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### Annual Progress Report from the ACOM Chair

*Council is requested to take note and promote:*

- *the launch of the advisory plan in Dec 2019.*
- *provide guidance to maintain investment in key expertise areas central to advice: MSE, mixed fisheries, ecosystem approach.*
- *the benefits of accepting the position of ICES expert group Chair.*

This report contains four sections focusing on the implementation of the ICES Strategic Plan and improving effectiveness of ICES advice (ICES advisory plan)

1. Special requests, challenges and opportunities, impact of lack of expertise
2. Advisory plan – assuring quality and making progress
3. Practical measures for evidence provision for ecosystem-based management
4. Review of last 12 months

#### **Advice Activities over the last 12 months:**

1. Developed the ICES Advisory plan.
2. Published:
  - i. 196 fishing opportunities advice, and 3 other recurrent advice
  - ii. 6 ecosystem overviews
  - iii. 4 fisheries overviews
  - iv. 1 viewpoint on biofouling
3. Explored the concept of aquaculture overviews
4. Explained the advice at 38 external meetings and attended key meetings with recipients of advice throughout the year (DGMARE, DGENV, Iceland, Norway, UK, OSPAR, HELCOM, NASCO, NEAFC, Coastal States, European Parliament, ACs, regional fisheries management bodies, NOAA, DFO, NGOs, CBD, aquaculture and processors)
5. Ran MIRIA, MIACO and WGCHAIRS. Held 28 advice drafting groups and 2 ACOM and 1 ACOM consultations meetings.
6. Launched the Fisheries Resources Steering Group (FRSG)
7. Worked with secretariat on MoUs and Partnership agreements (DGMARE, Norway, UK, Iceland, NASCO, DGENV)

## 1 Special requests, challenges and opportunities, impact of lack of expertise

The creation of impartial evidence for responsible decision-making is a key component of the ICES strategic plan. That is why governments and intergovernmental agencies turn to ICES for advice for the management of the exploitation of natural resources and monitoring and reaching conservation targets.

The lack of investment in certain expertise is hindering ICES ability to provide advice, especially for special requests. Figure 1.1. highlights the key areas where ICES received and answered special requests in 2019. To date, ICES has answered 18 special requests and including 2 technical services in 2019 <https://www.ices.dk/community/advisory-process/Pages/Latest-Advice.aspx>.

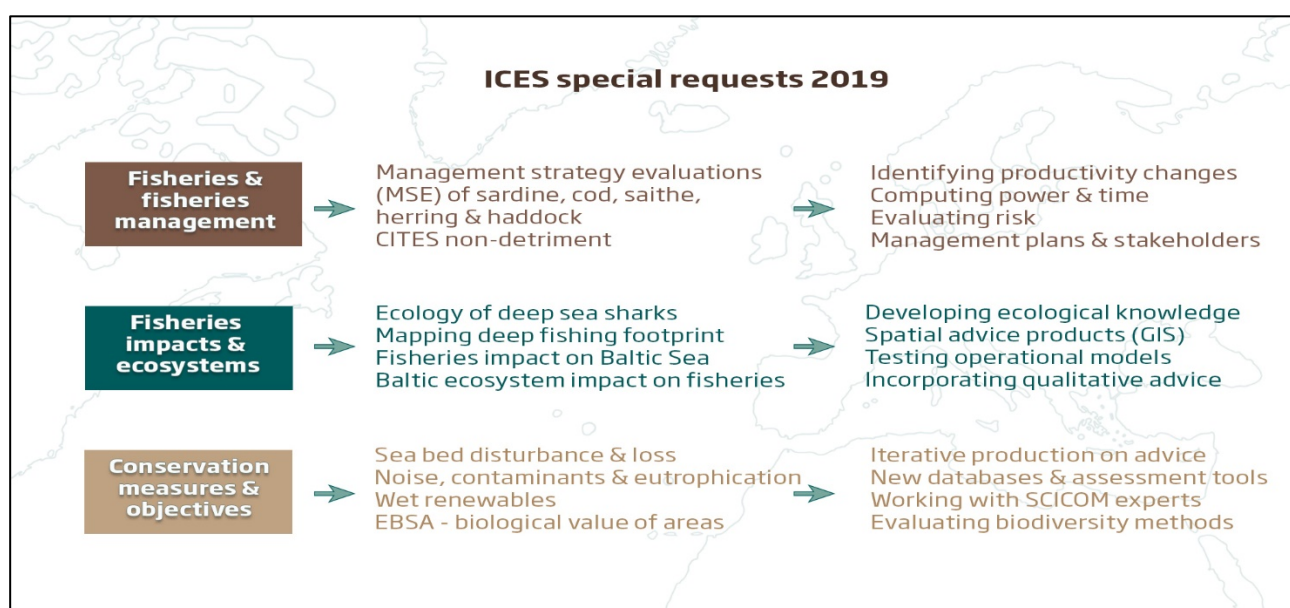


Figure 1.1. 2019 special requests: column 1 represents the broad areas, column 2 the specific research issues and column the new developments and challenges that ICES encountered by answering the requests.

To help highlight research needs and gaps for the provision of knowledge for decision makers, ICES runs stakeholder workshops with managers, fishers, NGOs to develop research needs plans for a range of issues. Examples include:

- Assessment and management advice for Baltic Cod ([WKSIBCA](#), 2014)
- Assessment and management advice North East Atlantic mackerel ([WKRRMAC](#), 2019)
- Scoping research needs for Ecosystem Based Management of the Baltic Sea (WKBALTIC, 2020)
- Scoping next generation of mixed fisheries advice (WKMIXFISH, 2020)

Thus we are providing the input to highlight and help lobby for stronger investment in key areas. These areas cannot be considered “fringe” to the ICES advisory portfolio. They include MSE, multispecies and mixed fisheries and ecosystem approach.

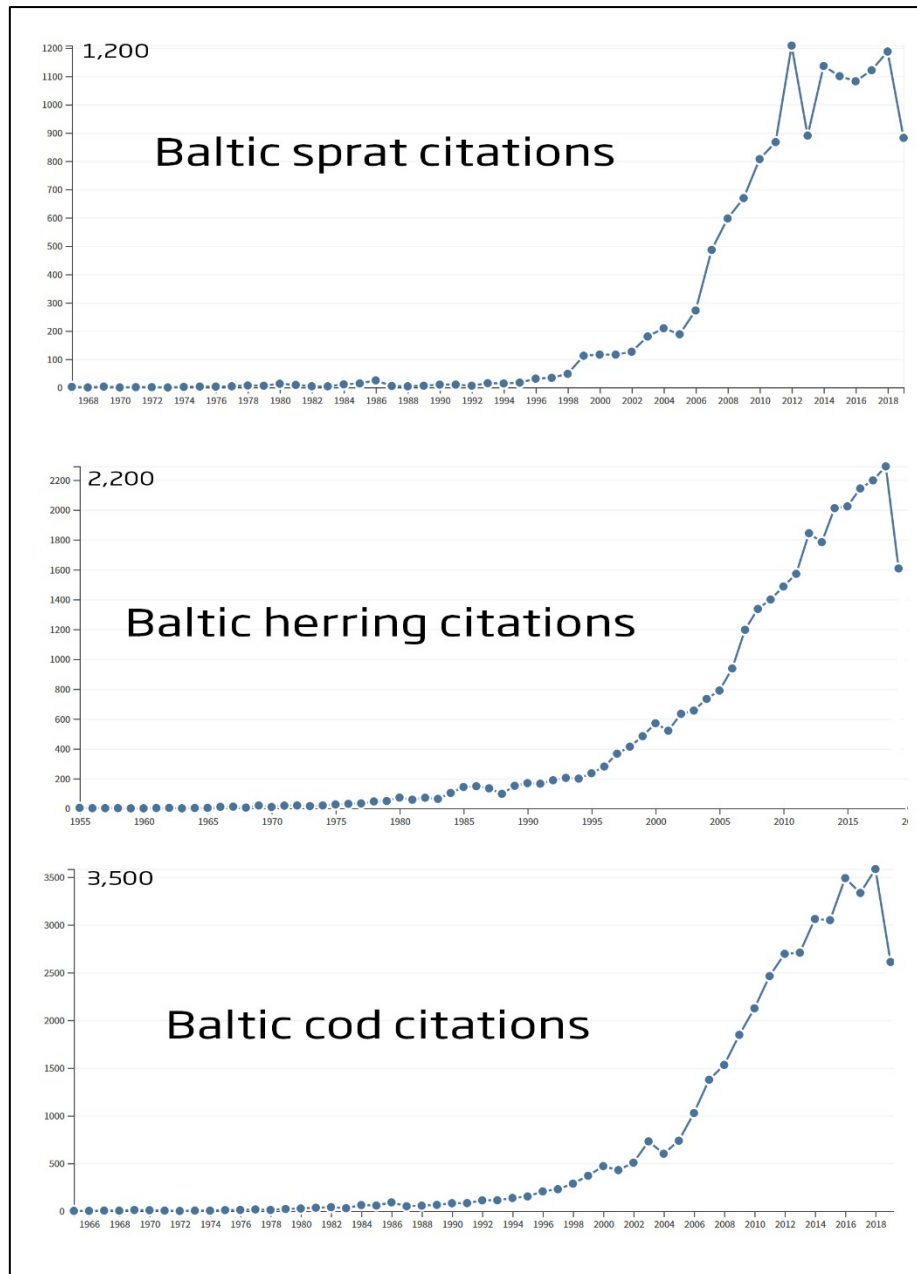
An example occurred in mid-2019, of a failure to link science through to applied science for fisheries management. ICES received a request from DGMARE to provide advice (Text box 1.1.). The request was in a key fisheries advice area (Baltic fisheries), and for many years ICES has advised that there is a need for spatial management of sprat and herring fisheries in the Baltic Sea to aid the management of Eastern Baltic cod. However after extensive investigation by the secretariat and ACOM leadership, ICES had to reject the request because

*“There is an apparent lack of scientific knowledge, data as well as expertise/human resources in the area of Baltic sprat and the interaction with Eastern Baltic cod fisheries. There are no operational tools currently available to help answer the request.”* (letter to DGMARE from ICES head of advisory support, 26 September 2019).

In essence there was a failure of the fisheries science framework to turn the large amount of research into operationally useful approaches for fisheries management (Figure 1.2).

Text box 1.1. Request to ICES from DGMARE which ICES rejected.

- 1) On the likely impact of spatial management measures for sprat with regards to the condition of cod ICES is asked to:
  - a. clarify in which subdivisions, in which months and by how much to reduce or to increase the effort in pelagic fisheries in the different ICES areas in the Baltic Sea with the objective of maximizing any beneficial effects on the eastern cod stock in terms of prey availability and
  - b. quantify the expected effects on the sprat stock in terms of stock biomass and individual condition/growth of eastern Baltic cod.
- 2) On the spatial distribution and overlaps of fish and fisheries ICES is asked to clarify how such an effort reallocation could impact the herring fishery in the relevant subdivisions?
- 3) On the predator/prey interactions between benthos, sprat, cod and seals ICES is asked to:
  - clarify what the relative importance of sprat in the diet of eastern Baltic cod is and if there are there differences from one subdivision to another;
  - clarify if the available sprat in SD 25-26 in terms of size and condition is an appropriate food that eastern Baltic cod is capable of preying and eating given that eastern Baltic cod is small and weak and
  - estimate any risk of a more sprat-dominated diet potentially increasing the “seal”-parasite infection of EBC.



*Figure 1.2. Annual citations of papers that have been published on Baltic Sea sprat, herring and cod (Web of Science extraction, 30 September 2019), illustrating that there isn't a lack of science activity on the three main commercial species fished in the Baltic Sea.*

**So the Chair of ACOM seeks guidance from Council how to ensure resources across the network and encourage the development of operational expertise. This is needed to maintain a tangible knowledge base keeping ICES advice resilient to existing and future management needs.**

## **2 Advisory plan – assuring quality and making progress**

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The ICES strategic plan states that we strive to continuously improve the quality and transparency of our advice and the processes. We use the data we collect and manage, and our scientific understanding of marine ecosystems to meet current and future demands for advice on the state and sustainable use of our seas and oceans. Future approaches for delivering advice will build on our longstanding experience as a leading provider of fisheries and environmental advice. The advisory plan highlights a number of priority areas that need attention (see document CM 2019 Del-4). The proposed allocation of tasks to deliver the plan is shown in Annex 1.

The advisory plan key priority 1 – assuring quality, documents a number of tasks. These include quality control of data (see CM 2019 Del-11) and quality assurance of the advisory process. Initial steps have been taken including the mapping of the entire advisory process with stress points and critical control points being investigated. This will be further developed in 2020. The quality control of data will be brought about through application for the core trust seal.

To deliver key parts of the advisory plan, ACOM is currently focusing on quality assurance, methods for stocks assessment, forecasting and management strategy evaluation, methods for overviews, automation of processes (TAF and databases), the benchmark process and developing a framework for ecosystem advice. Once the advisory plan has been formally launched, Council will be updated on progress and completion of the tasks.

## **3 Practical measures for evidence provision for ecosystem-based management**

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When providing the evidence for ecosystem-based management (EBM), and ecosystem-based fisheries management (EBFM), researchers are often criticised for remaining in the realm of concepts, and philosophical development. ICES must show practical progress, and lead the call for iterative implementation for EBM and EBFM.

In terms of EBFM, the requesters of advice are expecting ICES to provide advice that is robust. ICES is the science adviser to NEAFC and answers annual requests from OSPAR. NEAFC and OSPAR work together through their “collective arrangement”. ICES is a key science advisor to both EU DGMARE (CFP) and EU DG ENV (MSFD and Habitats & Birds Directives), and we need to ensure that all our advice is consistent to all of these requesters. Thus ACOM is developing the framework for ecosystem advice.

There are four main areas where practical progress is being made by ICES as an evidence provider to EBFM:

## **Accounting for the influence of a dynamic ecosystem on fisheries**

Where appropriate, ICES must account for productivity changes in stocks (recruitment, growth, natural mortality) in stock assessments, forecasts & reference points. An audit of how variable productivity is incorporated into our fishing opportunities advice will take place in 2020. The challenges associated with changes and overlaps in distribution of stocks also needs to be addressed. There is little activity in this area at the ACOM level, and it must be addressed. In contrast, ACOM advice is already considering alternative productivity scenarios in management strategy evaluations (MSEs). We must also account for the consequences of catches from mixed fisheries in advice and improving the analysis and communication of our mixed fisheries advice is a priority for ACOM in 2020.

## **Impact of fisheries on the ecosystem**

ICES is in the process of developing metrics and reporting on the occurrence and impact of bycatch in fisheries, and on fisheries impact on and services from seabed, including vulnerable marine ecosystems (VMEs). We are synthesizing the status of fish stocks by ecoregion in our fisheries overviews. ACOM acknowledges that more effort is required on the issue of bycatch and it has tasked itself with creating a bycatch road map to set objectives and build momentum.

## **Put fisheries into context of other maritime activities & pressures**

Through our ecosystem overviews, we are determining the priority anthropogenic pressures in an ecoregion and developing metrics and reporting on trends in species biodiversity and ecosystem structure. We provide information and methods for Ecologically or Biologically Significant Marine Areas (EBSAs) designation and contribute to assessments of threatened/endangered species & habitats. In our ecosystem overviews we also report the occurrence and spread of invasive species.

## **Consequences of trade-offs between management objectives**

The integrated ecosystem assessment groups are exploring suites of management objectives in each ecoregion. Our network has developed tools for comparing the consequences for trade-offs between objectives and management scenarios. We are running successful stakeholder engagement workshops that explore methods, ideas and the consequences of management decisions. All of these are now flowing into practical application via our advice on MSE of fisheries management plans, seabed impact, MSFD and mixed fisheries.

## **4 Review of last 12 months**

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### **Participation in core advice activities (expert groups and advice drafting).**

The last year has been busy, intense and productive. The expert groups have been well attended (Figure 4.1) and all ICES countries have contributed to the expert groups (Figure

4.2). Almost each fisheries assessment working group had at least one stock assessment that required further work, usually through an interbenchmark process. It was impossible to predict the causes, or the stock likely to require extra work.

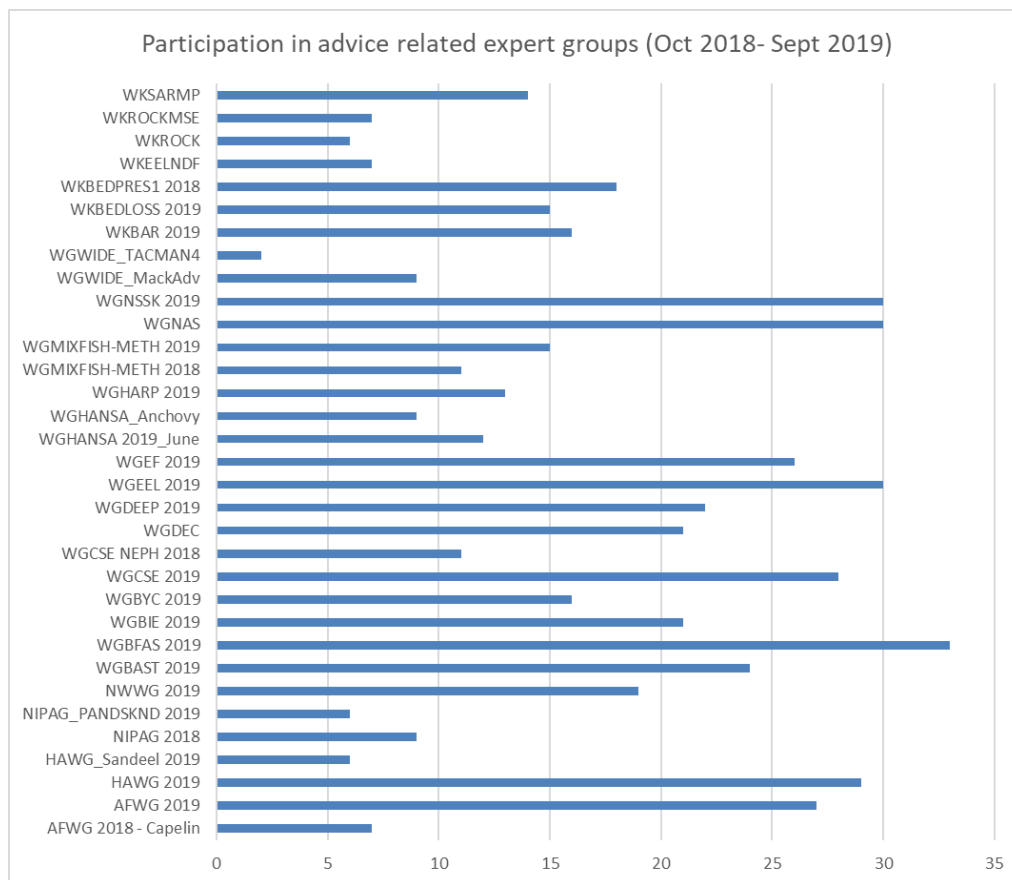


Figure 4.1. Participation in ACOM related expert group (Oct 2018 –Sept 2019). WGWIDE is not included.



Figure 4.2. Participation in ACOM related expert groups by country from Oct 2018-Sept 2019. WGWIDE is not included.

There were 28 advice drafting groups between October 2018 and September 2019 (Figure 4.3). In November 2018, ACOM enacted a new system of allocation of experts to ADGs. This was supported by Bureau. The system appears to be working well. Although two more environmental ADGs were poorly populated (High seas MPAs and haploops), the remaining groups functioned as expected. Certain countries contribute greater to the ADG process than other (Figure 4.4).

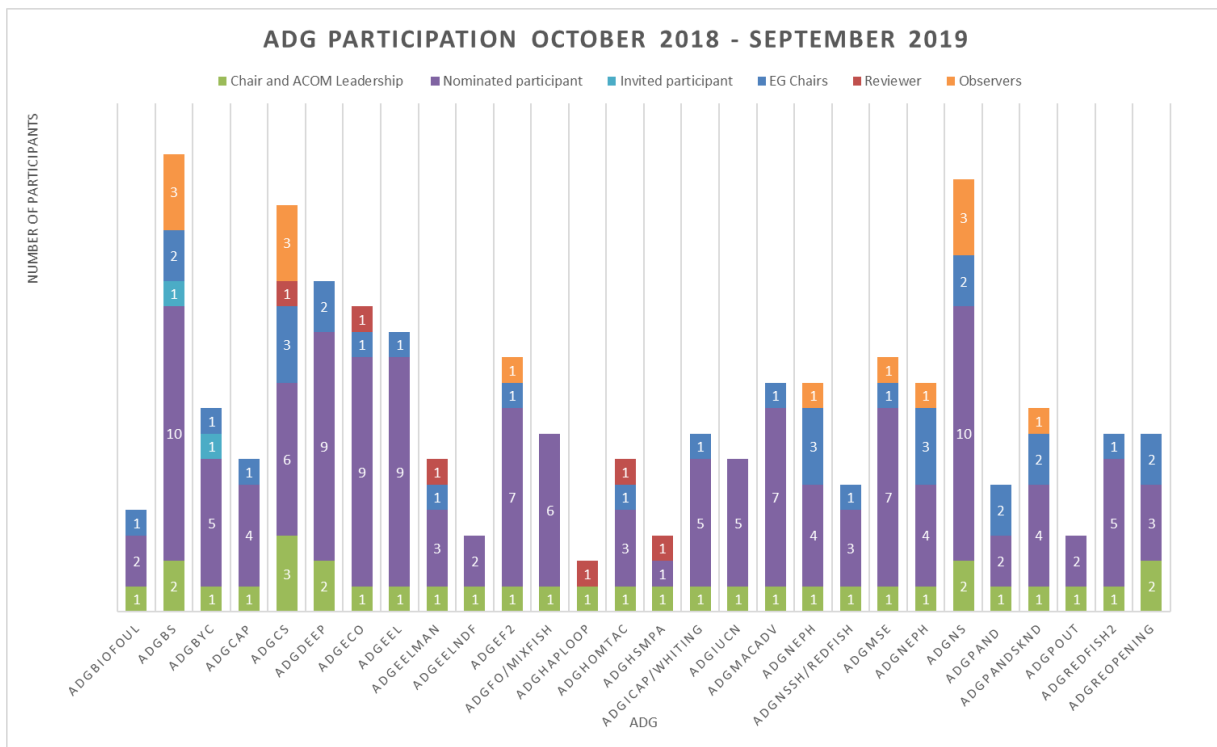


Figure 4.3 Population of advice drafting groups from October 2018 to September 2019.

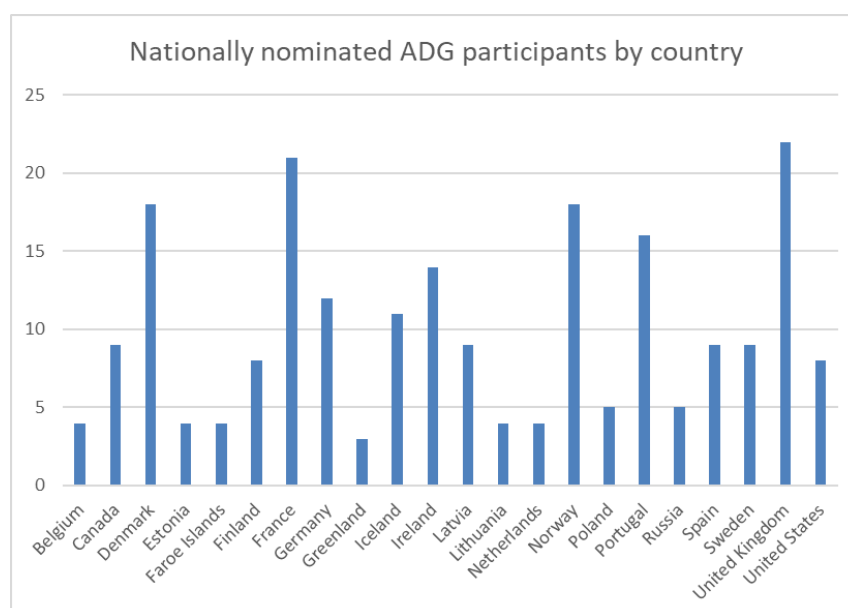


Figure 4.4. Participation in ADG by country from Oct 2018-Sept 2019.



**Chairs – reluctance to accept the position.**

The system is under strain, and the network is shouting about workload and broadening of expectations. One obvious problem in 2018/2019 was the reluctance of individuals to step forward to become Chairs of Expert Groups. ACOM leadership and the secretariat are finding this a challenge (examples include the North Sea and eel working groups). The role is seen as too challenging by junior researchers, and as not rewarding by senior researchers. ACOM would like Council to consider how to make the role of Chair attractive and a natural career step for researchers in the ICES network.

**Working across pillars – a success story.**

It is worth highlighting to Council that the pillars of ICES (data, science and advice) appears to be working closer together and more integrated than previously. This reflects a breakdown in the silo mentality and an increased awareness that the delivery of the ICES Strategic plan is dependent on teamwork across the network. The working relationship between ACOM and the secretariat has been excellent in 2019. The secretariat advisory services are extremely effective and helpful.

**Annex 1. Making the advisory plan operational.** 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