ICES SYMPOSIA REPORT 2018

ICES CM 2018/GEN:01

The 4th International ICES/PICES/IOC/FAO Symposium on the Effects of Climate Change on the World's Oceans
Washington D.C., USA, 4–8 June 2018

ICES/UNECE working meeting on Management tools and standards in support of Sustainable Development Goal 14 "Life below water"
Reykjavik, Iceland, 9–11 October 2018

Oceans Past VII
Bremerhaven, Germany, 22–26 October 2018

ICES International Council for the Exploration of the Sea
CIEM Conseil International pour l'Exploration de la Mer

International Council for the Exploration of the Sea
Conseil International pour l'Exploration de la Mer

H. C. Andersens Boulevard 44–46
DK-1553 Copenhagen V
Denmark
Telephone (+45) 33 38 67 00
Telefax (+45) 33 93 42 15
www.ices.dk
info@ices.dk

Recommended format for purposes of citation:

ICES. 2018. ICES Symposia Report 2018, ICES CM 2018/GEN:01. 9 pp.

Contents

1 The 4th International ICES/PICES/IOC/FAO Symposium on the Effects of Climate Change on the World's Oceans

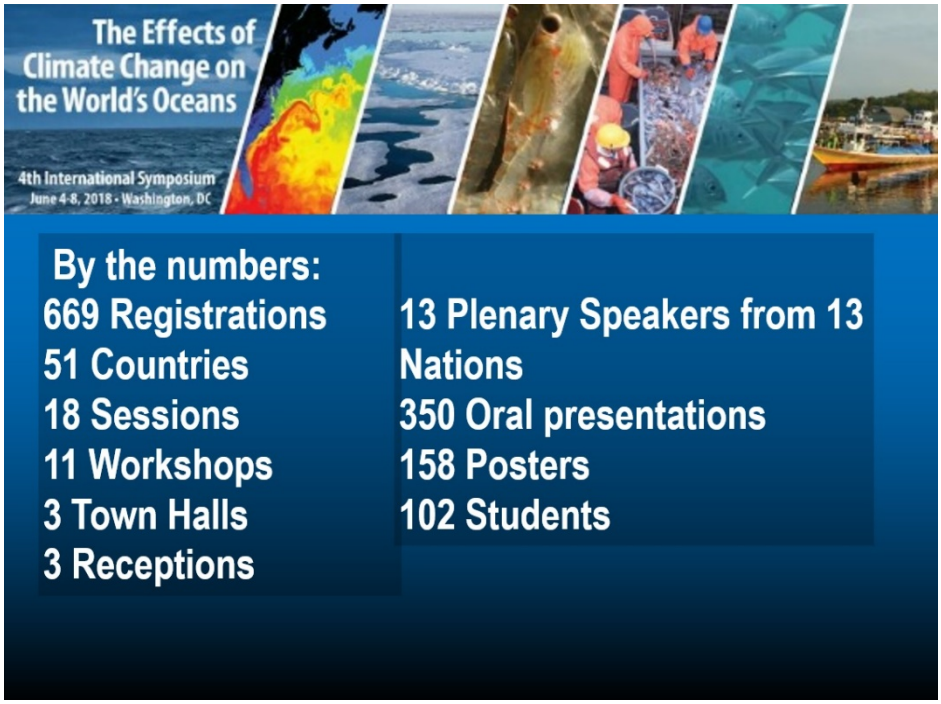
Venue and dates: Washington D.C., USA, 4–8 June 2018

Conveners: Manuel Barange (FAO), Veronique Garcon (CNRS), Shin-ichi Ito (University of Tokyo), Jason Link (NOAA Fisheries)

The ECCWO symposium series was launched in 2008. Three prior symposia (Spain 2008, Korea 2012 and Brazil 2015) were organized. The 4th Effects of Climate Change on the World's Oceans (ECCWO-4) symposium was held in Washington D.C., USA, 3–9 June 2018. ECCWO-4 brought together more than 600 scientists from over 50 countries to share information, build understanding and advance responses to climate impacts on oceans and the many people, businesses and communities that depend on them. The symposium was jointly convened by the International Council for Exploration of the Sea (ICES), the North Pacific Marine Science Organization (PICES), the Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Food and Agriculture Organization (FAO) of the UN, and the National Oceanic and Atmospheric Administration (NOAA).

The main themes of the conference were consequences of climate change and variability in the global marine ecosystem and ecological, economic, scientific and social relevance of climate change impacts in the world oceans.

Some symposium statistics:



Interesting addition to this symposium were the events on science communications, organized by the American COMPASS group: the opening ceremony included a "press event" where top scientists were delivering key messages to journalists. On Tuesday evening COMPASS organized a "pitch pit", where scientists were given the

opportunity to pitch their science to media. Something like this could be beneficial, in particular, for early career scientists at an ICES ASC.

ICES also led the symposium's communications team. The team's report 'ECCWO 2018 communications plan – summary & recommendations' summarizes activities and lists recommendations for future events.

One of the receptions were held by the Norwegian embassy in Washington. The Nansen project was presented.

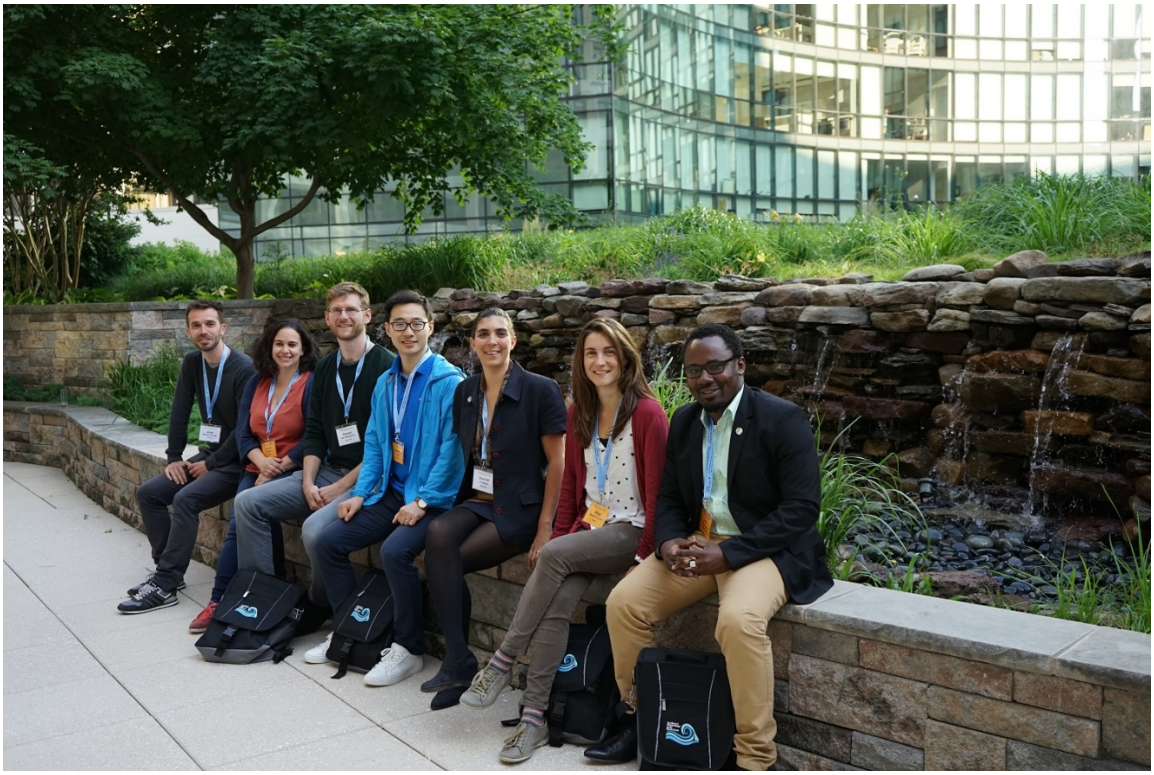
Images and the work of the symposium cartoonist available at:

https://www.flickr.com/photos/pices/sets/72157669719136128

Plenary talks are available on the PICES website:

http://meetings.pices.int/publications/video

ICES provided financial support to ten early career scientists. We were able to get most of them together for a group photo:



Side event on transatlantic research cooperation: NOAA hosted the '*Transatlantic* Research Cooperation to Treasure and Protect the Atlantic Ocean' session and panel at the Wilson Centre on 6 June. The event was held to celebrate the 20 years of the EU-US Science and Technology Agreement and 5 years of EU-US marine research cooperation. This event brought together European and US representatives of industry, science and policy to identify the best ways for science to help us treasure and protect the Atlantic Ocean, to keep it healthy and productive and to understand and tackle the issue of plastics in the ocean.

In addition, a visit to the Ocean Plastics Lab was included in the event which was in Washington DC from 4–17 June thanks to a joint effort of the German Federal Ministry of Education and Research, the European Commission, NOAA, and the German

Marine Research Consortium in collaboration with the Consortium for Ocean Leadership, National Park Service, Smithsonian Institution, National Marine Sanctuaries Foundation and other partners. The Lab is a travelling exhibition showcasing the contribution of science to understanding and combating the problem of plastics in the ocean.

Proceedings: ECCWO-4 manuscript submission was arranged by the Editor of the ICES Journal of Marine Science, to publish papers on presentations made at the symposium. Deadline for submission of manuscripts for the ECCWO-4 special issue was mid-September 2018.

Preparations for ECCWO-5 and ECCWO-6 have begun.

2 ICES/UNECE working meeting on Management tools and standards in support of Sustainable Development Goal 14 "Life below water"

Venue and dates: Reykjavik, Iceland, 9 -11 October 2018

Conveners: Roland Cormier, Sigurdur Guðjónsson, Andreas Kannen, Wojciech Wawrzyński

This document sets out the report on the ICES/UNECE working meeting on Management tools and standards in support of Sustainable Development Goal 14 "Life below water". This report provides the background, summarizes the discussions, and presents the recommendations developed by participants on the use of risk management tools within regulatory frameworks in support of the implementation of the Sustainable Development Goals of the United Nations Sustainable Development Agenda, in particular SDG 14 "Life under water."

Welcome address by the NMFRI Director Sigurdur Guðjónsson

The introduction included a summary of background and future uses for the fishery industry, increasing earnings for Icelandic fisheries sector. Then looking to the future challenges to the marine environment, globally, as well as in the Icelandic waters; climate change, acidification of the oceans, and the effect of these on fish stocks and fish migrations.

Setting the scene, Wojciech Wawrzynski, Head of ICES Science Support Department

Introduction to ICES, its products and to the current and new strategic plan.

Lorenza Jachia, UN Economic Commission for Europe

Implementation of sustainable development goals, translating global goals into norms, standards, and conventions, building capacity and engaging in partnerships with the private industries.

Thematic presentations

Jacky Wood, JPI Oceans: The role of intergovernmental platform such as The Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) in supporting SDG 14 "Life below water"

The intergovernmental partnership is focused on solving challenges for oceans that cannot be solved on a national level. It tests new ways of cooperation, brings in users and producers of knowledge to align research investment.

Tumi Tómasson, The United Nations University Fisheries Training Programme: "Solving future problems today"

The UNU FTP assists partner nations in reaching their development goals in fisheries.

Anna Kristín Daníelsdóttir, MATIS, 'Co-creating Ecosystem-based Fisheries Management Solutions, lessons learned, from the MareFrame project'

MATIS presented the achievements of the MAREFRAME project, its decision support tool and relevance to global goals implementation.

Kevin Knight, Australia: Managing risks to achieve SDG 14 targets

Risk management framework, with its structure, dynamics and value added were presented.

Andrew Minkiewicz, KelleyDrye, USA: 'International and national legal and regulatory context'

Selected aspects of international and national legislation with regards to IMO, CATT and IWC were presented.

Michael Elliott, University of Hull, 'Vertical and horizontal policy integration, Marine Management – Is an integrated approach to marine management possible??

The concept of the DAPSI(W)R(M) – underlying framework for marine environmental management was introduced and related to the EU MSFD and UN SDG14 targets.

Markus Krebsz, 'Key risk indicators, key control indicators and key performance indicators. Defining and measuring Kxls: Key risk, performance, control indicators'

Risk management process was described as the set of actions used to contribute towards the likelihood of achieving and surpassing planned objectives over a defined timeframe.

Simon Webb, Nichols, UK: Economic aspects of action and inaction on the SDG14

The SDGs were presented as an opportunity to press for a more coherent and high impact approach – getting the right data in front of the right decision-makers. A few of the decision-making bodies concerned are within the UN collective system, but are others controlled by member Governments who need to be persuaded and corralled.

The following discussion was led by Roland Cormier

The SDG implementation progress cannot be assessed unless there is a clear understanding of what procedures exist, whether they work, if they are enforced, controlled, and by whom. The intent of risk management, and application of it in regulatory processes is intended to develop a well-balanced and efficient system of controls and procedures. As opposed to one that veers between two extremes, excessive overregulation or insufficient regulations.

The bow-tie analysis is introduced as one of the IEC/ISO 31010 controls assessment techniques to facilitate the identification of the sources of the risk, causes and consequences of undesired events with a particular focus on prevention, mitigation and recovery controls. In this context, the risk of not achieving SDGs targets implies that the member countries do not have the legislation or the policy in place to contribute to the goals. Otherwise that their relevant legislation that insufficiently reflected the aim to reach those goals.

Comparison of the MSFD target progress and the SDG target implementation was used to illustrate similarities of the two processes in Europe. The group also discussed how transportable the EU directive framework may be in practice to SDG14 implementation and how would it work for less developed states and SIDS. Accountability for pressures that are outside of the control of implementing parties - unforeseen, irresistible and external factor (force majeure) needs to be considered. Risk evaluation asks if parties are willing to live with the consequences or not.

The following comparison of SDG 14 targets, with the MSFD descriptors was undertaken:

Giving each MSFD descriptor a number, on a scale of one to five, on the level of knowledge/information available. (What is known/not known? On a scale of 1 – 5. (1 = nice to have more, 5 = we can't move on without more information))

1) Biological diversity: We know lots about this already. 1
2) Non-indigenous species: 3
3) Commercial exploitation of fish and shellfish within safe biological limits: 3/5
4) Marine food webs and assurance of long term abundance of species and retention of reproductive capacity: 2 for description, 4 for understanding
5) Eutrophication: 1
6) Sea-floor integrity: 3
7) Hydrographical conditions:
8) Contaminants: 3
9) Contaminants in fish and seafood for consumption: (begs the question of the set standard, based on human health risk assessment levels): 1
10) Marine litter: what is meant by harm to the marine environment? 1
11) Energy including noise, not adversely affecting the environment: 5

Lessons learned

Frameworks will set the stage for achievements. Framework without a risk assessment process may be useless. And vice versa. The process is necessary as well as the policy context (ISO31000 and the MSFD).

Legislation vs non-enforceability. If there is no accountability, there will be no way to show how results were (or were not) achieved.

Recommendations for management and for science questions

This above analysis was followed by a discussion on recommendations from the meeting, to be addressed to the UNECE and ICES. The following table mapping the MSFD targets and their relevance to the SDG14 targets was discussed:

- It was noted that because of framework and a risk management process in place, many hazards e.g. in food safety or transport have been decreased. ICES has developed various indicator (including those strictly related to MSFD, e.g. food webs) but the network usually does not deal with designation of thresholds. With the exception of the MSY, indicators are usually descriptive and they refer to performance rather than control. It was suggested to look at the developed ecosystem indicator, also those that are in use by Regional Sea Organizations like HELCOM, at the SDG14 indicators, the 5 Eurostat SDG14 indicators and analyse what best could address the SDGs 14 implementation. It I also recommended to investigate what kind of science is needed to support SDG14 implementation at national and regional levels, incl. what are safe and tolerable levels of disturbances.
- It was suggested to organize an ICES/UNECE workshop to address these issues, or/and to draft ToR for an expert group to look into these. Also, the best ways to have the results up-taken by regulatory agencies and policy makers could be investigated. A risk management approach could help sort out information that is applicable to regulatory decision-making pro-

cesses. The UN2030 implementation will require a better understanding of the regulatory frameworks of member countries. A risk management process could also identify the SDG 14 targets that could be improved through risk-based regulatory frameworks and the ones that cannot. The intent of the UNECE is to introduce the risk management process to the work being done around the world.

The group will be asked to specify/modify these recommendations/challenges via e-mail following the meeting.

A wrap up was given by Grímur Valdimarsson, MFRI, pointing to importance of science in decision-making processes with the specific example of Icelandic fisheries and ecosystem-based management. This was followed up by concluding remarks from the MFRI Director, ICES and the UNECE.

3 Oceans Past VII: Tracing human interactions with marine ecosystems through deep time – implications for policy and management

Venue and dates: Bremerhaven, Germany, 22–26 October 2018

Conveners: Alison MacDiarmid, New Zealand, and Poul Holm, Ireland

Science Steering Group Chair: Henn Ojaveer, Estonia

Local organiser and host: Gesche Krause, Germany

The Oceans Past series of conferences are a platform for dissemination and discussion of new research findings in the fields of historical marine ecology, and fisheries and maritime history. The conference, held this year in Bremerhaven, was the seventh event since 2005. It was organised by the international Oceans Past Initiative (OPI) – a global research network for marine historical research. OPI's goal is to enhance knowledge and understanding of how the diversity, distribution and abundance of marine life in the world's oceans has changed over the long term to better indicate future changes and possibilities. The conference was financially supported by the EU COST Action Oceans Past Platform (OPP) coordinated by Prof. Poul Holm (Trinity College Dublin, Ireland).

The conference had over 100 registered participants. The participants at the conference are both natural and social scientists (ecologists, oceanographers, economists, historians, archaeologists), and the field is highly interdisciplinary. The participants came from 25 countries: Australia, Belgium, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Israel, Italy, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, South Africa, Spain, Sweden, Turkey, UK, and USA.

During the conference 75 talks, 8 posters and four key note addresses were presented. The conference talks were arranged into following topics:

- Oceans prior to contemporary exploitation
- Drivers of environmental use and change across historical time frames
- The significance of marine resources for human societies over time
- Paleoecology of the Subarctic Seas: High Latitude Climates, Oceans, Ecosystems, and Human Histories
- Implications of past and present human ocean activities for coastal and marine policy development
- Development of indictors
- Factors that have encouraged societies to exploit or leave the oceans

The four keynote addresses spanned a wide range of issues and included:

- Global Perspectives – Joint presentation by - Poul Holm (TCEH, Trinity College Dublin), Gesche Krause (AWI, Bremerhaven), Cristina Brito (CHAM, University of Lisbon), Emily Klein (Department of Ecology and Evolutionary Biology, Princeton), Alison MacDiarmid (NIWA, New Zealand)

- Marine environmental vs fisheries history - just two names or two different methods to catch the past? by Ingo Heidbrinck (Old Dominion University, Norfolk, Virginia)
- Scales, Trails, and Fish Tales: Paleo-Ecology and Human History in Sub-arctic and Arctic Oceans Past by Ben Fitzhugh (Department of Anthropology, University of Washington)
- Living in Reef Country. European Castaways and Indigenous Maritime Societies of the Great Barrier Reef, 1770–1923 by Iain McCalman (Department of History, University of Sydney)

Geographically, most presentations addressed case studies in sub-Arctic seas, NE Atlantic, Mediterranean, and NW Atlantic, although some presentations addressed cases in the South Atlantic, North Pacific, South Pacific and Indian Oceans (Australia, New Zealand).

The conference had strong participation and collaboration with members of ICES WGHIST, the PESAS (Paleoecology of Subarctic Seas) Working Group (member of ESSAS/IMBeR) and members of the COST OPP.

The next Oceans Past conference will be held in Antwerp Belgium in 2020.

After many years of activity, the OPI group opted to become a more formal society with bylaws and registered members. At the OPI General Assembly, members voted to adopt governing bylaws, set a structure and modest costs for membership dues, and elected a governing board. Newly elected members of the board include Cristina Brito, Ben Fitzhugh, Poul Holm, Gesche Krause, Alison MacDiarmid, and Ruth Thurston. The board subsequently identified a chair (Holm), secretary (Thurston), and treasurer (Brito).