

the local physical oceanography. In conclusion, the rebuilding of the Irish and Celtic Sea stocks of sole will depend to a large extent on local recruitment dynamics.

Work related to ICES via Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGSSK).

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Session 3: Conservation and management science

Develop tools, knowledge, and evidence for conservation and management — to provide more and better options to help managers set and meet objectives

(13) Providing ICES advice to OSPAR – an impression of the process

Jan Vanaverbeke¹ & Bob Rumes¹

¹ Royal Belgian Institute for Natural Sciences, OD Nature, MARECO, Vautierstraat 29, 1000 Brussels, Belgium

One of the core tasks of ICES is to provide scientific advice on the marine ecosystem to governments and international regulatory bodies that manage the North Atlantic Ocean and adjacent seas. At the end of 2018, ICES received a ‘Request for advice on the current state and knowledge of studies into the deployment and environmental impacts of wet renewable technologies and marine energy storage systems’, a request subsequently passed on to the Working Group on Marine Benthic Energy Developments (WGMBRED) and the Working Group on Marine Renewable Energy (WGMRE). Due to a restructuring process at ICES, and a shift in chairs in both WGMBRED and WGMRE, and the strict deadline, this proved to be a challenging process. The ICES secretariat supported the process by providing a suitable workspace (both physical and digital) and convened a specific workshop (WKWET, chair: Jan Vanaverbeke) attended by WGMBRED and WGMRE (Belgian) members, and external specialists in the field. This workshop was used to create a conceptual framework to unify the assessment of a wide range of wet renewable energy devices on a wide variety of marine receptors. The assessment showed that key receptors constraining the deployment of wet renewable devices are marine mammals, seabirds and fish. In addition, the review revealed that cumulative impact assessments with regards to wet renewables are in a very early stage of development causing a lot of uncertainty in decision making processes. The report provides the strong recommendation to move towards receptor-based assessments that consider both the ecological links between the abiotic and biotic components of the marine ecosystem and the feedback links between the different biotic components. This should be achieved by hypothesis-driven research, taking into account the link between structural components and the functioning of marine ecosystems, as this ultimately determines the provisioning of marine ecosystem services to society. This calls for cross-border coordination and cooperation in setting standards for data collection, sharing information, and setting research agendas.

Work related to ICES via WGMBRED (Working Group on Marine Benthic and Renewable Energy Developments), WGMRE (Working Group on Marine Renewable Energy), WKWET is chaired by Jan Vanaverbeke (RBINS).

(14) Highlighting EARS: putting data and operations in the global environmental context Highlighting the EARS software

Thomas Vandenberghe¹

¹ OD Nature, Royal Belgian Institute for Natural Sciences RBINS, Rue Vautierstraat 29, 1000 Brussels, Belgium.
E-mail: tvandenberghe@naturalsciences.be

The Eurofleets Automatic Reporting System (EARS v2) software is a set of services that allows the Principal Investigators or any person authorised to do so, to log their sampling events in a way that is helpful both for the scientific goals of the programme and for the data management that follows the cruise, for instance the OSPAR data reporting to ICES. The software has been available on the R/V Belgica since 2017-2018 for users wanting to test the software. Its software development has restarted thanks to the H2020 Eurofleets+ project, and the problems discovered during test runs dating