

## **Supporting Ecosystems Based Management for Fisheries in Atlantic Upwelling Regions (AtlantOS use case)**

Jörn Schmidt (Speaker)

Ecosystem Based Fisheries Management (EBFM) in the Atlantic Upwelling Regions needs adequate indices to monitor changes in an integrated manner and to identify appropriate links between environment, climate, and fisheries. A multitude of data products is already available, but neither covering all necessary variables nor being harmonized or integrated. Particularly, there is a need to (1) identify observing and scientific gaps, (2) address habitat and resource connections from North to South Atlantic, (3) answer questions about seasonality of and shifts in fish stocks, (4) maximize benefits of existing investments and instrumentation, and (5) unite a network of partners with observing, modelling, prediction, and scientific expertise. It is particularly important to pursue inter- and transdisciplinary approaches to better integrate disciplinary approaches as well as strengthen the science to policy and science to society links.

The All-Atlantic Ocean Observing System (AtlantOS) offers a forum for basin-scale collaboration. The AtlantOS use case on 'Supporting Ecosystems Based Fisheries Management (EBFM) in Atlantic Upwelling Regions' will lead to a knowledge buildup and exchange of experiences between different scientific and societal actors. It will support a comparative approach, and address several questions: Which indicators can be efficiently monitored to support sustainable fisheries in upwelling regions? What can we learn from different monitoring approaches? Can best practice methods be developed and shared? What can we learn from industries and communities? What mechanisms and technologies do we need to be successful?

Empirical data and model outputs will help to understand changes and possible tipping points in the ecosystems. Considering interdisciplinary scientific and local, traditional and indigenous knowledge with the support of existing programs, institutions and projects like the EAF-Nansen Program, LME Programs, ATLAFCO, the Sub-Regional Fishery Commission, the Abidjan Convention and European and other international projects will lead to the development of dynamic ocean management tools.