

## Co-sponsored Symposia Resolutions

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<b>Co-sponsored Symposia Resolutions .....</b>	<b>i</b>
<b>Resolutions approved in 2022 .....</b>	<b>2</b>
From Echosounders to the Cloud: Transforming Acoustic Data to Information (27-30 March 2023).....	2
Effects of human impacts on marine functional connectivity (22-25 May 2023).....	10
Third International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic (Spring 2024) .....	17
7th Zooplankton Production Symposium (17-21 March 2024) .....	24
Oceans Past 2024: Historical perspectives on human-ocean interactions: deep understandings for informing ocean futures (10-14 June 2024).....	30
<b>Resolutions approved in 2021 .....</b>	<b>38</b>
Ecosystem Effects of Climate Change on the World's Ocean 5 (ECCWO-5) (17-21 April 2023).....	38
<b>Resolutions approved 2016.....</b>	<b>45</b>
Marine Socio-Ecological Systems - MSEAS 2020: Navigating global change in the marine environment with socio-ecological knowledge (Dates to be confirmed - 2024) .....	45

## Resolutions approved in 2022

From Echosounders to the Cloud: Transforming Acoustic Data to Information (27-30 March 2023)

### Resolution Form: Symposium

Review the ICES Symposium Guidelines for Conveners before submitting this resolution form. Once approved, all resolution information on this form will be publicly available on the ICES website.



#### Resolution Term (yyyy-mm-dd)

Select a 2-year term. Start date is January 1 of the year before the symposium. End date is December 31 of the symposium year.

**Start Date:** 2022-01-01

**End Date:** 2023-12-31

#### Symposium Title (max 280 characters)

From Echosounders to the Cloud: Transforming Acoustic Data to Information

#### Symposium Conveners (max 5)

Full Name	Institute	Email	Country
Michael Jech	NOAA	<a href="mailto:michael.jech@noaa.gov">michael.jech@noaa.gov</a>	USA
Anne Lebourges-Dhaussy	IRD	<a href="mailto:anne.lebourges.dhaussy@ird.fr">anne.lebourges.dhaussy@ird.fr</a>	France
Gayle Zydlewski	University of Maine	<a href="mailto:gayle.zydlewski@maine.edu">gayle.zydlewski@maine.edu</a>	USA

#### Symposium Website URL (if known)

We do not have a website yet.

#### Scientific Justification (max 1500 characters)

Describe the aims, objectives, and anticipated outcomes of the symposium and the relevance of the symposium to the ICES Science, Advisory, and/or Strategic Plans.

The goal of this symposium is to facilitate exchange among the spectrum of scientists and engineers who develop acoustic instrumentation, collect data, and transform those bytes to information critical for conserving fisheries and ecosystems. Many institutions count their datasets in

terabytes or time series in decades, and monitor many facets of the ecosystem. The fisheries and plankton acoustics community continues to develop and evaluate new acoustic instrumentation and package them with other sensors on crewed and remote/autonomous platforms to observe components of the ecosystem that until now have been too expensive or impossible to monitor. In response to this meteoric increase in data, the community has evolved to integrate multiple data streams to address ecosystem science using “big data” analytics such as artificial intelligence and machine learning to form information used by resource managers and policymakers. This information provides for well-managed ecosystems that allow us to utilize the resources while allowing everyone to enjoy the ecosystem. The published proceedings from this conference will reflect the spectrum of science and engineering that are the foundation of observing ecosystems acoustically and the continued evolution of analytics.

This symposium directly addresses the ICES Emerging Technologies and Techniques and Observation and Exploration science priorities, and provides input to the Ecosystem Science and Seafood Production science priorities.

<b>Symposium Dates (yyyy-mm-dd)</b>	
<b>Start Date:</b> 2023-03-27	<b>End Date:</b> 2023-03-30

<b>Venue</b> (specific place such as the conference centre)	<b>Expected Number of Participants</b>
Holiday Inn	300

<b>City/Town</b>	<b>Country</b>
Portland, Maine	USA

<b>Comments on dates, venue, location, and participants (max 500 characters)</b>
For example, if any of the symposium details are tentative, provide potential dates (month/year), expected duration (# of days), venue(s) and location(s) under consideration.
We have the dates reserved and upon acceptance of the symposium will be locking into those dates with a security deposit. We anticipate about 300 participants.

<b>Symposium Programme (max 1500 characters)</b>
Briefly describe the symposium programme, including any pre- or post-symposium workshops, training, early career activities, and other coordinated events.

The symposium programme will consist primarily of oral presentations and poster sessions. We plan to schedule about 32 presentations per day (four presentations per hour) for a total of about 120-130 presentations over the course of the four days. Depending on submissions, the remaining abstracts will be designated as posters.

In addition to participant presentations/posters, we will also feature three keynote speakers. These speakers will be selected based on input from the scientific steering committee and we intend to have them speak on “higher level” topics. For example, rather than an overview of acoustic technologies, we would like to have speakers provide guidance on what information is needed to manage ecosystems for resource utilization or other societal needs of aquatic environments where advanced technologies can provide information.

An opening reception on the first night and a banquet on the third night are planned. We also are looking into networking sessions sponsored by technology companies.

We intend to have four theme sessions, tentatively titled:

1. Organism Detection: Models, Measures, and Classification
2. Advancements in Acoustic Devices, Platforms, and Combined Technologies
3. Data Integration: Analytics
4. Data Integration: Application to Ecosystem, Conservation, and Society

WGFAST will hold a meeting on the day immediately following the symposium. In the past, this meeting has typically been on the order of a few hours in duration with about 40-50 participants.

**Acronym(s) of ICES Expert Groups, Strategic Initiatives, Steering Groups, Operational Groups, and Other Groups Contributing to the Symposium (optional)**

Direct connections to WGFAST and DSTSG. We intend to advertise the symposium to other expert groups under EOSG, EPDSG, and FRSG, and IEASG.

**Contributions by ICES Representatives (max 1500 characters)**

How will ICES representatives contribute to the planning and organisation of the symposium? For example, members of the ICES community may be conveners, session chairs, serve on the planning board, scientific and organising committees, assist with the selection of plenary speakers, awards, and early career support. Additionally, if ICES representatives are already involved in the symposium, please provide this information.

ICES representatives will assist and be responsible for all aspects of the "scientific" components of the symposium. By this we mean ICES (mostly WGFAST) members and external partners will serve as conveners, session chairs, award judges; will participate in session and program planning, and

selection of keynote speakers; and will assist with selecting abstracts for oral or poster presentations, and the selection, review, and editing of manuscripts for the symposium proceedings. The conveners have made it a priority to select early career scientists to participate on the scientific steering committee as they have fresh insights to the science of fisheries acoustics. We also intend to have four people per theme session who will contribute to the scientific and technical aspects of the sessions. At this time, we have 9 confirmed to participate on the steering committee.

#### **Resource Request (max 1500 characters)**

Before completing this section, conveners should read the ICES Symposium Guidelines for Conveners outlining the types of financial, coordination, and technical support that can be provided by ICES. List below all items requested of ICES to support this symposium. This must include specifics of any financial request, assistance with early career support applications, symposium registration, advertising, and/or website and virtual conference hosting, plans to use the ICES logo, etc. Clearly identify and describe requests that will require any time of ICES Secretariat staff such as coordination and technical support. This information is required so that the ICES Secretariat can assess its ability to fulfil these requests.

We request ICES support for:

1. Secretariat resources for hosting the symposium website and promoting the symposium.
2. Funds for early career scientists (10,000 Euro). We are prioritizing early career scientists to participate on our scientific steering committee and any reduction in fees and/or travel expenses will be appreciated.
3. Use of the ICES logo on all symposium documentation and advertising.

#### **Additional Funding Sources (max 1500 characters)**

List all current, pending, and to be requested support from other sources.

- The University of Maine will support registration, abstract submission, and coordinating the finances including processing of payments for conference expenses.
- IRD may fund the participation of southern countries' students (applications are due around October 2022).
- We are pursuing funds from NOAA to cover the costs of the venue and AV support. We anticipate these funds to total about \$35,000 USD. These funds would lessen the burden on the registration fee.
- We have \$12,000 confirmed from sonar manufacturers and software vendors that will be used for the social events. We anticipate more revenue from exhibitors as we announce the symposium.

#### **Plans for Publication of the Proceedings**

Specify potential publication outlet(s) below. For specific information on publishing proceedings in the ICES Journal of Marine Science (IJMS), refer to the ICES Symposium Guidelines.

Publication intended (specify): We will be selecting a journal soon and are looking into an alternative to IJMS for publication of the proceedings. *Frontiers in Marine Science*, *Progress in Oceanography*, and *American Society of Limnology and Oceanography* are a few of the alternative journals we are exploring. The consensus of the WGFAST members after the 2015 symposium was that a traditional “proceedings” format was preferable to a traditional “journal” format that is required by IJMS.

No publication intended

## General Information

### Resolution Status (select one)

**New resolution**

This resolution has not been previously approved by the Advisory Committee (ACOM), Science Committee (SCICOM), and/or ICES Council.

**Amendment to an approved resolution**

This is a change to a currently active resolution that has been previously approved. Common amendments include changes to conveners, updates to symposium dates and venue, and term extensions following unavoidable delays.

### One-Sentence Summary (max 280 characters)

Describe the central purpose of this resolution written for non-experts for use on the ICES website and social media. Use active voice, plain language with simple words that convey meaning, and avoid jargon.

This symposium highlights the evolution of collecting sonar data with advanced technologies and transforming those bytes using “Big Data” analytics into information used to conserve fisheries and ecosystems.

### ICES Advisory Plan Priorities (select up to two if relevant to this resolution)

**Priority 1:** Incorporating Innovation

**Priority 2:** Choose an item.

### ICES Science Plan Priorities (select up to two if relevant to this resolution)

**Priority 1:** Emerging techniques and technologies

**Priority 2:** Observation and exploration

### Additional Comments (if required, max 500 characters)

Restrict comments to those that are required to understand and review this resolution and for which there is no existing box on the form (e.g., request for a special resolution term duration).

This symposium will be the 8th in the series of fisheries acoustics symposia sponsored by ICES. Historically, the interval between symposia has been 5-7 years, but in this case, it will be at least eight years since the last symposium in 2015. These symposia are important milestones in the evolution of fisheries acoustics as they highlight the state-of-the art research at the time of each symposium.

**Geographic Focus (select one or more)**

**Non-geospecific**

Select non-geospecific when the resolution is not closely focused on a specific geographic region (e.g., symposium focused on techniques or processes).

ICES Ecoregions and Adjacent Ecoregions	Areas outside ICES Ecoregions and Adjacent Ecoregions
<input type="checkbox"/> Adriatic Sea <input type="checkbox"/> Aegean-Levantine Sea <input type="checkbox"/> Arctic Ocean <input type="checkbox"/> Atlantic, Northeast (FAO area 27) <input type="checkbox"/> Azores <input type="checkbox"/> Baltic Sea <input type="checkbox"/> Barents Sea <input type="checkbox"/> Bay of Biscay and the Iberian Coast <input type="checkbox"/> Black Sea <input type="checkbox"/> Celtic Seas <input type="checkbox"/> Faroes <input type="checkbox"/> Greater North Sea <input type="checkbox"/> Greenland Sea <input type="checkbox"/> Icelandic Waters <input type="checkbox"/> Ionian Sea and the Central Mediterranean Sea	<input type="checkbox"/> Arctic Sea (FAO area 18) <input type="checkbox"/> Atlantic, Antarctic (FAO area 48) <input type="checkbox"/> Atlantic, Eastern Central (FAO area 34) <input type="checkbox"/> Atlantic, Northwest (FAO area 21) <input type="checkbox"/> Atlantic, Southeast (FAO area 47) <input type="checkbox"/> Atlantic, Southwest (FAO area 41) <input type="checkbox"/> Atlantic, Western Central (FAO area 31) <input type="checkbox"/> Indian Ocean, Antarctic and Southern (FAO area 58) <input type="checkbox"/> Indian Ocean, Eastern (FAO area 57) <input type="checkbox"/> Indian Ocean, Western (FAO area 51) <input type="checkbox"/> Mediterranean and Black Sea (FAO area 37) <input type="checkbox"/> Pacific, Antarctic (FAO area 88) <input type="checkbox"/> Pacific, Eastern Central (FAO area 77) <input type="checkbox"/> Pacific, Northeast (FAO area 67) <input type="checkbox"/> Pacific, Northwest (FAO area 61)

<input type="checkbox"/> Norwegian Sea	<input type="checkbox"/> Pacific, Southeast (FAO area 87)
<input type="checkbox"/> Oceanic Northeast Atlantic	<input type="checkbox"/> Pacific, Southwest (FAO area 81)
<input type="checkbox"/> Western Mediterranean Sea	<input type="checkbox"/> Pacific, Western Central (FAO area 71)

**Close Links to Other Organisations (if relevant)**

Select scientific cooperation, agreements, partnerships, and other close links from the list below. Other links can be specified at the bottom of this table, but restrict your list to pertinent organisations that are closely associated with this resolution.

**No close links to other organisations**

**United Nations Organisations and Programmes**

- European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC)
- Food and Agriculture Organization of the United Nations (FAO)
- International Maritime Organization (IMO)
- International Sea bed Authority (ISA)
- Secretariat of the Convention on Biological Diversity (CBD)
- UN Environment (UNEP)
- UN Education, Scientific, and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC)

**European Commission and its Agencies**

- European Commission (EC)
- European Environment Agency (EEA)
- European Fisheries Control Agency (EFCA)
- Joint Research Council (JRC)
- Regional Coordination Groups (RCGs)
- Statistical Office of the European Communities (EUROSTAT)

**Regional Fisheries Organisations and Management Organisations (RFOs/RFMOs)**

- General Fisheries Commission in the Mediterranean (GFCM)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)

<input type="checkbox"/> North Atlantic Salmon Conservation Organization (NASCO) <input checked="" type="checkbox"/> North East Atlantic Fisheries Commission (NEAFC) <input checked="" type="checkbox"/> Northwest Atlantic Fisheries Organization (NAFO)
<b>Regional Sea Conventions</b> <input type="checkbox"/> Baltic Marine Environment Protection Commission (HELCOM) <input type="checkbox"/> Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR)
<b>Arctic Networks</b> <input type="checkbox"/> Arctic Monitoring and Assessment Programme (AMAP) <input type="checkbox"/> Conservation of Arctic Flora and Fauna (CAFF) <input type="checkbox"/> International Arctic Science Committee (IASC) <input type="checkbox"/> Protection of the Arctic Marine Environment Working Group (PAME)
<b>Scientific Intergovernmental Organisations (IGOs)</b> <input type="checkbox"/> Mediterranean Science Commission (CIESM) <input type="checkbox"/> North Atlantic Marine Mammal Commission (NAMMCO) <input type="checkbox"/> North Pacific Marine Science Organization (PICES)
<b>Other</b> <input type="checkbox"/> European Aquaculture Society (EAS) <input type="checkbox"/> Integrated Marine Biosphere Research project (IMBeR)

Other Organisations(s) not listed above (if relevant)	
Acoustical Society of America	
European Acoustical Society	

**ICES Secretariat to complete the information below**

**Unique Identifier**

Include the auto-generated identifier when the <u>approved</u> resolution is added to the resolution database.
2022/SYM/SCICOM02

<b>Resolution Parent (select one)</b>
Symposia should generally select SCICOM.
SCICOM

<b>Professional Officer (if relevant)</b>	<b>Supporting Officer (if relevant)</b>

<b>Secretariat Comments (max 500 characters)</b>
Only include essential comments that can be made public and must stay with the resolution.

Effects of human impacts on marine functional connectivity (22-25 May 2023)

## Resolution Form: Symposium

Review the ICES Symposium Guidelines for Conveners before submitting this resolution form. Once approved, all resolution information on this form will be publicly available on the ICES website.



<b>Resolution Term (yyyy-mm-dd)</b>	
Select a 2-year term. Start date is January 1 of the year before the symposium. End date is December 31 of the symposium year.	
<b>Start Date:</b> 2022-01-01	<b>End Date:</b> 2023-12-31

<b>Symposium Title (max 280 characters)</b>
Effects of human impacts on marine functional connectivity

<b>Symposium Conveners (max 5)</b>			
<b>Full Name</b>	<b>Institute</b>	<b>Email</b>	<b>Country</b>

Lucía López López	CN IEO-CSIC	lucia.lopez@ieo.es	Spain
Manuel Hidalgo	CN IEO-CSIC	jm.hidalgo@ieo.es	Spain
Susanne Tanner	University of Lisbon	setanner@fc.ul.pt	Portugal
Ant Türkmen	Ecological Research Society	turkmen@me.com	Turkey
Maria Beger	University of Leeds	m.beger@leeds.ac.uk	UK

<b>Symposium Website URL (if known)</b>

<b>Scientific Justification (max 1500 characters)</b>
Describe the aims, objectives, and anticipated outcomes of the symposium <u>and</u> the relevance of the symposium to the ICES Science, Advisory, and/or Strategic Plans.
<p>Triggered by marine organism movements, marine functional connectivity (MFC) is a dynamic ecosystem property which sustains multiple ecological functions and marine ecosystem services through the spatio-temporal fluxes of nutrients, biomass, genes, and species. In the last decade, research has focused on understanding the drivers of MFC and its role at the ecosystem level, but a critical lack of knowledge on how MFC will respond to current and future human impacts persists. Filling this research gap is paramount to design effective strategies for conservation, management and sustainable development.</p> <p>The objective of this symposium is to gather the latest research on MFC changes under anthropogenic pressures, including the ubiquitous effects of global warming (e.g. increase in water temperature and extreme weather events, changes in oceanic circulation, etc.) but also regional human activities modifying marine habitats and ecosystems (e.g. fishing, offshore wind farms, shipping, aquaculture, etc.). Emphasis will be placed on describing the effects on connectivity of a wide range of human activities at different scales, pinpointing cumulative impacts where possible, and showcasing adaptive management strategies. These objectives align with several of ICES priorities, such as (1) advancing ecosystem science, and particularly connectivity research, (2) exploring pressures on the marine environment that modify its structure and function and (3) advising on options for adaptation and mitigation.</p> <p>This symposium aims to bring together a large number of experts in this emerging field, to exchange knowledge and experience, and to gather high-quality research articles for a special issue of ICES JMS, which will help to shape research directions and highlight management needs in the short to medium term.</p>

<b>Symposium Dates (yyyy-mm-dd)</b>	
<b>Start Date:</b> 2023-05-22	<b>End Date:</b> 2023-05-25

<b>Venue</b> (specific place such as the conference centre)	<b>Expected Number of Participants</b>
Cineteatro Municipal João Mota	100

<b>City/Town</b>	<b>Country</b>
Sesimbra	Portugal

**Comments on dates, venue, location, and participants (max 500 characters)**

For example, if any of the symposium details are tentative, provide potential dates (month/year), expected duration (# of days), venue(s) and location(s) under consideration.

While dates are tentative, we plan to hold the Symposium in Sesimbra, Portugal in May 2023. We are also considering an alternative venue, at the University of the Balearic Islands (UIB) in Mallorca (Spain). UIB has two large assembly halls that can accommodate 100 participants. We are currently discussing the details for the two options, along with some practical considerations, but we can confirm at this stage that venue rental will be free of charge in either case.

**Symposium Programme (max 1500 characters)**

Briefly describe the symposium programme, including any pre- or post-symposium workshops, training, early career activities, and other coordinated events.

The symposium will be structured in six sessions, each of them lasting half a day. The first 1.5 days will focus on changes in MFC in response to human activities, while the last day will focus on management strategies to mitigate changing MFC and uncertainty in MFC forecasts. The proposed sessions are:

- 1- Pervasive human impacts on the environment and trends in MFC
- 2- Response of MFC to environmental extremes and accidental human impacts
- 3- Human impacts on species phenology and seasonality of MFC
- 4- Poster session and cultural activity (TBC)
- 5- Protecting connectivity hubs and corridors at sea and at the land-sea interface
- 6- Management strategies to mitigate human impacts on MFC

After the symposium we will hold a one-day workshop, aiming to advance the production of descriptors of Marine Functional Connectivity applicable to diverse taxa, regions and habitats, and encompassing the lifetime movements of marine organisms. This is a first essential step to generate generic descriptors of connectivity at ecological- and policy-relevant scales. It will allow this field to progress from patterns to processes, to identify monitoring priorities regarding MFC, and to help promote the use of MFC data to predict future changes in marine ecosystems and their socio-economic consequences.

**Acronym(s) of ICES Expert Groups, Strategic Initiatives, Steering Groups, Operational Groups, and Other Groups Contributing to the Symposium (optional)**

We anticipate interest from working group participants of the WGCEAM and WGCOMEDA, and also participants of the following Steering Groups: Integrated Ecosystem Assessments, Human Activities, Pressures and Impacts, and Ecosystem Processes and Dynamics.

**Contributions by ICES Representatives (max 1500 characters)**

How will ICES representatives contribute to the planning and organisation of the symposium? For example, members of the ICES community may be conveners, session chairs, serve on the planning board, scientific and organising committees, assist with the selection of plenary speakers, awards, and early career support. Additionally, if ICES representatives are already involved in the symposium, please provide this information.

Many members of the ICES community are leading the organization community as conveners (e.g. Lucía Lopez from WGCOMEDA or Susanne Tanner from SIMWG) including an alternate ICES representative from SCICOM (Manuel Hidalgo). In addition, other members of the ICES community and part of the Sea-Unicorn Cost action will be part of the scientific committee of the symposium (e.g. Audrey Darnaude at CRNS, Anna Sturrock at the University of Essex, Maria Beger at the University of Leeds and Filip Volckaert at KU Leuven). Those will be also involved in scientific and organizing committees, awards committee and early career support.

As regards to other ICES Representatives, Antonina dos Santos (Portugal), Lidia Yebra and Francisco Velasco (Spain), and Debbi Pedreschi (IEASG chair) will be also part of the scientific committee, supporting as well the awards committee for early career scientists. We anticipate that other ICES representatives, including the HAPISG and EPDSG Steering Group chairs, will be invited and welcome to be involved in the scientific committee and other activities.

#### **Resource Request (max 1500 characters)**

Before completing this section, conveners should read the ICES Symposium Guidelines for Conveners outlining the types of financial, coordination, and technical support that can be provided by ICES. List below all items requested of ICES to support this symposium. This must include specifics of any financial request, assistance with early career support applications, symposium registration, advertising, and/or website and virtual conference hosting, plans to use the ICES logo, etc. Clearly identify and describe requests that will require any time of ICES Secretariat staff such as coordination and technical support. This information is required so that the ICES Secretariat can assess its ability to fulfil these requests.

We request from ICES:

10000€ to offer travel grants to early career researchers and for ECR awards for best presentation and best poster (as judged by the award committee). With this amount we aim at funding participation of at least 10 ECRs. A member of the ICES Secretariat will be asked to help with the selection process for travel grants.

Hosting of the registration platform for symposium participants.

Symposium promotion via the ICES website news section and social media posts via the ICES social media channels. The conveners will come up with a hashtag for the conference promotion. The symposium website will be hosted by the Sea-Unicorn COST ACTION at [www.sea-unicorn.com](http://www.sea-unicorn.com).

Use of ICES logotype for the main conference website and any promotional material. The logotype will be placed along with other conference sponsors.

#### **Additional Funding Sources (max 1500 characters)**

List all current, pending, and to be requested support from other sources.

Estimated total cost: 40000 €

Committed support

Additional financial support for the symposium will be provided by the EU COST Action n°CA-19107 (UN Ocean Decade Action n°221) "SEA-UNICORN: Unifying approaches to Marine Connectivity for Improved Resource Management for the Seas", which will contribute with 10000€ to

support the local organizers, which will be used to book the venue and provide session refreshments.

In addition, Sea-Unicorn will provide financial support (maximum 35000€) to reimburse travel and accommodation fees, for session chairs and keynote speakers, but also for some members of the SEA-UNICORN network, selected following a number of criteria that promote thematic, geographic and gender balance. Sea-Unicorn will also provide the website conference hosting.

The Venue provider (either the Sesimbra municipality or the University of the Balearic Islands) will participate in the conference sponsorship in kind, by providing access to the conference venue free of charge.

Pending support

10000 € from ICES to support early career scientists (this resolution)

Once we set the conference venue, we will try to request additional funding from the local organiser, the municipality and/or regional government.

Conference attendance will be free of charge, as the organisation costs will be covered by the Sea-Unicorn financial support to the local organisers.

#### Plans for Publication of the Proceedings

Specify potential publication outlet(s) below. For specific information on publishing proceedings in the ICES Journal of Marine Science (IJMS), refer to the ICES Symposium Guidelines.

Publication intended (specify): ICES Journal of Marine Science

No publication intended

## General Information

#### Resolution Status (select one)

**New resolution**

This resolution has not been previously approved by the Advisory Committee (ACOM), Science Committee (SCICOM), and/or ICES Council.

**Amendment to an approved resolution**

This is a change to a currently active resolution that has been previously approved. Common amendments include changes to conveners, updates to symposium dates and venue, and term extensions following unavoidable delays.

#### One-Sentence Summary (max 280 characters)

Describe the central purpose of this resolution written for non-experts for use on the ICES website and social media. Use active voice, plain language with simple words that convey meaning, and avoid jargon.

The symposium "Effects of human impacts on marine functional connectivity" will explore how the fluxes of nutrients, biomass, genes and species due to the movements of marine organisms are altered by human activities, and what management options are available to maintain connectivity and thus preserve ecosystem functions and services.

**ICES Advisory Plan Priorities (select up to two if relevant to this resolution)****Priority 1:** Incorporating innovation**Priority 2:** Evolving advice**ICES Science Plan Priorities (select up to two if relevant to this resolution)****Priority 1:** Choose an item.**Priority 2:** Choose an item.**Additional Comments (if required, max 500 characters)**

Restrict comments to those that are required to understand and review this resolution and for which there is no existing box on the form (e.g., request for a special resolution term duration).

**Geographic Focus (select one or more)****x Non-geospecific**

Select non-geospecific when the resolution is not closely focused on a specific geographic region (e.g., symposium focused on techniques or processes).

<b>ICES Ecoregions and Adjacent Ecoregions</b>	<b>Areas outside ICES Ecoregions and Adjacent Ecoregions</b>
<input type="checkbox"/> Adriatic Sea <input type="checkbox"/> Aegean-Levantine Sea <input type="checkbox"/> Arctic Ocean <input type="checkbox"/> Atlantic, Northeast (FAO area 27) <input type="checkbox"/> Azores <input type="checkbox"/> Baltic Sea <input type="checkbox"/> Barents Sea <input type="checkbox"/> Bay of Biscay and the Iberian Coast <input type="checkbox"/> Black Sea <input type="checkbox"/> Celtic Seas <input type="checkbox"/> Faroes <input type="checkbox"/> Greater North Sea <input type="checkbox"/> Greenland Sea <input type="checkbox"/> Icelandic Waters <input type="checkbox"/> Ionian Sea and the Central Mediterranean Sea <input type="checkbox"/> Norwegian Sea <input type="checkbox"/> Oceanic Northeast Atlantic <input type="checkbox"/> Western Mediterranean Sea	<input type="checkbox"/> Arctic Sea (FAO area 18) <input type="checkbox"/> Atlantic, Antarctic (FAO area 48) <input type="checkbox"/> Atlantic, Eastern Central (FAO area 34) <input type="checkbox"/> Atlantic, Northwest (FAO area 21) <input type="checkbox"/> Atlantic, Southeast (FAO area 47) <input type="checkbox"/> Atlantic, Southwest (FAO area 41) <input type="checkbox"/> Atlantic, Western Central (FAO area 31) <input type="checkbox"/> Indian Ocean, Antarctic and Southern (FAO area 58) <input type="checkbox"/> Indian Ocean, Eastern (FAO area 57) <input type="checkbox"/> Indian Ocean, Western (FAO area 51) <input type="checkbox"/> Mediterranean and Black Sea (FAO area 37) <input type="checkbox"/> Pacific, Antarctic (FAO area 88) <input type="checkbox"/> Pacific, Eastern Central (FAO area 77) <input type="checkbox"/> Pacific, Northeast (FAO area 67) <input type="checkbox"/> Pacific, Northwest (FAO area 61) <input type="checkbox"/> Pacific, Southeast (FAO area 87) <input type="checkbox"/> Pacific, Southwest (FAO area 81) <input type="checkbox"/> Pacific, Western Central (FAO area 71)

**Close Links to Other Organisations (if relevant)**

Select scientific cooperation, agreements, partnerships, and other close links from the list below. Other links can be specified at the bottom of this table, but restrict your list to pertinent organisations that are closely associated with this resolution.

**No close links to other organisations**

**United Nations Organisations and Programmes**

- European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC)
- Food and Agriculture Organization of the United Nations (FAO)
- International Maritime Organization (IMO)
- International Sea bed Authority (ISA)
- Secretariat of the Convention on Biological Diversity (CBD)
- UN Environment (UNEP)
- UN Education, Scientific, and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC)

**European Commission and its Agencies**

- European Commission (EC)
- European Environment Agency (EEA)
- European Fisheries Control Agency (EFCA)
- Joint Research Council (JRC)
- Regional Coordination Groups (RCGs)
- Statistical Office of the European Communities (EUROSTAT)

**Regional Fisheries Organisations and Management Organisations (RFOs/RFMOs)**

- General Fisheries Commission in the Mediterranean (GFCM)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- North Atlantic Salmon Conservation Organization (NASCO)
- North East Atlantic Fisheries Commission (NEAFC)
- Northwest Atlantic Fisheries Organization (NAFO)

**Regional Sea Conventions**

- Baltic Marine Environment Protection Commission (HELCOM)
- Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR)

**Arctic Networks**

- Arctic Monitoring and Assessment Programme (AMAP)
- Conservation of Arctic Flora and Fauna (CAFF)
- International Arctic Science Committee (IASC)
- Protection of the Arctic Marine Environment Working Group (PAME)

**Scientific Intergovernmental Organisations (IGOs)**

- Mediterranean Science Commission (CIESM)
- North Atlantic Marine Mammal Commission (NAMMCO)
- North Pacific Marine Science Organization (PICES)

**Other**

- European Aquaculture Society (EAS)
- Integrated Marine Biosphere Research project (IMBeR)

Other Organisations(s) not listed above (if relevant)	

### ICES Secretariat to complete the information below

Unique Identifier
Include the auto-generated identifier when the <u>approved</u> resolution is added to the resolution database.
2022/SYM/SCICOM01

Resolution Parent (select one)
Symposia should generally select SCICOM.
SCICOM

Professional Officer (if relevant)	Supporting Officer (if relevant)

Secretariat Comments (max 500 characters)
Only include essential comments that can be made public and must stay with the resolution.

Third International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic (Spring 2024)

## Resolution Form: Symposium

Review the ICES Symposium Guidelines for Conveners before submitting this resolution form. Once approved, all resolution information on this form will be publicly available on the ICES website.



Resolution Term (yyyy-mm-dd)
Select a 2-year term. Start date is January 1 of the year before the symposium. End date is December 31 of the symposium year.
<b>Start Date:</b> 2023-01-01
<b>End Date:</b> 2024-12-31

<b>Symposium Title (max 280 characters)</b>
Third International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic

<b>Symposium Conveners (max 5)</b>			
<b>Full Name</b>	<b>Institute</b>	<b>Email</b>	<b>Country</b>
Lis L. Jørgensen	IMR	lislin@hi.no	Norway
Libby Logerwell	NOAA	libby.logerwell@noaa.gov	USA

<b>Symposium Website URL (if known)</b>
<p>The website for the Spring 2024 (preferably in April) conference is under development:  <a href="https://www.pame.is/projects-new/ecosystem-approach-to-management/ea-conferences/433-third-international-science-and-policy-conference-on-implementation-of-the-ecosystem-approach-to-management-in-the-arctic">https://www.pame.is/projects-new/ecosystem-approach-to-management/ea-conferences/433-third-international-science-and-policy-conference-on-implementation-of-the-ecosystem-approach-to-management-in-the-arctic</a></p> <p>The past websites are available here:  2016 (Fairbanks, Alaska): <a href="https://www.pame.is/projects/ecosystem-approach/ea-conferences/ea-conference">https://www.pame.is/projects/ecosystem-approach/ea-conferences/ea-conference</a>  2019 (Bergen, Norway): <a href="https://www.pame.is/projects/ecosystem-approach/ea-conferences#session-1-integrated-ecosystem-assessment">https://www.pame.is/projects/ecosystem-approach/ea-conferences#session-1-integrated-ecosystem-assessment</a></p>

<b>Scientific Justification (max 1500 characters)</b>
Describe the aims, objectives, and anticipated outcomes of the symposium <u>and</u> the relevance of the symposium to the ICES Science, Advisory, and/or Strategic Plans.
<p>The Ecosystem Approach to Management (EA) is a widely adopted management principle that requires integrated management across sectors of human activities to achieve sustainable use of natural resources while maintaining the integrity of the ecosystem. The EA approach has been acknowledged, defined and adopted by the Arctic states working under the Arctic Council. In 2013 (Kiruna Declaration), the Arctic Council agreed that there was a need for periodic reviews of EA implementation in the Arctic to exchange information on integrated assessment and management experiences.</p> <p>This conference will bring together experts and practitioners to examine the scientific, policy and indigenous understanding and experience of the ecosystem approach to management in the eighteen Large Marine Ecosystems of the Arctic and corresponding terrestrial areas. Topics to be addressed include elements such as Integrated Ecosystem Assessment, Objectives, Advice as well as national policies. The content will focus on three specific objectives: (1) Benchmark the status of implementation of EA in the Arctic, (2) Present innovative examples of best practices in EA implementation, and (3) Identify priorities for future collaboration on EA implementation in the Arctic Themes.</p> <p>Proceedings from the conference will be presented to the Arctic Council Ministerial meeting.</p>

<b>Symposium Dates (yyyy-mm-dd)</b>	
<b>Start Date:</b> Click or tap to enter a date.	<b>End Date:</b> Click or tap to enter a date.

Venue (specific place such as the conference centre)	Expected Number of Participants
FRAM centre	100

City/Town	Country
Tromsø	Norway

**Comments on dates, venue, location, and participants (max 500 characters)**

For example, if any of the symposium details are tentative, provide potential dates (month/year), expected duration (# of days), venue(s) and location(s) under consideration.

The 3-day conference will be held in Tromsø in Spring 2024 during the Norwegian chairmanship of the Arctic Council in cooperation with the High North Research Centre for Climate and the Environment (FRAM Centre) and the Arctic Council Secretariat.

**Symposium Programme (max 1500 characters)**

Briefly describe the symposium programme, including any pre- or post-symposium workshops, training, early career activities, and other coordinated events.

The programme is under development and will focus on:

(1) Benchmark the status of implementation of EA in the Arctic, (2) Present innovative examples of best practices in EA implementation, and (3) Identify priorities for future collaboration on EA implementation in the Arctic Themes.

**Acronym(s) of ICES Expert Groups, Strategic Initiatives, Steering Groups, Operational Groups, and Other Groups Contributing to the Symposium (optional)**

We anticipate that following WGs and SG can contribute to the symposium:

WGICA  
WGIBAR  
WGINOR  
WGIEAGS  
WGIEANBS-CS  
AFWG  
IEASG

**Contributions by ICES Representatives (max 1500 characters)**

How will ICES representatives contribute to the planning and organisation of the symposium? For example, members of the ICES community may be conveners, session chairs, serve on the planning board, scientific and organising committees, assist with the selection of plenary speakers, awards, and early career support. Additionally, if ICES representatives are already involved in the symposium, please provide this information.

The chairs of WGICA (Lis Lindal Jørgensen) and WGIEANBS-CS (Libby Logerwell) are already assisting with the planning of this symposium. We expect that other members of the ICES community, including members of the groups listed above, will participate in the conference and serve on the planning board, scientific and organising committees, and as theme session chairs, and suggest potential keynote speakers from the ICES community.

**Resource Request (max 1500 characters)**

Before completing this section, conveners should read the ICES Symposium Guidelines for Conveners outlining the types of financial, coordination, and technical support that can be provided by ICES. List below all items requested of ICES to support this symposium. This must include specifics of any financial request, assistance with early career support applications, symposium registration, advertising, and/or website and virtual conference hosting, plans to use the ICES logo, etc. Clearly identify and describe requests that will require any time of ICES Secretariat staff such as coordination and technical support. This information is required so that the ICES Secretariat can assess its ability to fulfil these requests.

10,000 Euros to support the participation of Early Career Scientists and Indigenous knowledge holders (a panel including a member of the ICES Secretariat will be established to select grantees)

Use of the ICES logo and promotion on social media

**Additional Funding Sources (max 1500 characters)**

List all current, pending, and to be requested support from other sources.

Current:

- (1) Norwegian Institute of Marine Research will host the conference (ref: science director Geir Huse)
- (2) PAME Secretariat will host the symposium website, including coordinating the registration and processing of abstracts and publish the conference program and report

Pending:

Norwegian Government and the Arctic Council secretariate will likely support renting of localities, food, other facilities

Still to be requested: NOAA

**Plans for Publication of the Proceedings**

Specify potential publication outlet(s) below. For specific information on publishing proceedings in the ICES Journal of Marine Science (IJMS), refer to the ICES Symposium Guidelines.

- Publication intended (specify): Conference Report to be published on the PAME website.  
 No publication intended

**General Information****Resolution Status (select one)** **New resolution**

This resolution has not been previously approved by the Advisory Committee (ACOM), Science Committee (SCICOM), and/or ICES Council.

 **Amendment to an approved resolution**

This is a change to a currently active resolution that has been previously approved. Common amendments include changes to conveners, updates to symposium dates and venue, and term extensions following unavoidable delays.

**One-Sentence Summary (max 280 characters)**

Describe the central purpose of this resolution written for non-experts for use on the ICES website and social media. Use active voice, plain language with simple words that convey meaning, and avoid jargon.

The Third International Science and Policy Conference on Implementation of the Ecosystem Approach to Management in the Arctic Large Marine Ecosystems will review advancements, identify main obstacles to implementation, and discuss solutions. Scientists and managers are invited to discuss ways to operationalize the progression of ecosystem approaches from idea to implementation and to further develop and update the integration of the diversity of the ecosystem, human activities and the people of the Arctic.

**ICES Advisory Plan Priorities (select up to two if relevant to this resolution)****Priority 1:** Evolving advice**Priority 2:** Identifying needs**ICES Science Plan Priorities (select up to two if relevant to this resolution)****Priority 1:** Ecosystem science**Priority 2:** Impacts of human activities**Additional Comments (if required, max 500 characters)**

Restrict comments to those that are required to understand and review this resolution and for which there is no existing box on the form (e.g., request for a special resolution term duration).

ICES was a co-sponsor for the 2019 Second EA International Conference. The report is available here: <https://www.ices.dk/news-and-events/Documents/Symposia/Symposia%20Report%202019.pdf>

**Geographic Focus (select one or more)** **Non-geospecific**

Select non-geospecific when the resolution is not closely focused on a specific geographic region (e.g., symposium focused on techniques or processes).

<b>ICES Ecoregions and Adjacent Ecoregions</b>	<b>Areas outside ICES Ecoregions and Adjacent Ecoregions</b>
<input type="checkbox"/> Adriatic Sea <input type="checkbox"/> Aegean-Levantine Sea <input checked="" type="checkbox"/> Arctic Ocean <input checked="" type="checkbox"/> Atlantic, Northeast (FAO area 27) <input type="checkbox"/> Azores <input type="checkbox"/> Baltic Sea <input checked="" type="checkbox"/> Barents Sea <input type="checkbox"/> Bay of Biscay and the Iberian Coast <input type="checkbox"/> Black Sea <input type="checkbox"/> Celtic Seas <input checked="" type="checkbox"/> Faroes	<input type="checkbox"/> Arctic Sea (FAO area 18) <input type="checkbox"/> Atlantic, Antarctic (FAO area 48) <input type="checkbox"/> Atlantic, Eastern Central (FAO area 34) <input type="checkbox"/> Atlantic, Northwest (FAO area 21) <input type="checkbox"/> Atlantic, Southeast (FAO area 47) <input type="checkbox"/> Atlantic, Southwest (FAO area 41) <input type="checkbox"/> Atlantic, Western Central (FAO area 31) <input type="checkbox"/> Indian Ocean, Antarctic and Southern (FAO area 58) <input type="checkbox"/> Indian Ocean, Eastern (FAO area 57) <input type="checkbox"/> Indian Ocean, Western (FAO area 51)

<input checked="" type="checkbox"/> Greater North Sea	<input type="checkbox"/> Mediterranean and Black Sea (FAO area 37)
<input checked="" type="checkbox"/> Greenland Sea	<input type="checkbox"/> Pacific, Antarctic (FAO area 88)
<input checked="" type="checkbox"/> Icelandic Waters	<input type="checkbox"/> Pacific, Eastern Central (FAO area 77)
<input type="checkbox"/> Ionian Sea and the Central Mediterranean Sea	<input type="checkbox"/> Pacific, Northeast (FAO area 67)
<input checked="" type="checkbox"/> Norwegian Sea	<input type="checkbox"/> Pacific, Northwest (FAO area 61)
<input checked="" type="checkbox"/> Oceanic Northeast Atlantic	<input type="checkbox"/> Pacific, Southeast (FAO area 87)
<input type="checkbox"/> Western Mediterranean Sea	<input type="checkbox"/> Pacific, Southwest (FAO area 81)
	<input type="checkbox"/> Pacific, Western Central (FAO area 71)

**Close Links to Other Organisations (if relevant)**

Select scientific cooperation, agreements, partnerships, and other close links from the list below. Other links can be specified at the bottom of this table, but restrict your list to pertinent organisations that are closely associated with this resolution.

No close links to other organisations

**United Nations Organisations and Programmes**

- European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC)
- Food and Agriculture Organization of the United Nations (FAO)
- International Maritime Organization (IMO)
- International Sea bed Authority (ISA)
- Secretariat of the Convention on Biological Diversity (CBD)
- UN Environment (UNEP)
- UN Education, Scientific, and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC)

**European Commission and its Agencies**

- European Commission (EC)
- European Environment Agency (EEA)
- European Fisheries Control Agency (EFCA)
- Joint Research Council (JRC)
- Regional Coordination Groups (RCGs)
- Statistical Office of the European Communities (EUROSTAT)

**Regional Fisheries Organisations and Management Organisations (RFOs/RFMOs)**

- General Fisheries Commission in the Mediterranean (GFCM)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- North Atlantic Salmon Conservation Organization (NASCO)
- North East Atlantic Fisheries Commission (NEAFC)
- Northwest Atlantic Fisheries Organization (NAFO)

**Regional Sea Conventions**

- Baltic Marine Environment Protection Commission (HELCOM)
- Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR)

**Arctic Networks**

- Arctic Monitoring and Assessment Programme (AMAP)
- Conservation of Arctic Flora and Fauna (CAFF)

<input checked="" type="checkbox"/> International Arctic Science Committee (IASC) <input checked="" type="checkbox"/> Protection of the Arctic Marine Environment Working Group (PAME)
<b>Scientific Intergovernmental Organisations (IGOs)</b> <input type="checkbox"/> Mediterranean Science Commission (CIESM) <input type="checkbox"/> North Atlantic Marine Mammal Commission (NAMMCO) <input checked="" type="checkbox"/> North Pacific Marine Science Organization (PICES)
<b>Other</b> <input type="checkbox"/> European Aquaculture Society (EAS) <input type="checkbox"/> Integrated Marine Biosphere Research project (IMBeR)

Other Organisations(s) not listed above (if relevant)	

**ICES Secretariat to complete the information below**

<b>Unique Identifier</b> Include the auto-generated identifier when the <u>approved</u> resolution is added to the resolution database.
2022/SYM/SCICOM05

<b>Resolution Parent (select one)</b> Symposia should generally select SCICOM.
SCICOM

Professional Officer (if relevant)	Supporting Officer (if relevant)

<b>Secretariat Comments (max 500 characters)</b> Only include essential comments that can be made public and must stay with the resolution.

## 7th Zooplankton Production Symposium (17-21 March 2024)

**Resolution Form: Symposium**

Review the ICES Symposium Guidelines for Conveners before submitting this resolution form. Once approved, all resolution information on this form will be publicly available on the ICES website.

**Resolution Term (yyyy-mm-dd)**

Select a 2-year term. Start date is January 1 of the year before the symposium. End date is December 31 of the symposium year.

**Start Date:** 2023-01-01**End Date:** 2024-12-31**Symposium Title (max 280 characters)**

7th Zooplankton Production Symposium

**Symposium Conveners (max 5)**

Full Name	Institute	Email	Country
Anthony Richardson	University of Queensland and CSIRO	Anthony.Richardson@csiro.au	Australia
Kerrie Swadling	University of Tasmania	K.swadling@utas.edu.au	Australia
Sophie Pitois	Cefas	sophie.pitois@cefas.co.uk	UK
Sonia Batten	PICES	sonia.batten@pices.int	Canada
Akash Sastri	DFO	Akash.Sastri@dfo-mpo.gc.ca	Canada

**Symposium Website URL (if known)****Scientific Justification (max 1500 characters)**

Describe the aims, objectives, and anticipated outcomes of the symposium and the relevance of the symposium to the ICES Science, Advisory, and/or Strategic Plans.

Zooplankton play a pivotal role in polar, temperate and tropical marine ecosystems as well as in global biogeochemical cycles. They function as prey for commercially harvested fish, as grazers of primary production, and as drivers of carbon and nutrient cycles. Their population and community dynamics, including their growth, mortality, distribution, and diversity, structure the ecosystem. Zooplankton species may be a target for commercial harvesting, including Antarctic krill and other midwater species. Consequences of increasing exploitation of resources at lower trophic levels is still poorly understood and require urgent, multidisciplinary research. At the same time, a changing environment influences their dynamics. Climate change is profoundly impacting marine ecosystems through changes in zooplankton. A combination of new technologies and techniques, together with classical in situ and laboratory studies and targeted modelling studies, is required to understand changing ecosystems. In response to the need to understand zooplankton dynamics, their sensitivity to change, and the resultant effects on ecosystems, ICES and PICES are holding the 7th International Zooplankton Production Symposium as a forum to discuss zooplankton and their role in the global ecosystem.

**Symposium Dates (yyyy-mm-dd)****Start Date:** 2024-03-17**End Date:** 2024-03-21

<b>Venue</b> (specific place such as the conference centre)	<b>Expected Number of Participants</b>
Hotel Grand Chancellor	350

<b>City/Town</b>	<b>Country</b>
Hobart, Tasmania	Australia

**Comments on dates, venue, location, and participants (max 500 characters)**

For example, if any of the symposium details are tentative, provide potential dates (month/year), expected duration (# of days), venue(s) and location(s) under consideration.

This symposium was postponed to 2024 due to COVID-19. The venue is provisionally booked. It has 5 conference rooms, a capacity of 1000 people, and is close to a range of accommodation options of varying prices, the Waterfront, and the restaurant precinct. Hobart is the main centre of marine science in Australia, with several marine scientific organisations nearby including CSIRO, the Institute of Marine and Antarctic Science, and the Australian Antarctic Division.

The 6th Zooplankton Production Symposium 2016 in Bergen was attended by ca. 400 participants. The travel to Hobart might deter some European and North American participants, but we hope for a strong showing from Asian countries.

**Symposium Programme (max 1500 characters)**

Briefly describe the symposium programme, including any pre- or post-symposium workshops, training, early career activities, and other coordinated events.

This will be a 5-day symposium with a potential workshop day targeted towards students and ECS on the Sunday before the official start of the conference. Each morning will open with a keynote presentation followed by oral sessions. Theme sessions will be decided once the steering committee is in place later this year (by Oct 2022). There will be 1 or 2 poster sessions scheduled in the evening to promote mixing of the participants.

Potential overall schedule:

Sunday am - Workshops and training targeted at students and ECS

Sunday night – Icebreaker

Monday am - Opening ceremony

Mon night – Poster session 1

Tue night – Poster session 2 (if needed)

Wed am - Workshops

Wed night – Afternoon excursion

Thu night – Conference dinner

Friday - Closing ceremony with prizes for posters and orals for students and ECSs

Potential daily schedule will start with a plenary talk, followed by theme session presentations.

**Acronym(s) of ICES Expert Groups, Strategic Initiatives, Steering Groups, Operational Groups, and Other Groups Contributing to the Symposium (optional)**

WGZE will have a strong input into the scientific content of the symposium

**Contributions by ICES Representatives (max 1500 characters)**

How will ICES representatives contribute to the planning and organisation of the symposium? For example, members of the ICES community may be conveners, session chairs, serve on the planning board, scientific and organising committees, assist with the selection of plenary speakers, awards, and early career support. Additionally, if ICES representatives are already involved in the symposium, please provide this information.

The symposium is jointly organized and sponsored with PICES. Sophie Pitois, a chair of WGZE, will be one of the conveners. A Scientific Steering Group will be established with members nominated by the ICES Working Group on Zooplankton (WGZE), the relevant PICES Committees, and the local organising committee in Australia.

Organising this Symposium is one of the WGZE current ToRs; there will therefore be strong input to the scientific content from WGZE members, who will also be encouraged to submit proposals for theme sessions and workshops, attend the conference as participants, presenters and session chairs. Members of the WGZE will also be on the Scientific Steering Group.

Staff from the ICES Secretariat will participate in the symposium organising committee and in the panel selecting early career scientist travel grantees.

**Resource Request (max 1500 characters)**

Before completing this section, conveners should read the ICES Symposium Guidelines for Conveners outlining the types of financial, coordination, and technical support that can be provided by ICES. List below all items requested of ICES to support this symposium. This must include specifics of any financial request, assistance with early career support applications, symposium registration, advertising, and/or website and virtual conference hosting, plans to use the ICES logo, etc. Clearly identify and describe requests that will require any time of ICES Secretariat staff such as coordination and technical support. This information is required so that the ICES Secretariat can assess its ability to fulfil these requests.

The registration and abstract submission facilities, as well as the symposium website will be provided by PICES Secretariat.

ICES is requested to:

- 1- Provide 10,000 euros to support travel and subsistence of early career scientists.
- 2- ICES Secretariat staff to provide input on general coordination of the symposium and scientific input to the program in collaboration with PICES, the local organising committee, and the Scientific Steering Group.
- 3- Permit the use of ICES logo on all symposium documentation and advertising

A representative of the Secretariat will be invited to the conveners monthly online meetings. Attendance of ICES Secretariat staff at the conference as well as the ICES leadership or a national delegate to open the conference is highly desirable.

**Additional Funding Sources (max 1500 characters)**

List all current, pending, and to be requested support from other sources.

A Conference fee will be imposed to cover the lion's share of the expenses. Additional funding will be sought from the co-sponsoring partners and from other local and national sponsors.

The budget is currently being developed...

### Plans for Publication of the Proceedings

Specify potential publication outlet(s) below. For specific information on publishing proceedings in the ICES Journal of Marine Science (IJMS), refer to the ICES Symposium Guidelines.

- Publication intended (specify): The ICES Journal of Marine Science is requested for the publication of the proceedings. Conveners agree to the 15-month turnaround schedule for publication.
- No publication intended

## General Information

### Resolution Status (select one)

**New resolution**

This resolution has not been previously approved by the Advisory Committee (ACOM), Science Committee (SCICOM), and/or ICES Council.

**Amendment to an approved resolution**

This is a change to a currently active resolution that has been previously approved. Common amendments include changes to conveners, updates to symposium dates and venue, and term extensions following unavoidable delays.

### One-Sentence Summary (max 280 characters)

Describe the central purpose of this resolution written for non-experts for use on the ICES website and social media. Use active voice, plain language with simple words that convey meaning, and avoid jargon.

We are excited to announce the 7th Zooplankton Production Symposium for March 2024 in Hobart, Australia. Since our last symposium in 2016, new technologies have been developed to aid the collection of zooplankton information, leading to further understanding on the impact of climate change and other anthropogenic pressures on pelagic environments. Zooplankton enthusiasts are invited to share their latest research on areas of science related to the role of zooplankton in marine ecosystems around the world, from polar to tropical environments.

### ICES Advisory Plan Priorities (select up to two if relevant to this resolution)

**Priority 1:** Sharing evidence

**Priority 2:** Choose an item.

### ICES Science Plan Priorities (select up to two if relevant to this resolution)

**Priority 1:** Ecosystem science

**Priority 2:** Observation and exploration

### Additional Comments (if required, max 500 characters)

Restrict comments to those that are required to understand and review this resolution and for which there is no existing box on the form (e.g., request for a special resolution term duration).

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**Geographic Focus (select one or more)**
 **Non-geospecific**

Select non-geospecific when the resolution is not closely focused on a specific geographic region (e.g., symposium focused on techniques or processes).

ICES Ecoregions and Adjacent Ecoregions	Areas outside ICES Ecoregions and Adjacent Ecoregions
<input type="checkbox"/> Adriatic Sea <input type="checkbox"/> Aegean-Levantine Sea <input type="checkbox"/> Arctic Ocean <input type="checkbox"/> Atlantic, Northeast (FAO area 27) <input type="checkbox"/> Azores <input type="checkbox"/> Baltic Sea <input type="checkbox"/> Barents Sea <input type="checkbox"/> Bay of Biscay and the Iberian Coast <input type="checkbox"/> Black Sea <input type="checkbox"/> Celtic Seas <input type="checkbox"/> Faroes <input type="checkbox"/> Greater North Sea <input type="checkbox"/> Greenland Sea <input type="checkbox"/> Icelandic Waters <input type="checkbox"/> Ionian Sea and the Central Mediterranean Sea <input type="checkbox"/> Norwegian Sea <input type="checkbox"/> Oceanic Northeast Atlantic <input type="checkbox"/> Western Mediterranean Sea	<input type="checkbox"/> Arctic Sea (FAO area 18) <input type="checkbox"/> Atlantic, Antarctic (FAO area 48) <input type="checkbox"/> Atlantic, Eastern Central (FAO area 34) <input type="checkbox"/> Atlantic, Northwest (FAO area 21) <input type="checkbox"/> Atlantic, Southeast (FAO area 47) <input type="checkbox"/> Atlantic, Southwest (FAO area 41) <input type="checkbox"/> Atlantic, Western Central (FAO area 31) <input type="checkbox"/> Indian Ocean, Antarctic and Southern (FAO area 58) <input type="checkbox"/> Indian Ocean, Eastern (FAO area 57) <input type="checkbox"/> Indian Ocean, Western (FAO area 51) <input type="checkbox"/> Mediterranean and Black Sea (FAO area 37) <input type="checkbox"/> Pacific, Antarctic (FAO area 88) <input type="checkbox"/> Pacific, Eastern Central (FAO area 77) <input type="checkbox"/> Pacific, Northeast (FAO area 67) <input type="checkbox"/> Pacific, Northwest (FAO area 61) <input type="checkbox"/> Pacific, Southeast (FAO area 87) <input type="checkbox"/> Pacific, Southwest (FAO area 81) <input type="checkbox"/> Pacific, Western Central (FAO area 71)

**Close Links to Other Organisations (if relevant)**

Select scientific cooperation, agreements, partnerships, and other close links from the list below. Other links can be specified at the bottom of this table, but restrict your list to pertinent organisations that are closely associated with this resolution.

 **No close links to other organisations**
**United Nations Organisations and Programmes**

- European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC)
- Food and Agriculture Organization of the United Nations (FAO)
- International Maritime Organization (IMO)
- International Sea bed Authority (ISA)
- Secretariat of the Convention on Biological Diversity (CBD)

<input checked="" type="checkbox"/> UN Environment (UNEP) <input checked="" type="checkbox"/> UN Education, Scientific, and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC)
<b>European Commission and its Agencies</b> <input type="checkbox"/> European Commission (EC) <input type="checkbox"/> European Environment Agency (EEA) <input type="checkbox"/> European Fisheries Control Agency (EFCA) <input type="checkbox"/> Joint Research Council (JRC) <input type="checkbox"/> Regional Coordination Groups (RCGs) <input type="checkbox"/> Statistical Office of the European Communities (EUROSTAT)
<b>Regional Fisheries Organisations and Management Organisations (RFOs/RFMOs)</b> <input type="checkbox"/> General Fisheries Commission in the Mediterranean (GFCM) <input type="checkbox"/> International Commission for the Conservation of Atlantic Tunas (ICCAT) <input type="checkbox"/> North Atlantic Salmon Conservation Organization (NASCO) <input type="checkbox"/> North East Atlantic Fisheries Commission (NEAFC) <input type="checkbox"/> Northwest Atlantic Fisheries Organization (NAFO)
<b>Regional Sea Conventions</b> <input type="checkbox"/> Baltic Marine Environment Protection Commission (HELCOM) <input type="checkbox"/> Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR)
<b>Arctic Networks</b> <input type="checkbox"/> Arctic Monitoring and Assessment Programme (AMAP) <input type="checkbox"/> Conservation of Arctic Flora and Fauna (CAFF) <input type="checkbox"/> International Arctic Science Committee (IASC) <input type="checkbox"/> Protection of the Arctic Marine Environment Working Group (PAME)
<b>Scientific Intergovernmental Organisations (IGOs)</b> <input type="checkbox"/> Mediterranean Science Commission (CIESM) <input type="checkbox"/> North Atlantic Marine Mammal Commission (NAMMCO) <input checked="" type="checkbox"/> North Pacific Marine Science Organization (PICES)
<b>Other</b> <input type="checkbox"/> European Aquaculture Society (EAS) <input type="checkbox"/> Integrated Marine Biosphere Research project (IMBeR)

Other Organisations(s) not listed above (if relevant)	

**ICES Secretariat to complete the information below**

**Unique Identifier**

Include the auto-generated identifier when the approved resolution is added to the resolution database.

2022/SYM/SCICOM04

**Resolution Parent (select one)**

Symposia should generally select SCICOM.

SCICOM

**Professional Officer (if relevant)**

**Supporting Officer (if relevant)**

**Secretariat Comments (max 500 characters)**

Only include essential comments that can be made public and must stay with the resolution.

Oceans Past 2024: Historical perspectives on human-ocean interactions: deep understandings for informing ocean futures (10-14 June 2024)

**Resolution Form: Symposium**

Review the ICES Symposium Guidelines for Conveners before submitting this resolution form. Once approved, all resolution information on this form will be publicly available on the ICES website.



**Resolution Term (yyyy-mm-dd)**

Select a 2-year term. Start date is January 1 of the year before the symposium. End date is December 31 of the symposium year.

**Start Date:** 2023-01-01

**End Date:** 2024-12-31

**Symposium Title (max 280 characters)**

Oceans Past 2024: Historical perspectives on human-ocean interactions: deep understandings for informing ocean futures.

**Symposium Conveners (max 5)**

Full Name	Institute	Email	Country
Ruth Thurstan	University of Exeter	r.thurstan@exeter.ac.uk	UK
Gesche Krause	Alfred Wegener Institute Helmholtz Center for Polar and Marine Research	gesche.krause@awi.de	Germany

**Symposium Website URL (if known)**

[www.oceanspast.org](http://www.oceanspast.org)

**Scientific Justification (max 1500 characters)**

Describe the aims, objectives, and anticipated outcomes of the symposium and the relevance of the symposium to the ICES Science, Advisory, and/or Strategic Plans.

**Aims:** The Oceans Past Initiative (OPI) works to understand the past interactions of maritime societies with marine ecosystems, their influences upon ecosystem dynamics and health and repercussions on human systems. This goal aligns with ICES Science Plan to advance “understanding of marine ecosystems [and] effects of human activities” and generate “evidence on the state and sustainable use of our seas”.

**Objectives:** OP2024 will cover scales of past exploitation/consumption patterns of living marine resources; changing human-ocean interactions through time and their social-ecological consequences; targets for ecosystem-based management; societal benefits gained from healthy marine ecosystems, and; trajectories and repercussions of management interventions on marine social-ecological systems. We will showcase efforts to enhance data availability and access in line with best practice by groups such as ICES Data Centre.

**Outcomes:** OP2024 will continue the successful run of interdisciplinary meetings that bring together a growing global network of researchers to generate a fuller system understanding of our interactions with oceans through time, outcomes, and likely future trajectories of marine system health and societal needs.

**Relevance:** OP2024 informs several ICES Science Priorities: Ecosystem Science [advancing understanding of marine ecosystem dynamics], Impacts of Human Activities [quantifying effects of human activities on marine ecosystems and services], Observation and Exploration [tracking past changes and extending datasets], Seafood Production [quantifying past production and corresponding impacts on resilience] and Sea and Society [mapping societal benefits of marine ecosystems through time].

**Symposium Dates (yyyy-mm-dd)**

**Start Date:** 2024-06-10

**End Date:** 2024-06-14

**Venue** (specific place such as the conference centre)

University of Exeter's Cornwall Campus

**Expected Number of Participants**

70

**City/Town**

Penryn, Cornwall

**Country**

United Kingdom

**Comments on dates, venue, location, and participants (max 500 characters)**

For example, if any of the symposium details are tentative, provide potential dates (month/year), expected duration (# of days), venue(s) and location(s) under consideration.

Dates for OP2024 are tentative but are most likely to take place in June 2024, as this aligns well with term dates (for conference room availability on campus) and avoids peak holiday season (for

accommodation availability in Penryn and Falmouth). If this month is unavailable, we will aim for May or early July of that same year. Expected duration is 5 days.

**Symposium Programme (max 1500 characters)**

Briefly describe the symposium programme, including any pre- or post-symposium workshops, training, early career activities, and other coordinated events.

The symposium programme will include the following sessions, each with a series of oral/poster presentations followed by a moderated group discussion.

- Charting past exploitation and consumption of living marine resources through time
- Changing human-ocean interactions and their social and ecological consequences
- Past oceans and present-day targets for ecosystem-based management
- Understanding the societal benefits gained from healthy marine ecosystems, past and present
- Trajectories and outcomes of management interventions for sea and societies
- Past oceans for future policy
- Transformations in marine resource utilisation and valuation (i.e., technical development of fishing technologies, aquaculture, etc.): role and effects on social-ecological system perspectives

Training and ECR activities:

- Historical data archiving: best practices for enhancing availability and access of your data
- Mixed methods approaches: analysis of qualitative and quantitative data
- Early Career Session: enhancing interdisciplinary networks
- Early Career Session: generating cross-disciplinary mentorship opportunities
- Early Career Session: interdisciplinary working and publishing - tips and tricks
- Early Career Awards: Best talk, Best poster, Best interdisciplinary approach (prize will be a book or similar)

Workshops: The lead convenor will explore opportunities with the WGHIST chairs for hosting the annual meeting of the ICES Working Group on the History of Fish and Fisheries immediately before or after the conference to maximise attendance at both meetings.

**Acronym(s) of ICES Expert Groups, Strategic Initiatives, Steering Groups, Operational Groups, and Other Groups Contributing to the Symposium (optional)**

WGHIST

DIG (to be approached)

SIHD (to be approached)

**Contributions by ICES Representatives (max 1500 characters)**

How will ICES representatives contribute to the planning and organisation of the symposium? For example, members of the ICES community may be conveners, session chairs, serve on the planning board, scientific and organising committees, assist with the selection of plenary speakers, awards, and early career support. Additionally, if ICES representatives are already involved in the symposium, please provide this information.

The lead convenor will explore opportunities for ICES representatives to be involved in the following:

- A session chair or keynote speaker on the 'Applications of historical data to marine management policy: challenges and opportunities'
- Assistance with the selection of researchers for Early Career Support and to ensure parity of support across disciplines, member states, gender...
- Help with identifying training sessions/subjects of potential interest to ECRs would be much appreciated - we will also have feedback from the Oceans Past 2022 conference ECR sessions to learn from.
- Involvement on the conference planning board, if time and of interest.

#### **Resource Request (max 1500 characters)**

Before completing this section, conveners should read the ICES Symposium Guidelines for Conveners outlining the types of financial, coordination, and technical support that can be provided by ICES. List below all items requested of ICES to support this symposium. This must include specifics of any financial request, assistance with early career support applications, symposium registration, advertising, and/or website and virtual conference hosting, plans to use the ICES logo, etc. Clearly identify and describe requests that will require any time of ICES Secretariat staff such as coordination and technical support. This information is required so that the ICES Secretariat can assess its ability to fulfil these requests.

We seek support from ICES and other professional organizations for financial support to 1) subsidise attendance costs of early career researchers from ICES-member countries, 2) support an early career network event and 3) support an early career keynote speaker to attend. We note that OPI's members come in part from social science and humanities disciplines, which have fewer grant opportunities and lower budgets to work with for international travel. Successful inclusion of these groups is critical to the OPI and ICES goals of encouraging interdisciplinary collaborations and understanding and supporting action towards sustainable marine social-ecological systems.

We therefore request 10,000 Euros from ICES to strengthen the participation of early career researchers and ECR keynote speakers. These funds will be used to: 1) subsidise registration, subsistence and accommodation costs for ECRs from ICES member countries (5000€), 2) support an ECR networking event during the conference (3000€) and, 3) subsidise travel costs for an early career keynote speaker to attend (2000€).

We also seek support from the ICES Comms team in advertising the conference across social media channels and the ICES website, and in identifying courses or events that may be of interest to Oceans Past conference attendees e.g., ECS training courses/organisers that have previously received positive feedback.

Finally, we seek the use of the ICES logo on symposium websites, social media and communications to early career scientists.

#### **Additional Funding Sources (max 1500 characters)**

List all current, pending, and to be requested support from other sources.

The majority of conference costs will be borne by participant registration fees and by the vast majority of participants self-funding their travel and accommodation.

Fisheries Society of the British Isles - to be requested

University of Exeter - to be requested

In-kind support from currently funded projects e.g., ERC Synergy Project SEACHANGE, based at Exeter.

If the timeline permits, fellowship applications (such as the European Research Council Consolidator Grants) will include a request for conference support.

#### Plans for Publication of the Proceedings

Specify potential publication outlet(s) below. For specific information on publishing proceedings in the ICES Journal of Marine Science (IJMS), refer to the ICES Symposium Guidelines.

- Publication intended (specify):
- No publication intended

## General Information

#### Resolution Status (select one)

**New resolution**

This resolution has not been previously approved by the Advisory Committee (ACOM), Science Committee (SCICOM), and/or ICES Council.

**Amendment to an approved resolution**

This is a change to a currently active resolution that has been previously approved. Common amendments include changes to conveners, updates to symposium dates and venue, and term extensions following unavoidable delays.

#### One-Sentence Summary (max 280 characters)

Describe the central purpose of this resolution written for non-experts for use on the ICES website and social media. Use active voice, plain language with simple words that convey meaning, and avoid jargon.

The Oceans Past Conference brings together scientists and humanities researchers from around the world to better understand our past interactions with oceans, the changes that subsequently occurred and the consequences for ecosystems and human health, with the aim to inform future policy.

#### ICES Advisory Plan Priorities (select up to two if relevant to this resolution)

**Priority 1:** Choose an item.

**Priority 2:** Choose an item.

#### ICES Science Plan Priorities (select up to two if relevant to this resolution)

**Priority 1:** Impacts of human activities

**Priority 2:** Sea and society

#### Additional Comments (if required, max 500 characters)

Restrict comments to those that are required to understand and review this resolution and for which there is no existing box on the form (e.g., request for a special resolution term duration).

**Geographic Focus (select one or more)**
 **Non-geospecific**

Select non-geospecific when the resolution is not closely focused on a specific geographic region (e.g., symposium focused on techniques or processes).

<b>ICES Ecoregions and Adjacent Ecoregions</b>	<b>Areas outside ICES Ecoregions and Adjacent Ecoregions</b>
<input type="checkbox"/> Adriatic Sea <input type="checkbox"/> Aegean-Levantine Sea <input type="checkbox"/> Arctic Ocean <input type="checkbox"/> Atlantic, Northeast (FAO area 27) <input type="checkbox"/> Azores <input type="checkbox"/> Baltic Sea <input type="checkbox"/> Barents Sea <input type="checkbox"/> Bay of Biscay and the Iberian Coast <input type="checkbox"/> Black Sea <input type="checkbox"/> Celtic Seas <input type="checkbox"/> Faroes <input type="checkbox"/> Greater North Sea <input type="checkbox"/> Greenland Sea <input type="checkbox"/> Icelandic Waters <input type="checkbox"/> Ionian Sea and the Central Mediterranean Sea <input type="checkbox"/> Norwegian Sea <input type="checkbox"/> Oceanic Northeast Atlantic <input type="checkbox"/> Western Mediterranean Sea	<input type="checkbox"/> Arctic Sea (FAO area 18) <input type="checkbox"/> Atlantic, Antarctic (FAO area 48) <input type="checkbox"/> Atlantic, Eastern Central (FAO area 34) <input type="checkbox"/> Atlantic, Northwest (FAO area 21) <input type="checkbox"/> Atlantic, Southeast (FAO area 47) <input type="checkbox"/> Atlantic, Southwest (FAO area 41) <input type="checkbox"/> Atlantic, Western Central (FAO area 31) <input type="checkbox"/> Indian Ocean, Antarctic and Southern (FAO area 58) <input type="checkbox"/> Indian Ocean, Eastern (FAO area 57) <input type="checkbox"/> Indian Ocean, Western (FAO area 51) <input type="checkbox"/> Mediterranean and Black Sea (FAO area 37) <input type="checkbox"/> Pacific, Antarctic (FAO area 88) <input type="checkbox"/> Pacific, Eastern Central (FAO area 77) <input type="checkbox"/> Pacific, Northeast (FAO area 67) <input type="checkbox"/> Pacific, Northwest (FAO area 61) <input type="checkbox"/> Pacific, Southeast (FAO area 87) <input type="checkbox"/> Pacific, Southwest (FAO area 81) <input type="checkbox"/> Pacific, Western Central (FAO area 71)

**Close Links to Other Organisations (if relevant)**

Select scientific cooperation, agreements, partnerships, and other close links from the list below. Other links can be specified at the bottom of this table, but restrict your list to pertinent organisations that are closely associated with this resolution.

 **No close links to other organisations**
**United Nations Organisations and Programmes**

- European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC)
- Food and Agriculture Organization of the United Nations (FAO)
- International Maritime Organization (IMO)
- International Sea bed Authority (ISA)
- Secretariat of the Convention on Biological Diversity (CBD)
- UN Environment (UNEP)
- UN Education, Scientific, and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC)

<b>European Commission and its Agencies</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> European Commission (EC)</li> <li><input type="checkbox"/> European Environment Agency (EEA)</li> <li><input type="checkbox"/> European Fisheries Control Agency (EFCA)</li> <li><input type="checkbox"/> Joint Research Council (JRC)</li> <li><input type="checkbox"/> Regional Coordination Groups (RCGs)</li> <li><input type="checkbox"/> Statistical Office of the European Communities (EUROSTAT)</li> </ul>
<b>Regional Fisheries Organisations and Management Organisations (RFOs/RFMOs)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> General Fisheries Commission in the Mediterranean (GFCM)</li> <li><input type="checkbox"/> International Commission for the Conservation of Atlantic Tunas (ICCAT)</li> <li><input type="checkbox"/> North Atlantic Salmon Conservation Organization (NASCO)</li> <li><input type="checkbox"/> North East Atlantic Fisheries Commission (NEAFC)</li> <li><input type="checkbox"/> Northwest Atlantic Fisheries Organization (NAFO)</li> </ul>
<b>Regional Sea Conventions</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Baltic Marine Environment Protection Commission (HELCOM)</li> <li><input type="checkbox"/> Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR)</li> </ul>
<b>Arctic Networks</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Arctic Monitoring and Assessment Programme (AMAP)</li> <li><input type="checkbox"/> Conservation of Arctic Flora and Fauna (CAFF)</li> <li><input type="checkbox"/> International Arctic Science Committee (IASC)</li> <li><input type="checkbox"/> Protection of the Arctic Marine Environment Working Group (PAME)</li> </ul>
<b>Scientific Intergovernmental Organisations (IGOs)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mediterranean Science Commission (CIESM)</li> <li><input type="checkbox"/> North Atlantic Marine Mammal Commission (NAMMCO)</li> <li><input type="checkbox"/> North Pacific Marine Science Organization (PICES)</li> </ul>
<b>Other</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> European Aquaculture Society (EAS)</li> <li><input type="checkbox"/> Integrated Marine Biosphere Research project (IMBeR)</li> </ul>

Other Organisations(s) not listed above (if relevant)	

### ICES Secretariat to complete the information below

<b>Unique Identifier</b> Include the auto-generated identifier when the <u>approved</u> resolution is added to the resolution database.
2022/SYM/SCICOM03

<b>Resolution Parent (select one)</b>
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Symposia should generally select SCICOM.
SCICOM

Professional Officer (if relevant)	Supporting Officer (if relevant)

<b>Secretariat Comments (max 500 characters)</b> Only include essential comments that can be made public and must stay with the resolution.

## Resolutions approved in 2021

Ecosystem Effects of Climate Change on the World's Ocean 5 (ECCWO-5) (17-21 April 2023)

### Resolution Form: Symposium

Review the ICES Symposium Guidelines for Conveners before submitting this resolution form. Once approved, all resolution information on this form will be publicly available on the ICES website.



#### Resolution Term (yyyy-mm-dd)

Select a 2-year term. Start date is January 1 of the year before the symposium. End date is December 31 of the symposium year.

**Start Date:** 2022-01-01

**End Date:** 2023-12-31

#### Symposium Title (max 280 characters)

Ecosystem Effects of Climate Change on the World's Ocean 5 (ECCWO-5)

#### Symposium Conveners (max 5)

Full Name	Institute	Email	Country
Geir Huse	Institute of Marine Research	geir.huse@hi.no	Norway
Jörn Schmidt	ICES	joern.schmidt@ices.dk	Denmark

#### Symposium Website URL (if known)

[www.pices.int/ECCWO-5](http://www.pices.int/ECCWO-5)

#### Scientific Justification (max 1500 characters)

Describe the aims, objectives, and anticipated outcomes of the symposium and the relevance of the symposium to the ICES Science, Advisory, and/or Strategic Plans.

The International Symposium "Ecosystem Effects of Climate Change on the World's Ocean 5 (ECCWO-5)" will bring together experts from around the world to better understand climate effects on ocean ecosystems and how adaptation and mitigation measures could look like and been implemented. The symposium is continuing the successful series of ECCWO symposia over the last years.

The Symposium will:

Highlight the latest information on how oceans are changing, what is at risk and how to respond; Identify key knowledge gaps; Promote collaborations; and stimulate the next generation of science and actions.

The Symposium will include:  
 Theme sessions, presentations, and posters  
 Opportunities for post-meeting workshops  
 Special events for early career scientists  
 Exhibit Opportunities  
 Networking sessions

An objective for this Symposium is to present current research results and to facilitate the uptake of these new results in other analyses, including (but not restricted to) the forthcoming Assessment Report (AR7) of the IPCC. The symposium will also feed into the UN Decade of Ocean Science for Sustainable Development and address the SDGs, specifically SDGs 13 and 14. We plan a Special Volume from the symposium. The symposium is highly relevant to the science plan priorities of ICES including ecosystem science, impacts of human activities, seafood production and sea and society. It is also very relevant to the ICES/PICES Strategic Initiative on Climate Change Impacts on Marine Ecosystems.

<b>Symposium Dates (yyyy-mm-dd)</b>	
<b>Start Date:</b> 2023-04-17	<b>End Date:</b> 2023-04-21

<b>Venue</b> (specific place such as the conference centre)	<b>Expected Number of Participants</b>
TBD	500 (physical participation, more options for remote participation)

<b>City/Town</b>	<b>Country</b>
Bergen	Norway

<b>Comments on dates, venue, location, and participants (max 500 characters)</b>
For example, if any of the symposium details are tentative, provide potential dates (month/year), expected duration (# of days), venue(s) and location(s) under consideration.
The symposium will commence on the 10th of April 2023 and go on for a total of five days. The location will be Bergen and tentatively the Radisson SAS hotel at the historic Bryggen area is the venue. Alternatively, there are other potential venues including the Grieghall. Remote participation will be facilitated.

<b>Symposium Programme (max 1500 characters)</b>
Briefly describe the symposium programme, including any pre- or post-symposium workshops, training, early career activities, and other coordinated events.
Steering structure As in the previous symposium (ECCWO-4, <a href="https://meetings.pices.int/meetings/international/2018/climate-change/scope">https://meetings.pices.int/meetings/international/2018/climate-change/scope</a> ) in Washington DC, ECCWO-5 will be arranged jointly by ICES, PICES, IOC and FAO. There will be one convener appointed per organisation. The steering committee will be appointed by the conveners. The IMR will be the local host for the meeting.

### Plenary Sessions

Morning plenary sessions to provide overarching keynote presentations and to introduce topics for the concurrent sessions to be convened on the same day.

### Topic sessions

Concurrent Topic Sessions every day, following the morning plenary session. There will be 12-15 topic sessions. Sessions themes and chairs will be decided by steering committee and conveners.

### Workshops

In addition to the Topic Sessions there will be Workshops on 17-18 April where themes and chairs will be proposed by attendants.

### The One Ocean Expedition

The tall ship Statsraad Lehmkuhl will return from its 19 months long circumnavigation of the world's ocean - the One Ocean Expedition ([One Ocean Expedition - Statsraad Lehmkuhl 2021-2023](#)). The expedition is part of the programme of the UN Decade for Ocean Science, and will include a scientific sampling programme. In association with the homecoming of SL there will be several ocean conferences focusing on industry issues, research, and sea & society. Symposium participants will be invited to take part in the ocean conferences which will take place the week-end and the week following ECCWO.

We will include specific activities for Early Career Scientists and add measures to ensure Diversity, Equity and Inclusion Throughout the Symposium.

### **Acronym(s) of ICES Expert Groups, Strategic Initiatives, Steering Groups, Operational Groups, and Other Groups Contributing to the Symposium (optional)**

SCICOM, SICCOME, SIHD

### **Contributions by ICES Representatives (max 1500 characters)**

How will ICES representatives contribute to the planning and organisation of the symposium? For example, members of the ICES community may be conveners, session chairs, serve on the planning board, scientific and organising committees, assist with the selection of plenary speakers, awards, and early career support. Additionally, if ICES representatives are already involved in the symposium, please provide this information.

Jörn Schmidt and Wojciech Wawrzynski have taken part in the planning. Geir Huse, a Norwegian delegate to ICES has been leading the local arrangements from IMR. It is expected that many researchers from the ICES community will attend the meeting as participants and theme session conveners, and some will also be invited to be members of the steering committee and as keynote speakers.

### **Resource Request (max 1500 characters)**

Before completing this section, conveners should read the ICES Symposium Guidelines for Conveners outlining the types of financial, coordination, and technical support that can be provided by ICES. List below all items requested of ICES to support this symposium. This must include spe-

cifics of any financial request, assistance with early career support applications, symposium registration, advertising, and/or website and virtual conference hosting, plans to use the ICES logo, etc. Clearly identify and describe requests that will require any time of ICES Secretariat staff such as coordination and technical support. This information is required so that the ICES Secretariat can assess its ability to fulfil these requests.

The Symposium requests financial support to support attendance of Early Career Scientists. The webpage as well as registration will be handled by PICES.  
Support in advertising would be highly appreciated.  
The attendance of the Secretariat Staff, the SCICOM Chair and the ICES President will place an additional financial burden on the Secretariat.

#### **Additional Funding Sources (max 1500 characters)**

List all current, pending, and to be requested support from other sources.

Current:

The Institute of Marine Research, Bergen, Norway

To be requested:

The Research Council of Norway

PICES

IOC

FAO

The Committee for Resource Research (Norway)

University of Bergen

City of Bergen

The European Commission

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#### **Plans for Publication of the Proceedings**

Specify potential publication outlet(s) below. For specific information on publishing proceedings in the ICES Journal of Marine Science (IJMS), refer to the ICES Symposium Guidelines.

Publication intended (specify): A special issue will be produced from the symposium. ICES Journal of Marine Science will be contacted shortly in this regard.

No publication intended

## **General Information**

#### **Resolution Status (select one)**

**New resolution**

This resolution has not been previously approved by the Advisory Committee (ACOM), Science Committee (SCICOM), and/or ICES Council.

**Amendment to an approved resolution**

This is a change to a currently active resolution that has been previously approved. Common amendments include changes to conveners, updates to symposium dates and venue, and term extensions following unavoidable delays.

**One-Sentence Summary (max 280 characters)**

Describe the central purpose of this resolution written for non-experts for use on the ICES website and social media. Use active voice, plain language with simple words that convey meaning, and avoid jargon.

ICES supports symposium on ecosystem effects of climate change on the world's ocean.

**ICES Advisory Plan Priorities (select up to two if relevant to this resolution)**

**Priority 1:** Choose an item.

**Priority 2:** Choose an item.

**ICES Science Plan Priorities (select up to two if relevant to this resolution)**

**Priority 1:** Ecosystem science

**Priority 2:** Impacts of human activities

**Additional Comments (if required, max 500 characters)**

Restrict comments to those that are required to understand and review this resolution and for which there is no existing box on the form (e.g., request for a special resolution term duration).

**Geographic Focus (select one or more)** **Non-geospecific**

Select non-geospecific when the resolution is not closely focused on a specific geographic region (e.g., symposium focused on techniques or processes).

<b>ICES Ecoregions and Adjacent Ecoregions</b>	<b>Areas outside ICES Ecoregions and Adjacent Ecoregions</b>
<input type="checkbox"/> Adriatic Sea <input type="checkbox"/> Aegean-Levantine Sea <input type="checkbox"/> Arctic Ocean <input type="checkbox"/> Atlantic, Northeast (FAO area 27) <input type="checkbox"/> Azores <input type="checkbox"/> Baltic Sea <input type="checkbox"/> Barents Sea <input type="checkbox"/> Bay of Biscay and the Iberian Coast <input type="checkbox"/> Black Sea <input type="checkbox"/> Celtic Seas <input type="checkbox"/> Faroes <input type="checkbox"/> Greater North Sea	<input type="checkbox"/> Arctic Sea (FAO area 18) <input type="checkbox"/> Atlantic, Antarctic (FAO area 48) <input type="checkbox"/> Atlantic, Eastern Central (FAO area 34) <input type="checkbox"/> Atlantic, Northwest (FAO area 21) <input type="checkbox"/> Atlantic, Southeast (FAO area 47) <input type="checkbox"/> Atlantic, Southwest (FAO area 41) <input type="checkbox"/> Atlantic, Western Central (FAO area 31) <input type="checkbox"/> Indian Ocean, Antarctic and Southern (FAO area 58) <input type="checkbox"/> Indian Ocean, Eastern (FAO area 57) <input type="checkbox"/> Indian Ocean, Western (FAO area 51) <input type="checkbox"/> Mediterranean and Black Sea (FAO area 37) <input type="checkbox"/> Pacific, Antarctic (FAO area 88)

<input type="checkbox"/> Greenland Sea <input type="checkbox"/> Icelandic Waters <input type="checkbox"/> Ionian Sea and the Central Mediterranean Sea <input type="checkbox"/> Norwegian Sea <input type="checkbox"/> Oceanic Northeast Atlantic <input type="checkbox"/> Western Mediterranean Sea	<input type="checkbox"/> Pacific, Eastern Central (FAO area 77) <input type="checkbox"/> Pacific, Northeast (FAO area 67) <input type="checkbox"/> Pacific, Northwest (FAO area 61) <input type="checkbox"/> Pacific, Southeast (FAO area 87) <input type="checkbox"/> Pacific, Southwest (FAO area 81) <input type="checkbox"/> Pacific, Western Central (FAO area 71)
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**Close Links to Other Organisations (if relevant)**

Select scientific cooperation, agreements, partnerships, and other close links from the list below. Other links can be specified at the bottom of this table, but restrict your list to pertinent organisations that are closely associated with this resolution.

**No close links to other organisations**

**United Nations Organisations and Programmes**

- European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC)
- Food and Agriculture Organization of the United Nations (FAO)
- International Maritime Organization (IMO)
- International Sea bed Authority (ISA)
- Secretariat of the Convention on Biological Diversity (CBD)
- UN Environment (UNEP)
- UN Education, Scientific, and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC)

**European Commission and its Agencies**

- European Commission (EC)
- European Environment Agency (EEA)
- European Fisheries Control Agency (EFCA)
- Joint Research Council (JRC)
- Regional Coordination Groups (RCGs)
- Statistical Office of the European Communities (EUROSTAT)

**Regional Fisheries Organisations and Management Organisations (RFOs/RFMOs)**

- General Fisheries Commission in the Mediterranean (GFCM)
- International Commission for the Conservation of Atlantic Tunas (ICCAT)
- North Atlantic Salmon Conservation Organization (NASCO)
- North East Atlantic Fisheries Commission (NEAFC)
- Northwest Atlantic Fisheries Organization (NAFO)

**Regional Sea Conventions**

- Baltic Marine Environment Protection Commission (HELCOM)
- Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR)

**Arctic Networks**

- Arctic Monitoring and Assessment Programme (AMAP)
- Conservation of Arctic Flora and Fauna (CAFF)

<input type="checkbox"/> International Arctic Science Committee (IASC)
<input type="checkbox"/> Protection of the Arctic Marine Environment Working Group (PAME)
<b>Scientific Intergovernmental Organisations (IGOs)</b>
<input type="checkbox"/> Mediterranean Science Commission (CIESM)
<input type="checkbox"/> North Atlantic Marine Mammal Commission (NAMMCO)
<input checked="" type="checkbox"/> North Pacific Marine Science Organization (PICES)
<b>Other</b>
<input type="checkbox"/> European Aquaculture Society (EAS)
<input type="checkbox"/> Integrated Marine Biosphere Research project (IMBeR)

Other Organisations(s) not listed above (if relevant)	

### ICES Secretariat to complete the information below

<b>Unique Identifier</b>
Include the auto-generated identifier when the <u>approved</u> resolution is added to the resolution database.
RES-2

<b>Resolution Parent (select one)</b>
Symposia should generally select SCICOM.
Choose an item.

<b>Professional Officer (if relevant)</b>	<b>Supporting Officer (if relevant)</b>

<b>Secretariat Comments (max 500 characters)</b>
Only include essential comments that can be made public and must stay with the resolution.

## Resolutions approved 2016

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### Marine Socio-Ecological Systems - MSEAS 2020: Navigating global change in the marine environment with socio-ecological knowledge (Dates to be confirmed - 2024)

*DUE TO COVID-19 VIRUS OUTBREAK, THE SYMPOSIUM HAS BEEN POSTPONED; PLEASE VISIT THE [ICES SYMPOSIA WEBPAGE](#) FOR INFORMATION AND NEW DATES.*

**2016/3/SSGIEA07** A Symposium on “**Marine Socio-Ecological Systems - MSEAS 2020: Navigating global change in the marine environment with socio-ecological knowledge**” will be held in 2020, in Yokohama, Japan with Rich Little (Australia, SPICES), Marloes Kraan (Netherlands, ICES), Mitsutaku Makino (Japan, PICES), Doug Lipton (US, ICES) and Keith Criddle (US, PICES) as Conveners.

A Scientific Steering Group will be established to assist the Conveners in planning the Symposium, with suggested participation of Jan Jaap Poos (Netherlands), Olivier Thebaud (France), Alan Haynie (USA), Jörn Schmidt (Germany), Ingrid van Putten (Australia), Evangelia Drakou (Netherlands), Eva Plaganyi (Australia), Katell Hamon (Netherlands), Sophie Gourguet (France).

Symposium coordinators: Alex Bychkov (PICES), Wojciech Warzynski (ICES)

### Supporting Information

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**Priority:** Policy and decision-makers responsible for activities that affect the marine environment must weigh how to adapt to or mitigate the impacts of human activity across a range of spatial and jurisdictional scales (global, national, regional to local) and time frames (near-term, long-term, infinite). The marine environment as a source of foods, energy, minerals, environmental services, and vector for maritime transit is an essential component of the world economy. Investments in “blue growth” are escalating across the globe, supported by well-established economic sectors (shipping, fishing and seafood processing, coastal aquaculture, coastal tourism, conventional exploitation of oil and gas, etc.) and emerging sectors (kinetic and thermal energy, deep-sea oil, gas, and mineral resources, blue-water aquaculture, marine biotechnologies, etc.). The challenge is to enable current and future growth of maritime activities, while ensuring their long-term sustainability from ecological, economic and social points of view. This challenge implies managing human impacts on marine ecosystems and, in turn, managing the impacts of ecological changes on coastal populations, industries and society at-large. This requires extension of traditional disciplinary and interdisciplinary scientific methods and development of new trans-disciplinary approaches to better integrate policy and decision making systems and to better account for risk and uncertainty, evolving social preferences, and environmental justice. Development of new decision support tools that are robust to the current uncertainties in our understanding and limits to the predictive ability of social-ecological system models has been identified by the World Economic Forum and OECD as one of the most important emerging areas of science. This was also the focus of the MSEAS 2016 symposium, which sought to establish an inter-disciplinary, international dialogue on how to include human dimensions within research, science and management efforts intended to support the long-term management of marine and coastal ecosystems.

Considerable progress has been made in characterizing the options available to policy and decision makers, visualizing synergies and tradeoffs of activities in the marine environment. Central challenges include: identifying the spectrum of economic, social and ecological values and objectives of society, and understanding the hierarchical dynamic nature of the human and biophysical systems, all in the context of high u

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certainty. Simulation models offer a way to evaluate the robustness of alternative adaptive decision-making systems in the context of a highly uncertain decision-making environment.

Building on the success of the MSEAS 2016 symposium, MSEAS 2020 will bring together experts from around the world, from a range of disciplinary areas to focus on the science to support integrated planning and decision making for the marine environment. It will characterize the spectrum of “user specifications” for decision support from relevant policy-makers, from local to national scales; match these needs with the most appropriate assessment and evaluation approaches; and identify the major multidisciplinary and technical challenges that need to be addressed in order to deliver robust policy and decision making systems for different decision making contexts (e.g., local government, regional planning, national/international policies) in the marine environment.

In summary, the objectives of this symposium will be to:

1. Provide a focused international forum for the presentation and discussion of frontier research on marine social-ecological systems.
2. Foster closer collaboration among biophysical, economic and social, decision-support researchers and policy-makers.
3. Review the theoretical and technical strengths and weaknesses of current social-ecological models.
4. Identify short-term opportunities for increased cross fertilization of cross-disciplinary/cross-domain approaches and longer-term strategic research directions, including potential case studies.

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Scientific justification: The symposium will focus on the integrated assessment of multiple ocean uses across sectors, including: fisheries, renewable energy, coastal development, oil and gas, transport, and the need for conservation. Emphasis will be on the methodological and empirical challenges involved in including the human dimensions in integrated ecosystem assessments. As was highlighted during MSEAS 2016, exploring tools to specifically evaluate coupled social-ecological systems is sorely needed, is timely, and is just beginning to be done.

Understanding these complex social-ecological systems is a challenging new area of research that combines multidisciplinary, interdisciplinary and transdisciplinary components. The integrated marine focus is relatively new, as previous research efforts have either been terrestrially focused or dealt primarily with single sectors.

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Resource requirements: Primary funding will be achieved through registration fees, as is typical. The conveners will seek additional sponsorship from participating institutions and other agencies which have active interest in the topic. These funds will be used to support keynote speakers, participation of postgraduate students and early career scientists, and to support publication.

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Participants: There is increasing global interest in this topic which we expect to be reflected in participation from scientists and practitioners from Asia, Europe, North America, and Australasia. In addition, the scope of the symposium with its multi-disciplinary and multi-sectoral focus will ensure considerable interest. We would anticipate that around 200-250 delegates will attend.

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Secretariat facilities: The conveners requested PICES support for advertisement, pre-planning, development of a web page and management of registration, and the general organisation of the symposium. ICES support is thus requested for advertising mainly.

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Financial: The conveners humbly request ICES to contribute €10,000 to fund travel support for early career scientists. (approved by SCICOM pending Council allocation of funding in November 2018)

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Linkages to other organizations: Linkages to other organisations will be pursued, including PICES, IMBER, IIFET, Belmont Forum, Future Earth and others

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Publication proceedings After communication with the local organizer, the journal 'Fisheries Science' has been approached for the proceedings

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