

### Advisory Plan – update to Council 2019

*Council is requested to take note and promote the launch of the Advisory Plan in December 2019.*

The plan highlights ICES intent to:

1. Enhance credibility and transparency of advice, following FAIR<sup>1</sup> and Transparent Assessment Framework (TAF) principles
2. Move towards ecosystem advice and better utilise the science and data available in ICES
3. Share and communicate advice better to meet the stakeholders/requestors needs



<sup>1</sup> <https://www.go-fair.org/fair-principles/>

## 1 Objective and rationale for the ICES Advisory Plan

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The objective of the plan is to map the priority areas for further strengthening of ICES advice. The plan hopes to improve the resilience of ICES advice to future challenges, and recognise and embrace opportunities. It is the sister plan to the 2019 strategic and science plans.

## 2 Structure of ICES Advisory Plan

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There are four elements to the plan:

- 1 **Advice to support the ecosystem-based decision making for our seas and oceans.**  
A preamble setting the context for ICES advice.
- 2 **What we do and how we work**  
A broad description of the advisory processes and the principles that underpin the delivery of ICES advice.
- 3 **Priority areas of advisory plan.**  
Descriptions of six priority areas for specific consideration, with associated tasks with each priority area to improve ICES advice.
- 4 **Text boxes of examples of success stories.**  
Descriptions using graphics, of existing “good news” stories to show that ICES advice has an existing strong foundation.

## 3 Consultations and time line.

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This document represents the state of play of the ICES Advisory Plan, after development by ACOM (Nov 2018, March, May, Sept 2019) and consultations with WGChairs (Jan 2019), Bureau (February, June 2019), SCICOM (March-April, Sept 2019) and with recipients of advice (EU, Norway, NASCO, NEAFC, OSPAR, HELCOM, May-June 2019).

Agreed timeline for production of the ICES advisory plan.

Target date	Action	By who
Mar 2019	Consider 6 priorities, strengths & develop actionable tasks	ACOM
Mar 2019	Plan presented for consultation to SCICOM	ACOM leadership
Apr 2019	Consultation period with SCICOM	ACOM leadership
May & Jun 2019	Use meetings with recipients of advice used as opportunities to discuss the six priorities	ACOM leadership
Jun 2019	The full text constructed. Bureau & ACOM asked for further comment	ACOM leadership
Jun 2019	Draft for Bureau	Bureau
Jun 2019	Operational requirements to implement the plan discussed	ACOM leadership, Secr
Sep 2019	Sign off of plan at ASC	ACOM

Oct 2019	Council briefed on plan	Council, ACOM Chair
Oct & Nov 2019	Development of visual presentation of the plan	Secr, ACOM
Dec 2019	Plan launched	ACOM leadership, Secr
Jan 2020	MIRIA and MIACO introduced to the plan.	ACOM leadership

Shaded denotes completed.

#### 4 **ICES Advisory Plan: delivering evidence-based advice to meet conservation, management, and sustainability goals.**

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##### **Advice to support the ecosystem-based decision making for our seas and oceans.**

ICES mission is to advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management, and sustainability goals. This advice supports ecosystem-based decision making for the management of human activities in our seas and oceans, and contributes towards the effective application of an ecosystem approach. The approach seeks to maintain the health of marine ecosystems, alongside appropriate human use, for the benefit of current and future generations.

To support application of the ecosystem approach, ICES is committed to facilitating the incorporation of a wider range of scientific knowledge into the evidence base that informs decision-makers and society about the state and trends of our seas and oceans, the consequences of human use, and options for conservation and management. We will answer requests on specific challenges encountered by policy developers and managers. We will also develop and regularly publish, update, and disseminate overviews on the state of ecosystems, fisheries and aquaculture in the ICES region, drawing as appropriate on analyses of human activities, pressures, and impacts. In the longer term, these overviews will incorporate social, cultural, and economic information.

Ongoing development of advice, tools and assessments to support the ecosystem approach will build on our longstanding experience as impartial advisers on the status and use of marine ecosystems. Development of these products will be informed by ICES ecosystem science, data provision, observation and exploration, and assessments of human activities that affect and are affected by marine ecosystems.

Requests for advice will be answered following the ICES framework and guidelines for providing fisheries advice and the developing ICES framework for ecosystem advice. We consider that certain key phrases illustrate the central tenet of the ecosystem approach:

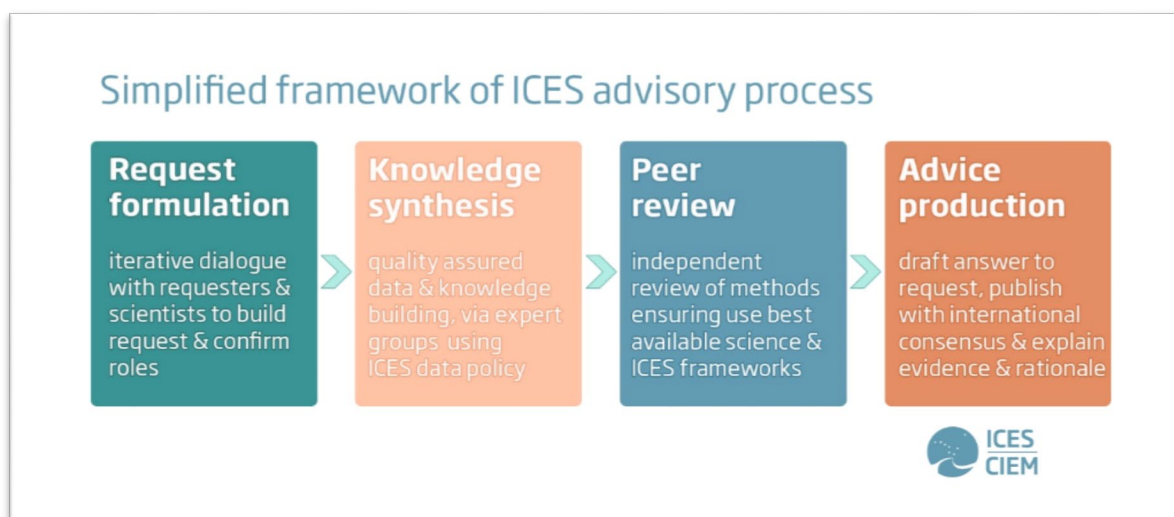
- management of human activities
- consideration of collective pressures
- achievement of good environmental status

- sustainable use
- optimization of benefits among diverse societal goals
- regionalization
- trade-offs
- stewardship for future generations

Evidence is required to explore the consequences of likely trade-offs between and within sectors as well as between sectors and conservation and protection obligations. This is to support sustainable development aimed at both human and ecosystem well-being and stewardship of marine ecosystems.

The overviews complement other types of advice, providing supporting context and allowing users to understand the implications of sectoral decisions in an ecosystem context. They provide a concise and informative introduction to ecoregions and human activities considered in other ICES advice. Ecosystem overviews identify the main human pressures and environmental characteristics and provide a description of the state of the ecoregions. Fisheries overviews summarize fishing activities in the ecoregions, describing the countries and fleets, the distribution and intensity of fishing activities, catches and bycatches. They also cover management of the fisheries, the status of fished stocks, wider fisheries impacts and advice on the trade-offs linked to mix-fisheries scenarios. Aquaculture overviews will describe the distribution, ecosystem interactions, benefits, impacts and potential of aquaculture production at a regional scale. The overviews also afford an opportunity to present information on “potential” and identify options for development where the ration of benefits to impacts is projected to be high.

## What we will do and how we work



To be relevant and credible, ICES advice should be developed and shared in a legitimate and transparent manner. It is independent and based on best available knowledge. ICES will continue to provide the evidence base for policy developers and managers of marine

activities in response to their needs for recurrent advice and special one-off requests. To imbed the provision of evidence in the context of ecosystem-based management, the advice will be framed within fisheries, aquaculture and ecosystem overviews. ICES viewpoints will also provide valuable contributions to global discourse around the state of the marine ecosystem, the management of human impacts and the provision of goods and services.

### **Credibility**

By ensuring robust debate and critical evaluation of data, methods and knowledge sources, ICES will continue to provide credible best available science for decision making for society. ICES sees the dual tools of consensual deliberation of science and independent peer review of those deliberations, as the key mechanisms to deliver our vision. The breadth of knowledge across over 150 expert groups, and the dynamism of our experts, is the foundation of ICES advice. Our experience as a trusted knowledge provider and facilitator of evidence for policy builds on this foundation.

### **Relevancy**

ICES will continue its dialogue with recipients of advice and wider society to maintain the relevancy of our advice. The management objectives determined by society are already incorporated into the fisheries advice framework. ICES will work with partners to create a similar ecosystem advice framework which reflects international objectives, such as those of the Convention of Biological Diversity (CBD) and regional objectives such as the Baltic Sea Action Plan, North-East Atlantic Environment Strategy and the Marine Strategy Framework Directive. ICES will also use FAO guidance on the ecosystem-based fisheries management to link and where possible reconcile resource management and biodiversity conservation objectives.

### **Legitimacy**

Continuing adaption and improvement of our processes to reflect the expectations of the recipients of advice will maintain our legitimacy. Clear decision making and appropriate quality assurance of the advisory processes will underpin our role as an independent and legitimate evidence provider. The potential for tensions may arise, as the transparency and the interaction with stakeholders increase, in particular regarding the independence of the advice given. ICES will work with stakeholders, and social scientists, to ensure a wider range of relevant scientific knowledge is incorporated into our advice consistent with the ecosystem approach. ICES advice will be shared and communicated in an audience relevant manner.

## Priority areas of advisory plan

### 1. Assuring quality

*Assure that quality in ICES encompasses the entire process from data collection to the publication of objective and independent advice.*

ICES will continue to build upon the proven track record of providing credible evidence-based advice through assuring quality, reproducibility and transparency. The existing quality control and assurance processes are enhanced to form an end-to-end quality assurance framework that will encompass best practice in data management, data integration and translation into advice. Quality assurance within ICES should meet international standards, adhere to the FAIR principles and include independent peer review for existing and new areas of advice. To assure high quality advice, ICES will continue to maintain and expand the expertise needed to address evolving advisory needs.

#### Tasks:

- As part of the quality assurance framework (QAF), map out process flows and critical control points and feedback loops in the advisory system and begin to address identified critical control points.
- Seek international quality accreditation for the ICES advisory system.
- Develop a comprehensive ICES quality management system for advice including implementing RDBES, TAF, etc.
- Where possible ensure that all advice products are based on data that adhere to the FAIR principals.
- Application and ongoing development of the ICES benchmark system, to ensure the advice is fit for the evolving advisory demands.

### 2. Incorporating innovation

*Incorporate new knowledge into the advisory process to contribute effectively to the creation of advice on meeting conservation, management and sustainability goals.*

ICES advice is based on the best available knowledge, while also meeting our stringent requirements for transparency, traceability, documentation, peer-review, robustness and being relevant to the needs of recipients and stakeholders. Knowledge assimilated by ICES spans outputs delivered through the ICES science plans, marine science internationally, data, tools and technologies for monitoring and assessment, as well as relevant social, cultural, economic and stakeholder information. ICES will work with scientists, advisors, recipients of advice and stakeholders and be guided by their feedback as it assimilates new and a wider range of relevant scientific knowledge. The principal use of assimilated knowledge will be to advance ICES capacity to provide ecosystem-based advice.

## Tasks

- Scan and evaluate new knowledge, from inside and outside the ICES community, to assess if it can support state of the art advice on meeting conservation, management and sustainability goals (ACOM, EG, benchmarks)
- Review and report on best practices in other agencies and management systems to inform future development of advice (Benchmarks, workshops, dialogue meetings)
- Support translation of mature science into viewpoints or ecosystem overviews (if ICES priority but no recipient request) and into requested advice (if recipient request) (EG, ACOM)
- Engage stakeholders and advice recipients to develop current and future advice products (MIRIA, MIACO, ACOM)
- Engage funding agencies to develop/ recommend approaches to project calls and design that increase uptake of science into advice (Council)

## 3. Highlighting benefits

*Profile and communicate to existing and potential new users the relevance and benefits of the ICES approach to providing advice.*

ICES is a leading, trusted adviser on the impacts of human activities on marine ecosystems; advising on more than 90% of fisheries catches and the impacts of these associated fisheries on the marine ecosystem of the North East Atlantic. The advice draws on the expertise and experience approximately 1,500 active researchers across a multitude of disciplines in many regions. Throughout its long history as an adviser, ICES has recognised the need to have credible, timely and relevant advice. The advice is based on the best available science and is characterized by quality assurance, developed in a transparent process, unbiased, independent manner. ICES will continue to develop advice products informed by its extensive network and underpinned by its experience as a trusted operator at the science for policy interface. It will profile its strengths in incorporating state-of-the art scientific knowledge and adapting globally agreed standards to regional management challenges.

## Tasks

- Prepare a communication strategy with SCICOM and the secretariat outlining the strengths and future direction of the ICES advisory system clarifying the message that ICES is an organisation that operates as a science network with functional, knowledge brokering and boundary organisation activities.
- Highlight the ecosystem approach in existing ICES advisory products and communicate this to new audiences and publicise future developments of the integration of ecosystem approach in ICES advisory products

- Communicate the synergy between ICES Data, Science and Advice by revising ICES website in terms of target audience, levels of detail and clarity. Link this to the visualisation of advice on the website.
- Raise the profile of ICES with marine sectors (commercial, managers and policy makers) not currently engaged with ICES such as energy and shipping.
- Broaden the participation in the ICES Science community by promoting participation from academia in the Advisory process – the ASC is an important event in this respect
- Identify and target specific audiences of advice when concerns are expressed about ICES advice process and begin dialogue to resolve such issues
- Expand the terms of references for MIRIA and MIACO to use these meetings as part of the communication strategy

#### 4. Sharing evidence

*Share effectively the evidence and advice with recipients and society, and develop a responsive dialogue with partners to maintain relevance.*

ICES acknowledges that the audience for its advisory products goes beyond the clients and immediate stakeholders to a much broader society. ICES already embraces a range of mechanisms for communicating and will continue to use new evolving methods to communicate our advice. ICES will maintain a dialogue with key users to ensure that it remains responsive to their needs. The methods used to create the advice must be transparent and explained with the advice. The complexity of the language used will be appropriate to the target audience. The flow from the underlying science research to the published advice to will be explicitly described, together with the principles by which ICES delivers the advice and evidence.

##### **Tasks:**

- Improve and ensure branding of all ICES advice products
- In dialogue with clients to design and develop a user friendly and dynamic web platform for ICES advice (either through the ICES website, or in parallel)
- Develop web-based advice that includes several levels/layers (incl. popular advice, forecast options, full advice) and also enables presentation of advice in an effective and consistent format
- Work with the fishing industry to develop a mechanism to bring commercially derived sample data into the RDBES
- Improve the mechanism for sharing alternative perceptions of the state of stocks and fisheries.
- Simplify the headline advice, but connect to the underlying basis and data in an interactive way



- Ensure that ICES advisory highlights are made available to society in a user-friendly way
- Ensure corrections in advice and updates in the advisory products will be transparent and easily tracked by the clients.
- Improve the advice profile in the ICES document archive, encourage the creation of an ICES online library for all documents

## 5. Evolving advice

*Evolve the advice to remain relevant to policy developments and management challenges, while horizon scanning likely future evidence needs.*

The policy arena is continuously changing and ICES advice needs to evolve to stay fit for purpose and pre-empt future requirements for impartial evidence. ICES needs to be resilient to these future policy and technology developments and ensure that the knowledge base is robust. ICES will actively engage with recipients to understand and meet their oncoming needs. The ICES advisory system will adapt to incorporate further consideration of issues such as cross sectoral challenges, ecosystem thresholds, acceptable risk and competition for space. Efforts with requesters will intensify to identify and clarify management objectives, future scenarios and potential trade-offs. Mechanisms will be developed to alert managers and stakeholders to changes in the marine ecosystem and human activities. ICES will strive to maintain clear narratives when answering complex requests.

### Tasks:

- Map with recipients their current and potential future policy initiatives and management objectives and document their potential impact on the provision of advice from ICES
- Develop an ecosystem advice framework
- Identify and develop new clients for ICES advice e.g. marine energy and spatial planning.
- Develop a stronger base in scoping and stakeholder engagement
- Investigate mechanisms and examples of assuring independence of advice in systems with increasing stakeholder participation, more consultation and iterations with client.
- Identify associated data and information needs related to policy developments, the concept of risk and thresholds for ecosystem health

## 6. Identifying needs

*Identify and communicate the expertise, monitoring, data and process needs to maintain and develop the provision of relevant advice.*

ICES receives data from providers, undertakes analysis, and provides evidence-based advice and services. To enhance the provision of advice, ICES needs to ensure that the scientific community and advice recipients are aware of potential improvements, gaps, and emerging issues that should be addressed. Successful building of capacity requires an informed development approach. ICES will evaluate skills and expertise shortages, and the provision and use of data and knowledge. This evaluation will assist the data collectors (e.g. RCGs), experts, funding agencies and advice recipients in their provision of resources for the production of advice.

### **Tasks**

- Conduct an objective stock assessment prioritization and data-gap analysis
- Collate a list of future research and data requirements from benchmarks, overviews and expert group reports in an existing database on an annual basis, across expert groups, steering groups and SCICOM
- Continuously review training courses run by ICES with the potential to increase the programme for key areas.
- Identify key under-populated areas of expertise and clearly communicate the current needs in expert groups to institutes and conduct an independent review of the gaps in expertise related to the anticipated advisory needs.
- Identify potential programme of funding and training in disciplines that are relevant to the institutes and engage funding agencies and recipients of advice to highlight research to meet future advice needs
- Once the database on surveys, RDBES and the inclusion in stock assessments is concluded, communicate with the institutes and regional data groups about gaps and modifications that will augment the surveys and monitoring utility.
- Identify disciplines and institutions that could collaborate with ICES with the view to improving and adding context to ICES advice e.g. socio-economics and marine planning

### **Text boxes highlighting existing successful approaches.**

Transparent assessment framework (TAF)

Vulnerable Marine Ecosystem portal and process (VMEs)

Data limited method development for fishing opportunities advice

Seabed impact and value of catch tradeoff advice

**Making the advisory plan operational.** Table 1 proposed allocation the tasks for each priority area to bodies within ICES.

Priority area		Tasks	Responsible
<b>Assuring quality</b>	1.1	As part of the quality assurance framework (QAF), map out process flows and critical control points and feedback loops in the advisory system and begin to address identified critical control points.	ACOM/ secretariat
	1.2	Seek international quality accreditation for the ICES advisory system.	ACOM/ secretariat
	1.3	Develop a comprehensive ICES quality management system for advice including implementing RDBES, TAF, etc.	secretariat
	1.4	Where possible ensure that all advice products are based on data that adhere to the FAIR principals.	ACOM/SCICOM
	1.5	Application and ongoing development of the ICES benchmark system, to ensure the advice is fit for the evolving advisory demands.	ACOM
<b>Incorporating innovation</b>	2.1	Scan and evaluate new knowledge, from inside and outside the ICES community, to assess if it can support state of the art advice on meeting conservation, management and sustainability goals	ACOM
	2.2	Review and report on best practices in other agencies and management systems to inform future development of advice	ACOM
	2.3	Support translation of mature science into viewpoints or ecosystem overviews (if ICES priority but no recipient request) and into requested advice (if recipient request)	ACOM/SCICOM
	2.4	Engage stakeholders and advice recipients to develop current and future advice products	ACOM
	2.5	Engage funding agencies to develop/ recommend approaches to project calls and design that increase uptake of science into advice	SCICOM/Council
<b>Profiling approach</b>	3.1	Prepare a communication strategy with SCICOM and the secretariat outlining the strengths and future direction of the ICES advisory system clarifying the message that ICES is an organisation that operates as a science network with functional, knowledge brokering and boundary organisation activities.	ACOM/ SCICOM/ secretariat
	3.2	Highlight the ecosystem approach in existing ICES advisory products and communicate this to new audiences and publicise future developments of the integration of ecosystem approach in ICES advisory products	ACOM
	3.3	Communicate the synergy between ICES Data, Science and Advice by revising ICES website in terms of target audience, levels of detail and clarity. Link this to the visualisation of advice on the website.	secretariat
	3.4	Raise the profile of ICES with marine sectors (commercial, managers and policy makers) not currently engaged with ICES such as energy and shipping.	ACOM
	3.5	Broaden the participation in the ICES Science community by promoting participation from academia in the Advisory process – the ASC is an important event in this respect	ACOM/ SCICOM

Priority area		Tasks	Responsible
	3.6	Identify and target specific audiences of advice when concerns are expressed about ICES advice process and begin dialogue to resolve such issues	ACOM
	3.7	Expand the terms of references for MIRIA and MIACO to use these meetings as part of the communication strategy	ACOM
<b>Sharing evidence</b>	4.1	Improve and ensure branding of all ICES advice products	ACOM/ secretariat
	4.2	In dialogue with clients to design and develop a user friendly and dynamic web platform for ICES advice (either through the ICES website, or in parallel)	ACOM/ secretariat/ external projects
	4.3	Develop web-based advice that includes several levels/layers (incl. popular advice, forecast options, full advice) and also enables presentation of advice in an effective and consistent format	ACOM/ secretariat/ external projects
	4.4	Work with the fishing industry to develop a mechanism to bring commercially derived sample data into the RDBES	ACOM
	4.5	Improve the mechanism for sharing alternative perceptions of the state of stocks and fisheries.	ACOM
	4.6	Simplify the headline advice, but connect to the underlying basis and data in an interactive way	ACOM
	4.7	Ensure that ICES advisory highlights are made available to society in a user-friendly way	ACOM/ secretariat
	4.8	Ensure corrections in advice and updates in the advisory products will be transparent and easily tracked by the clients.	ACOM/ secretariat
	4.9	Improve the advice profile in the ICES document archive, encourage the creation of an ICES online library for all documents	ACOM/ secretariat
<b>Evolving advice</b>	5.1	Map with recipients their current and potential future policy initiatives and management objectives and document their potential impact on the provision of advice from ICES	ACOM
	5.2	Develop an ecosystem advice framework	ACOM
	5.3	Identify and develop new clients for ICES advice e.g. marine energy and spatial planning.	ACOM
	5.4	Develop a stronger base in scoping and stakeholder engagement	ACOM/ SCICOM
	5.5	Investigate mechanisms and examples of assuring independence of advice in systems with increasing stakeholder participation, more consultation and iterations with client.	ACOM/ SCICOM
	5.6	Identify associated data and information needs related to policy developments, the concept of risk and thresholds for ecosystem health	ACOM/ SCICOM
<b>Identifying needs</b>	6.1	Conduct an objective stock assessment prioritization and data-gap analysis	ACOM
	6.2	Collate a list of future research and data requirements from benchmarks, overviews and expert group reports in an existing database on an annual basis, across expert groups, steering groups and SCICOM	ACOM

Priority area		Tasks	Responsible
	6.3	Continuously review training courses run by ICES with the potential to increase the programme for key areas.	Training Group
	6.4	Identify key under-populated areas of expertise and clearly communicate the current needs in expert groups to institutes and conduct an independent review of the gaps in expertise related to the anticipated advisory needs.	ACOM
	6.5	Identify potential programme of funding and training in disciplines that are relevant to the institutes and engage funding agencies and recipients of advice to highlight research to meet future advice needs	SCICOM
	6.6	Once the database on surveys, RDBES and the inclusion in stock assessments is concluded, communicate with the institutes and regional data groups about gaps and modifications that will augment the surveys and monitoring utility.	ACOM/ secretariat
	6.7	Identify disciplines and institutions that could collaborate with ICES with the view to improving and adding context to ICES advice e.g. socio-economics and marine planning	ACOM/ SCICOM