas while balancing ecological and socio-economic interests. Most of the WIO countries are currently developing MSP. By MSP, thoughtful cross-sectorial strategic and operative plans may spur blue growth while maintaining rather than endangering ecosystem functions. As all MSP cover very large areas, data from various sources and significant computational power are needed to transparently and effectively integrate environmental considerations into the marine planning process.

WIO Symphony is a tool based on more than 60 maps (1×1 km) of selected regional-specific ecosystem components and pressures from human activity, parameterized using openly available data sources. Coupled with a WIO-specific sensitivity matrix developed by a regional expert panel, the tool indicates how vulnerable the considered ecosystems are to different pressures across the WIO. Most importantly, it allows for analysis of cumulative impacts and the expected environmental outcomes of different planning options and management scenarios. All with limited geographical resolution and mostly useful at a strategic level.

From late 2022, the WIO Symphony tool will be hosted by the Nairobi Convention and available to all member states.

Following the co-development of the tool during 2019-2022 it is essential that WIO Symphony is further assessed and discussed by expert groups and potential users from diverse backgrounds and work fields. The operational version of the tool must be validated with both benefits and limitations communicated and broadly anchored with the community. To this aim, we propose to shortly present the main structure, functionalities and current results obtained by the WIO Symphony tool, and then moderate further presentations and discussions to identify remaining key uncertainties and gaps, as well as additional scenarios and research/data needed for further model improvement.

Presenters

Gustav Kågesten, Geological Survey of Sweden, Sweden

Dr Charlotte Berkström, Swedish University of Agricultural Sciences, Sweden

Potlako Khati, Department of Environmental Affairs, South Africa

Elke Talma, Seychelles Conservation and Climate Adaptation Trust, Seychelles

Helena Sims, Seychelles Marine Spatial Plan initiative, The Nature Conservancy

Dr Arshad Rawat, Department for Continental Shelf and Maritime Zones Administration and Exploration, Oceanography/ Marine Geosciences Unit, Mauritius

Theuri Mwangi, Nairobi Convention Secretariat, UNEP

Mini-symposium structure

Time	Session	Contributors
16:00-16:10	Welcome and introduction by the conveners – Launching of the WIO Symphony tool, short presentation of purpose, methods and collaboration	Mr Harrison Ong'anda Dr Birgit Koehler
16:10-16:25	Technical aspects and challenges – Data and models behind the WIO Symphony tool.	Mr Gustav Kågesten Dr Charlotte Berkström
16:25-16:40	DEMO of the WIO Symphony tool	Dr Linus Hammar
16:40-17:10	Contributors' perspective – Contributing partners and end users provide views on the development, potentials and limitations	Mr Potlako Khati Mrs Helena Sims Dr Arshad Rawat Mrs Elke Talma
17:10-17:20	Tool access and longevity – Hosting of the WIO Symphony tool at UNEP, next steps, and the bigger picture	Mr Theuri Mwangi
17.20-17.40	Open floor – Collecting reflections from the audience Pin-pointed issues: Uncertainties and limitations, use of scenarios, as well as additional research and data needs for further improvement.	Audience

Expected outputs

The expected outputs of the mini-symposium are, besides community building and awareness, a thorough display of the WIO Symphony tool, its usefulness and limitations, and collection of constructive opinions from the WIO expert community. Based on the discussions, the mini-symposium is expected to lead to a position paper where the remaining key uncertainties and gaps of the WIO Symphony tool are identified, steps forward and needed scenarios defined, and main additional data and research needs for further model improvement described. Expectedly, the paper will be submitted December 2022.