

## ICES contribution to the report of the Secretary-General on oceans and the law of the sea

### ***(i) Advancing ocean science and identifying and addressing gaps in knowledge and ocean science;***

[The International Council for the Exploration of the Sea](#) (ICES) is an intergovernmental marine science organization with headquarters in Copenhagen, Denmark. ICES coordinates and promotes research on oceanography, the marine environment, ecosystems, and living marine resources in the North Atlantic Ocean and adjacent sea areas.

As a global scientific organization, we focus *inter alia* on advancing the scientific understanding of marine ecosystems and their relation to human activities. Every year more than 1500 experts contribute to fulfilling the organization's mandate to give advice on human activities affecting, and affected by, marine ecosystems.

Science is the foundation on which integrated and successful environmental marine policies are built to achieve agreed objectives. ICES works at the science-policy interface, providing the best available science to sustainable management. The science is carried out in a way that is transparent and auditable, covering areas from the regional to the global level. The advice produced is independent of political influence, based on established scientific advisory frameworks, peer-reviewed, and developed according to an inclusive, transparent, and well-documented process.

ICES has just launched its [Strategic Plan](#) and its [Science Plan](#), focusing on areas where cooperation at the international level will provide additional value to the scientific cooperation, the sharing of data and information products, and thus the provision of best available science answering to requests by intergovernmental organizations or its member countries.

### ***ii) the United Nations Decade of Ocean Science for Sustainable Development; iii) cross-cutting role of ocean science in SDG 14***

ICES was granted observer status to the UN General Assembly 1 November 2018. This acknowledges ICES potential to contribute and actively engage in relevant UN processes with the science and advice developed by our network of experts and working groups. Such as, achieving the Sustainable Development Goals, contributing to the UN Decade of Ocean Science for Sustainable Development (UNESCO/IOC), as well as the Informal Consultations of States Parties to the United Nations Fish Stocks Agreement and the UN Open-ended Informal Consultative Process in Oceans and the Law of the Sea.

ICES has established formal cooperation agreements with the Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO) and the Food and Agriculture Organization of the United Nations (FAO), including [a number of other cooperation agreements](#).

ICES pledged two commitments at the [UN Ocean Conference](#) in June 2018 support of the SDGs: [one on developing the science basis to assist ecosystem based management](#) and the other [to enhance marine science training and capacity building](#).

Support for [SDG 14 \(Conserve and sustainably use the oceans, seas and marine resources for sustainable development\)](#) is [outlined in a statement](#), which covers the ways in which ICES contributes to the goal: by providing the scientific evidence for decision-making via integrated ecosystem assessments (IEAs) and ecosystem overviews, addressing the impacts of ocean acidification, and assessing fish stocks in order to provide advice on the sustainable level of fishing activity.

**(iv) *the integration of traditional knowledge in ocean research***

As part of the developing IEA framework, ICES has been working towards co-production of knowledge. A recent ICES and PAME (Arctic Council's Protection of the Arctic Marine Environment Working Group) workshop entitled '*Ecosystem Approach guidelines and Integrated Ecosystem Assessment in the Arctic*', was held at NOAA Alaska Fisheries Science Center in Seattle, US. The workshop included indigenous perspectives, as they are crucial in the ecosystem approach, not only to avoid risks to human life and to secure resources important for indigenous peoples and their cultures, but also to support the scientific basis for management in rapidly changing Arctic ecosystems. Indigenous people have intimate knowledge on life in the seas, including on productive areas, vulnerable areas such as calving areas and spawning habitats, trophic interactions as observed from harvested animals, and migration timing and routes. Finding ways to combine different knowledge systems is essential to the ecosystem approach.

**(v) *the science–policy interface***

ICES work in the Atlantic Ocean also extends, through strategic partnerships, into the Arctic, the Mediterranean Sea, the Black Sea, and the North Pacific Ocean. In supporting sustainable use, its advice has great relevance to work to conserve Biodiversity Beyond National Jurisdiction (BBNJ). Here we summarise the ICES activities relevant to both ABNJ and BBNJ.

[Advice on fishing opportunities](#)

ICES is annually providing advice to advice requester on approximately 250 stocks, out of these advice is provided to NEAFC on 10-15 stocks in Areas Beyond National Jurisdiction (ABNJ).

Annual advice is provided to NEAFC on the harvesting of 10-15 stocks of fish in the Northeast Atlantic based on analyses done by the Working Group on the Biology and Assessment of Deep-sea Fisheries Resources. These analyses are peer reviewed and quality-assured before being drafted into catch advice that is agreed by the 20 member countries of ICES.

ICES also analyses NEAFC records of the location of fishing activity to determine if vulnerable seabed habitats are at risk.

ICES is developing a series of [Fisheries Overviews](#) that will soon include the Oceanic Northeast Atlantic. These overviews aim to summarise the state of fisheries and of fish stocks, as well as the effects of fisheries on the wider marine environment.

[Advice for ecosystem protection](#)

ICES is annually providing advice on various ecosystem issues, ranging from reviews of Marine Protected Areas (MPAs), selecting and de-selecting hazardous substances of concern, to footprint of fisheries (use of bottom-contacting gear, impact and sensitivity of habitats). ICES advises NEAFC on the protection of biodiversity in the Northeast Atlantic. This advice is based primarily on the work of

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the [ICES/NAFO Working Group on Deepwater Ecology](#). ICES has worked to develop a [complete database of records of Vulnerable Marine Ecosystem indicators and habitats](#) (covering deep-water areas inside and outside national jurisdiction). At present, this database holds more than 40,000 records that span more than 60 years. The database is used by ICES in providing annual advice to NEAFC on seabed ecosystems, such as cold-water coral reefs and cold-water seeps that require protection from fishing activities that might damage them. At present, fourteen closures to mobile bottom fishing in the ABNJ in the Northeast Atlantic have resulted from this advice. These closures are protecting Vulnerable Marine Ecosystems on the Mid-Atlantic Ridge, around certain seamounts and on offshore banks to the west of Scotland. ICES is now working to develop mechanisms to provide an assessment of the confidence that a VME is present when only indicators (such as a small sample of a coral) are available.

ICES has also advised OSPAR on several issues relating to biodiversity conservation in the High Seas of the Northeast Atlantic. We have advised on habitat sensitivity, reviewed proposals for listing of habitats and species as Threatened or Declining, advised which deep-water habitats are essential for fish species, and reviewed bycatch issues within fisheries.

OSPAR is also responsible for identifying and designating Ecological and Biologically Significant Marine Areas (EBSAs) in relevant ABNJ. A series of EBSA proposals were fully peer-reviewed by ICES using its network of experts on the various aspects of biodiversity that were proposed for protection. Some areas were found to meet internationally accepted criteria to become EBSAs, while others did not achieve that threshold on the basis of the evidence provided. Most the EBSAs that were adopted by OSPAR have also become OSPAR Marine Protected Areas. ICES has advised also on the scientific case for other areas to become OSPAR MPAs and on the suitability of various management measures for each EBSA.

In addition to these specific areas of advice, we are also developing a series of [ecosystem overviews](#) for each ICES ecoregion. Each overview provides a description of the state of ecosystem, the main human pressures and activities, as well as an overview of the likely effects of climate change. These overviews also provide an easy way to access relevant parts of ICES databases.

We are working to expand our work through modelling of areas of habitat suitability to predict where VMEs might occur in waters where there has been no survey. This will make it possible for management bodies to take precautionary measures to protect Vulnerable Marine Ecosystems, and to target further research and survey on areas of greatest uncertainty.

Although ICES advice is in general for the Northeast Atlantic, its work has set standards that are being applied elsewhere, both within national jurisdiction and in ABNJ.