

3. Overview of ICES advice activities in 2025

Colm Lordan, ACOM Chair



ICES
CIEM

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



ICES Advisory Committee



....by employing the knowledge of ICES to effectively meet the societal needs for impartial evidence, and to generate state-of-the-art advice on meeting conservation, management and sustainability goals.

Advice Production Process



Governed by 10 principles of advice

No other fisheries body has
these specifically stated



<https://doi.org/10.17895/ices.pub.30885011>

Key requesters of advice



Advice & underpinning evidence 2025:

- 210 advisory documents
- 100 expert group reports
- 60 new stock annexes
- 15 data calls
- 3 new technical guidelines documents

ICES advice in 2025

Fisheries

180 stocks (4.7 mT) 85% MSY/MP & 15% PA
MPs Icelandic Haddock & Saithe, NSAS Herring
Spurdog Management Scenarios

Ecosystem services and effects

Recurrent VME & Bycatch advice
Impact of Offshore wind on fisheries & ecosystem
Aquaculture & Cumulative impacts advice

Overviews

Arctic & Oceanic Atlantic Ecosystem Overview
North Sea Aquaculture Overview
North Sea & Celtic Sea Fisheries Overviews



New advice tool in 2025

Home Overview Landings Stock statusShare Resources

fisheriesXplorer

Select an ICES ecoregion:



Select a topic:

**Overview**

**Landings**

**Stock status**

Selected ICES Ecoregion:

Celtic Seas

<https://ices-taf.shinyapps.io/fisheriesXplorer/>

FisheriesXplorer: communication and synthesis of regional information in support of EBFM

The Central Arctic Ocean ecosystem



Underwater noise

Ships and sonar generate underwater noise. Sound can travel **hundreds of kilometers**, and ecologically important sounds can be masked.

With **sea-ice cover declining**, noise is expected to **increase** in extent, intensity, and frequency.

Wildlife impacts can include altered behaviour and adverse physiological effects in **marine mammals**.



Propellers



Engines



Sonar



Climate change

The **unique ecosystem** has species adapted to sea ice, the mesopelagic zone, the seabed, and hydrothermal vents on the deep-sea ridges.

The ecosystem is under pressure. The reduction in multiyear ice is **changing the range and abundance of species**, from primary producers to top predators.

Rapid warming and **sea-ice loss** are transforming the Central Arctic Ocean, reshaping the ecosystem and facilitating human activities.

Physical changes



Sea ice



Water temperatures



Acidity in seawater

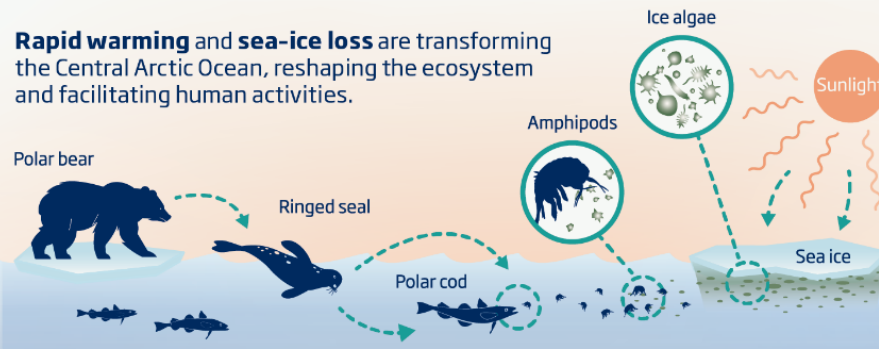
Ecosystem changes



Primary productivity



Animals moving north



Contaminants

The ecoregion acts as a **sink for contaminants**, carried into the Arctic from **lower latitudes** through multiple pathways.

Elevated levels of **mercury** and **polychlorinated biphenyls (PCBs)** are found in the Arctic foodweb.



Air



Rivers



Currents



Hg mercury



PCBs

Seabirds and marine mammals carry the highest concentrations



Marine litter

Most marine litter originates from **outside the ecoregion**.

Microplastics have been found in ocean sediments, ice floes, and snow samples.

Marine litter is **ingested by wildlife**.

Socio-economic context

Human activity is limited but is an emerging pressure due to sea ice declining. Activity is increasing in the periphery of the region.

73% of the region lies within the High Seas, an **area beyond national jurisdiction**.



International governance has been strengthened with treaties such as UNCLOS. **Arctic Indigenous Peoples** are increasingly recognized in Arctic governance.



Commercial fishing has been banned through the **CAOFA Agreement** until 2037 to protect the fragile ecosystem.

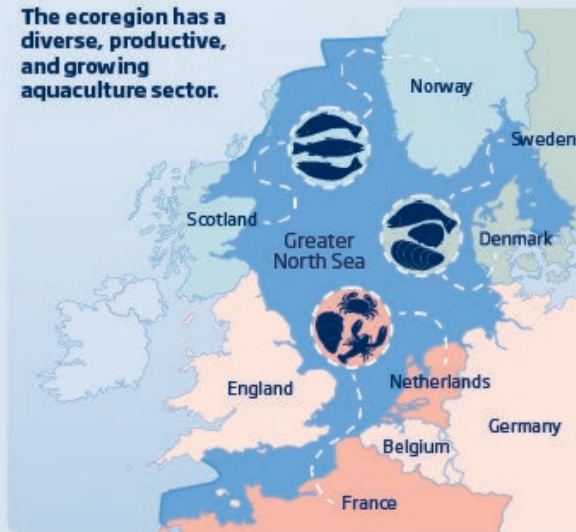


Explore the Central Arctic Ocean Ecosystem Overview 2025 for more insights



Aquaculture in the Greater North Sea

The ecoregion has a diverse, productive, and growing aquaculture sector.



Production

Aquaculture production has grown steadily in the past three decades, through family businesses and large corporations.

- **Finfish production** is driving growth and is dominated by Norway and Scotland.
- **Shellfish cultivation** is led by France and the Netherlands. It has a strong tradition and cultural value.
- **Mussel, oyster, and trout farming** is the focus of Denmark and Sweden.



~74%

Atlantic salmon and rainbow trout aquaculture dominates total production volume.



~23%

Shellfish aquaculture, the most widespread, primarily consists of blue mussel and Pacific oyster.



~3%

Crustaceans, seaweeds, and microalgae represent smaller but emerging sectors.

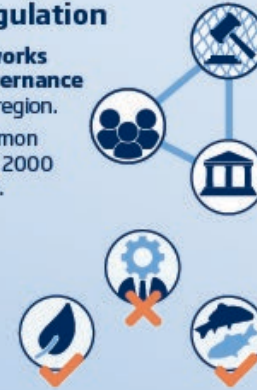


Governance and regulation

Strong regulatory frameworks and complex **multilevel governance** guide aquaculture in the ecoregion.

The MSP Directive, the Common Fisheries Policy, and Natura 2000 guide aquaculture in the EU.

Regulation ensures **high environmental and food safety standards**. **Complex administrative procedures** can challenge industry expansion.



Social and economic context

Aquaculture supports coastal livelihoods and local economies, providing income, jobs, and seafood.



Innovation, research, and public-private investments are advancing growth and environmental practices.



High standards of living and labour costs and a declining workforce drive diversification.

Environmental interactions

Aquaculture can have both **positive and negative impacts** on the environment, differing between regions and influenced by the species produced and the farming methods.

Opportunities

- Local water quality improvements through filtration
- Habitat formation and biodiversity enhancement

Challenges

- Nutrient enrichment, habitat degradation, and pollution
- Disease spread and genetic introgression with wild species

Competition for space

Aquaculture, fisheries, shipping, and offshore energy sectors experience intense competition for space.

This pressure encourages innovation and multi-use solutions at sea.

- Synergies with small-scale tourism
- Synergies with restoration projects
- Co-use areas by integrating aquaculture with offshore wind



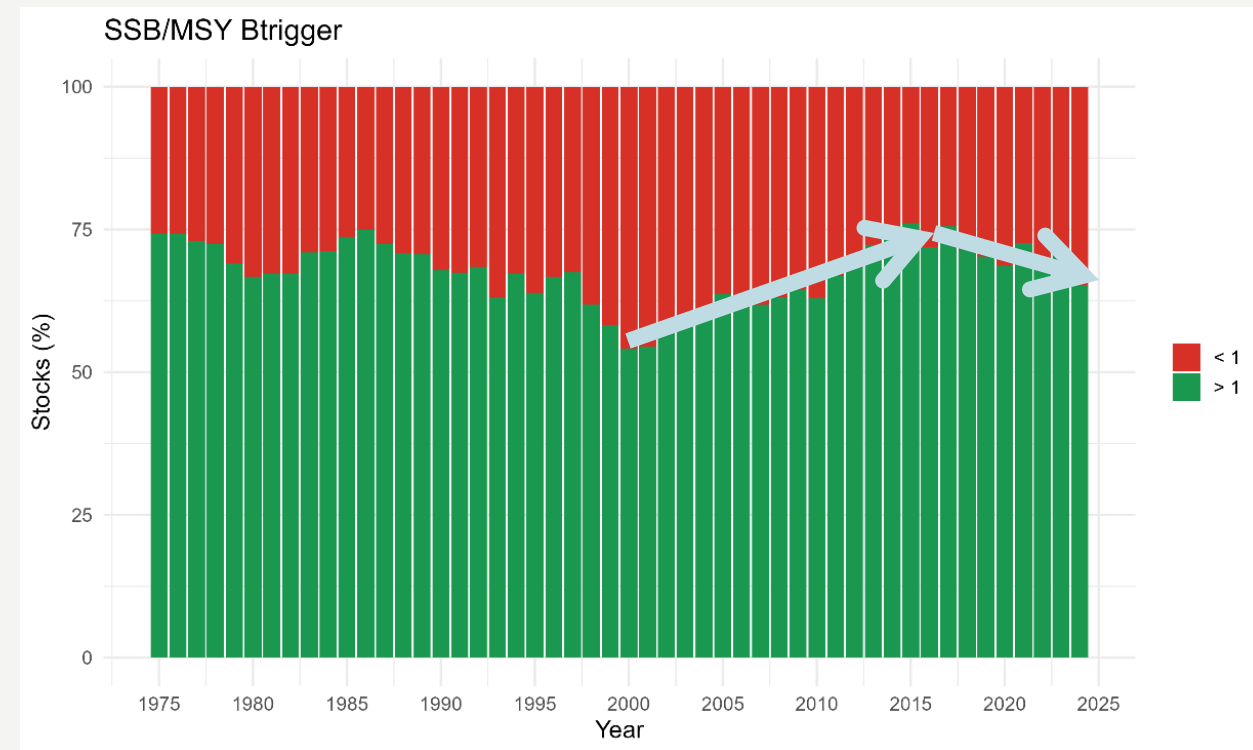
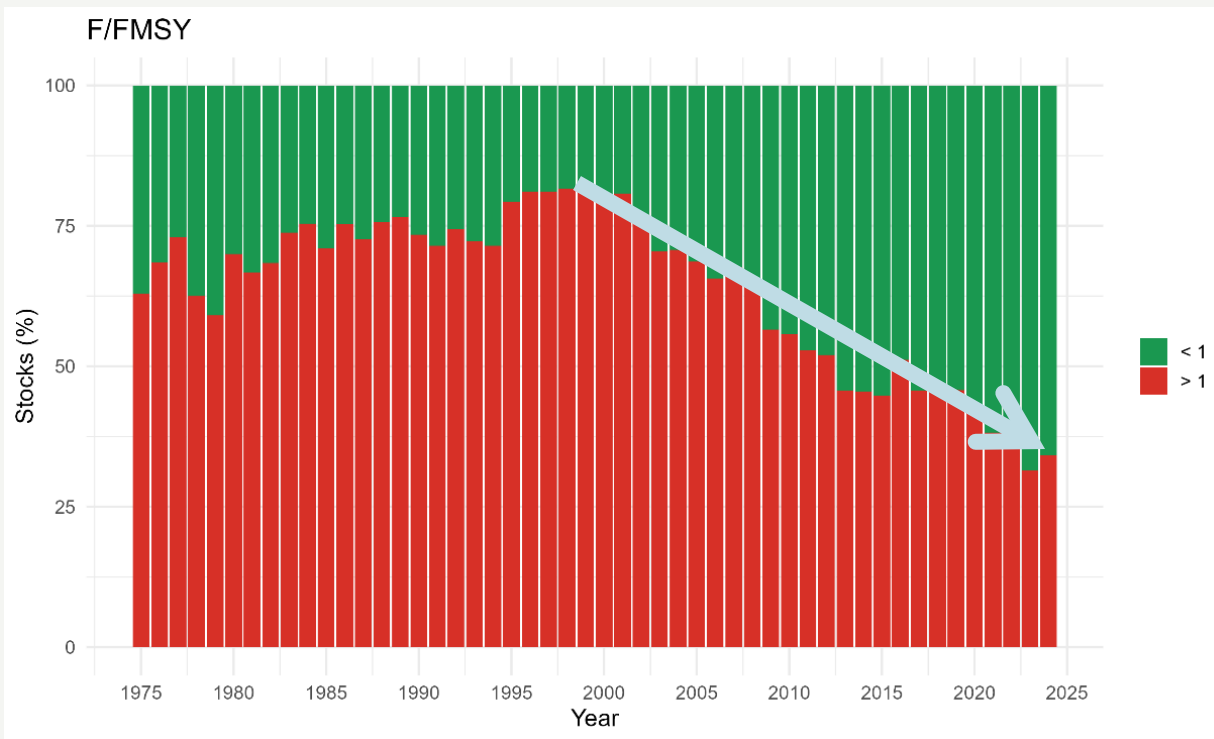
Future

Considerations for future aquaculture development and management:

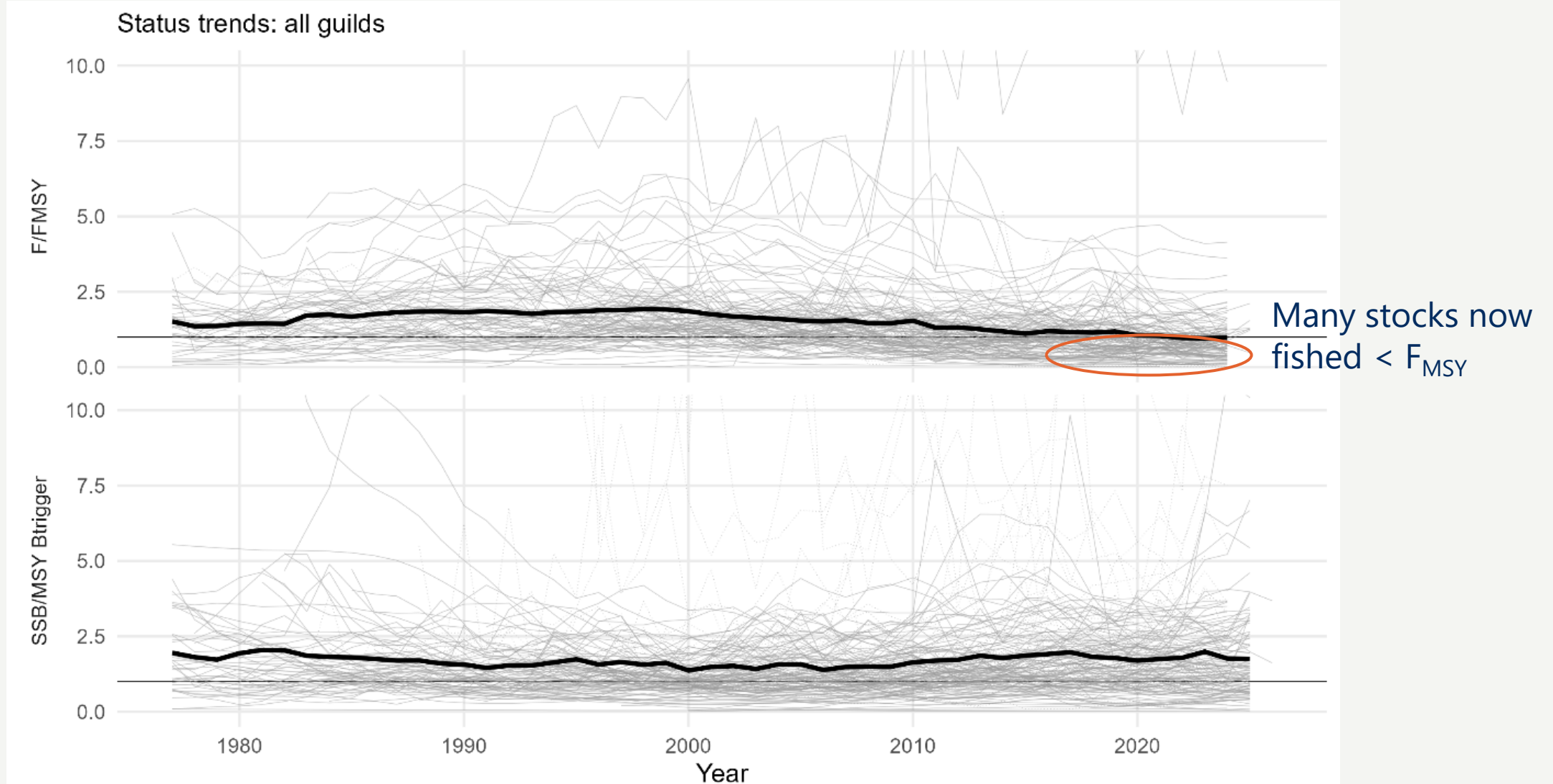
- Adapting to climate change impacts
- Strengthening the contribution to nature conservation
- Diversifying cultured species and business models
- Enhancing collaboration across maritime sectors
- Leveraging innovation to reduce environmental footprint



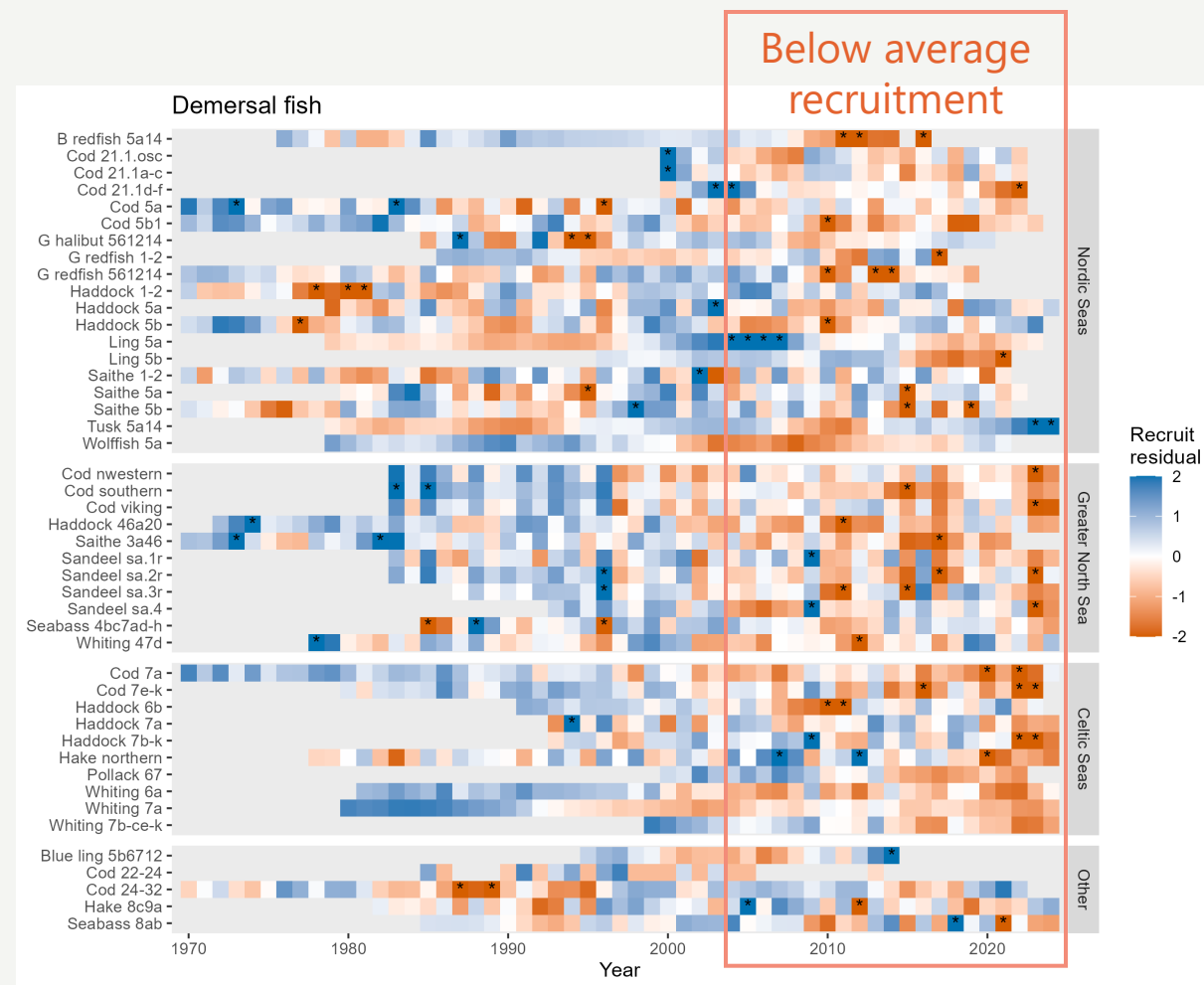
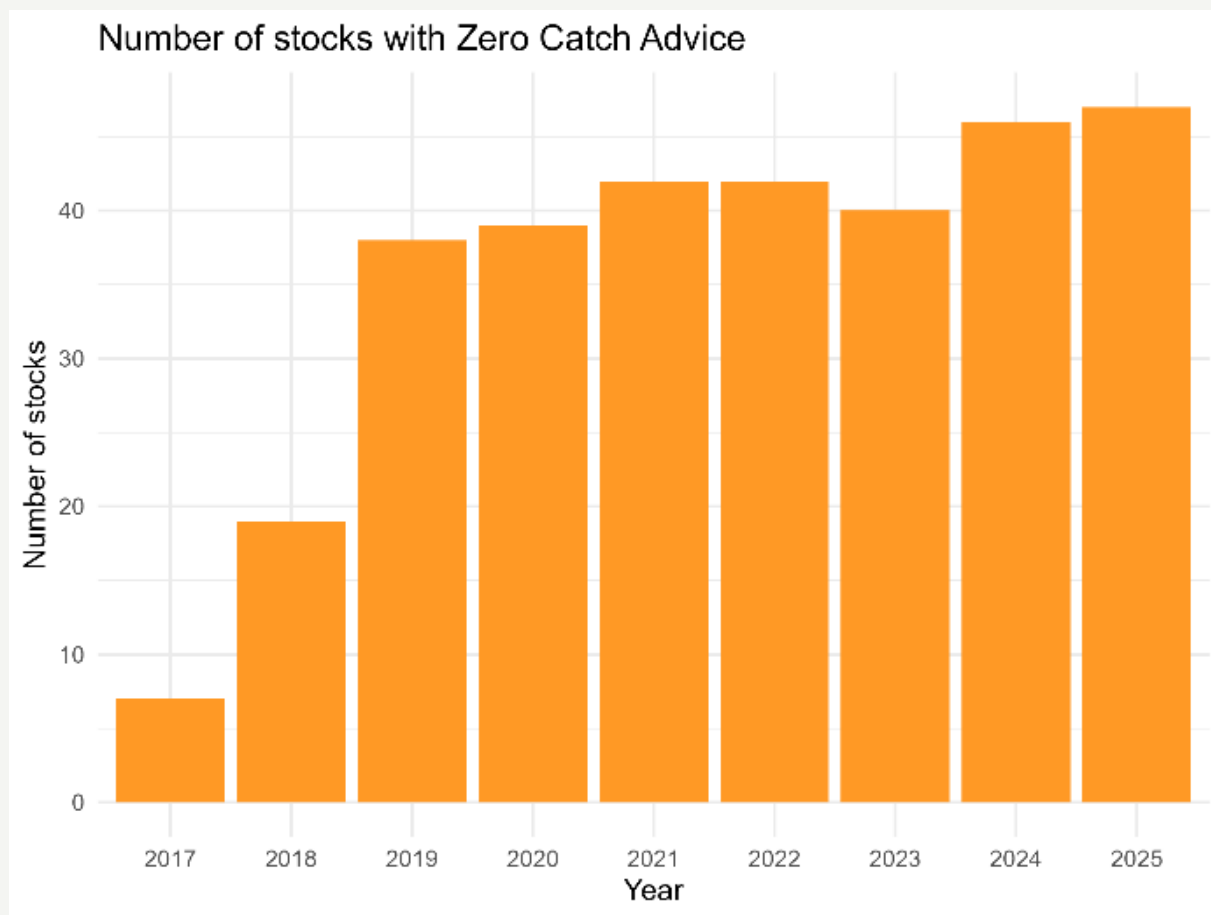
Fisheries management performance in the ICES Area



Fisheries management performance in the ICES Area

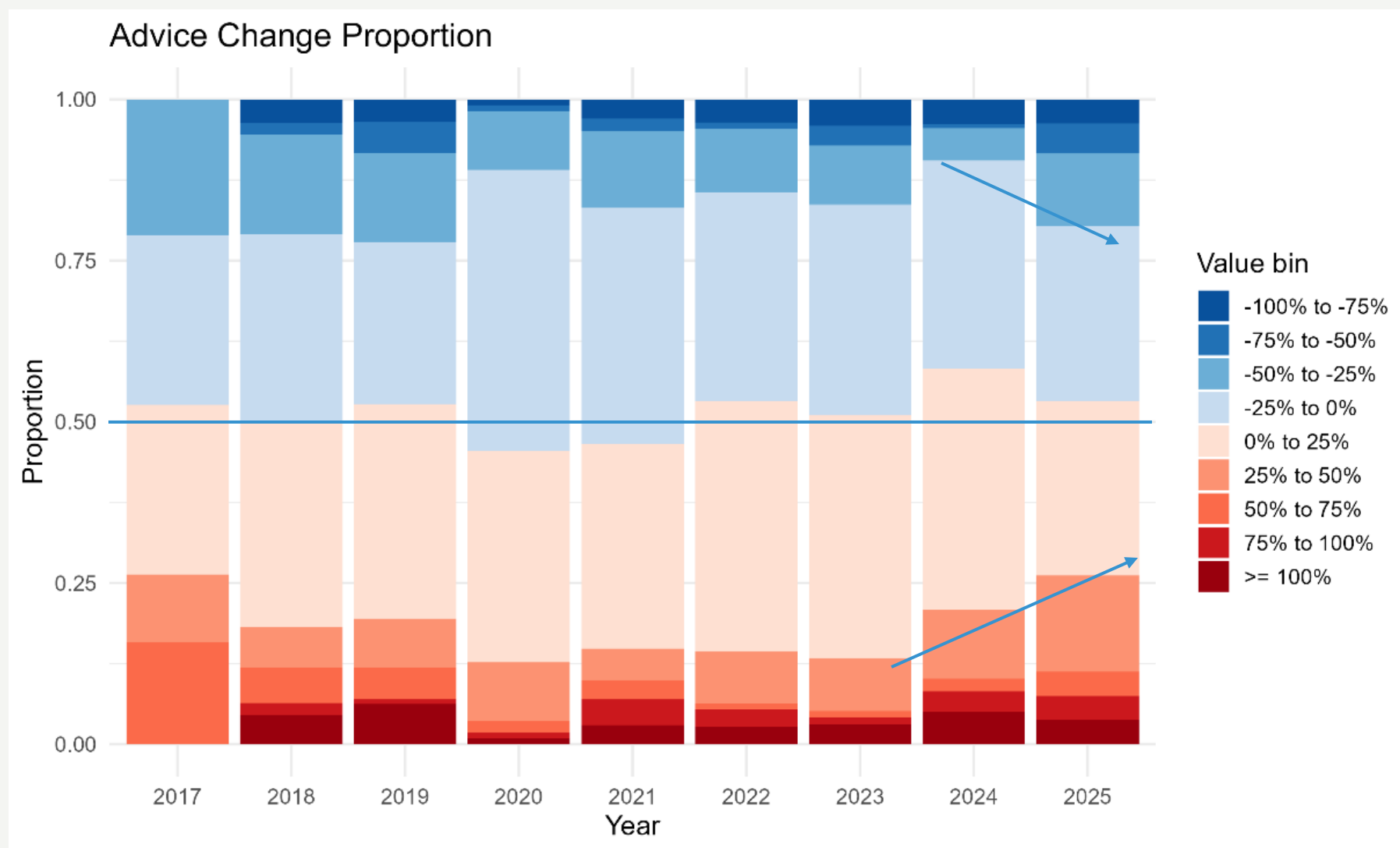


Increasing Numbers of stock < B_{lim}



Source: Dr. Hans Gerritsen, Marine Institute Ireland

Advice Change trends

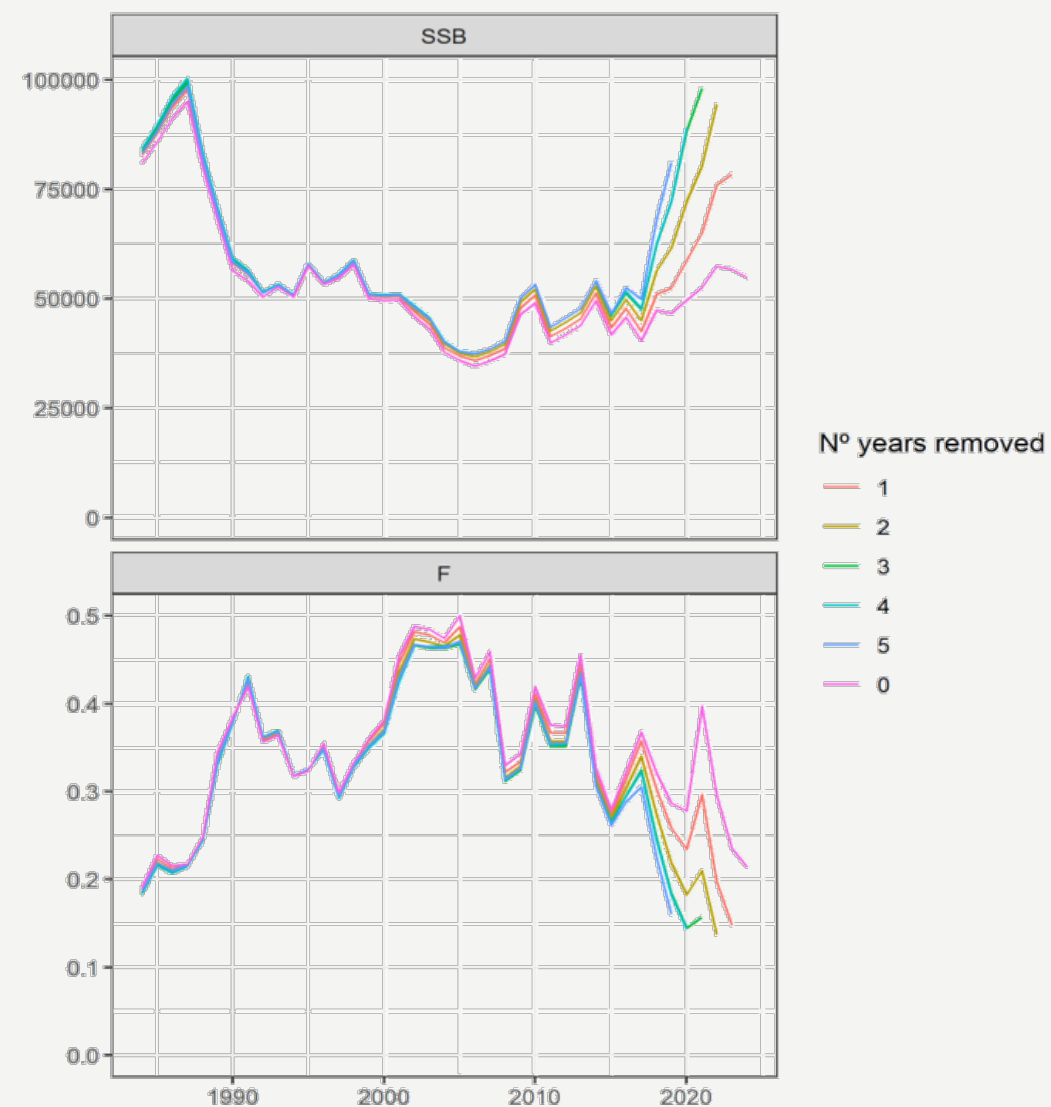


Stocks with retrospective patterns

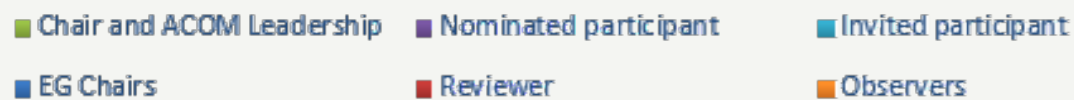
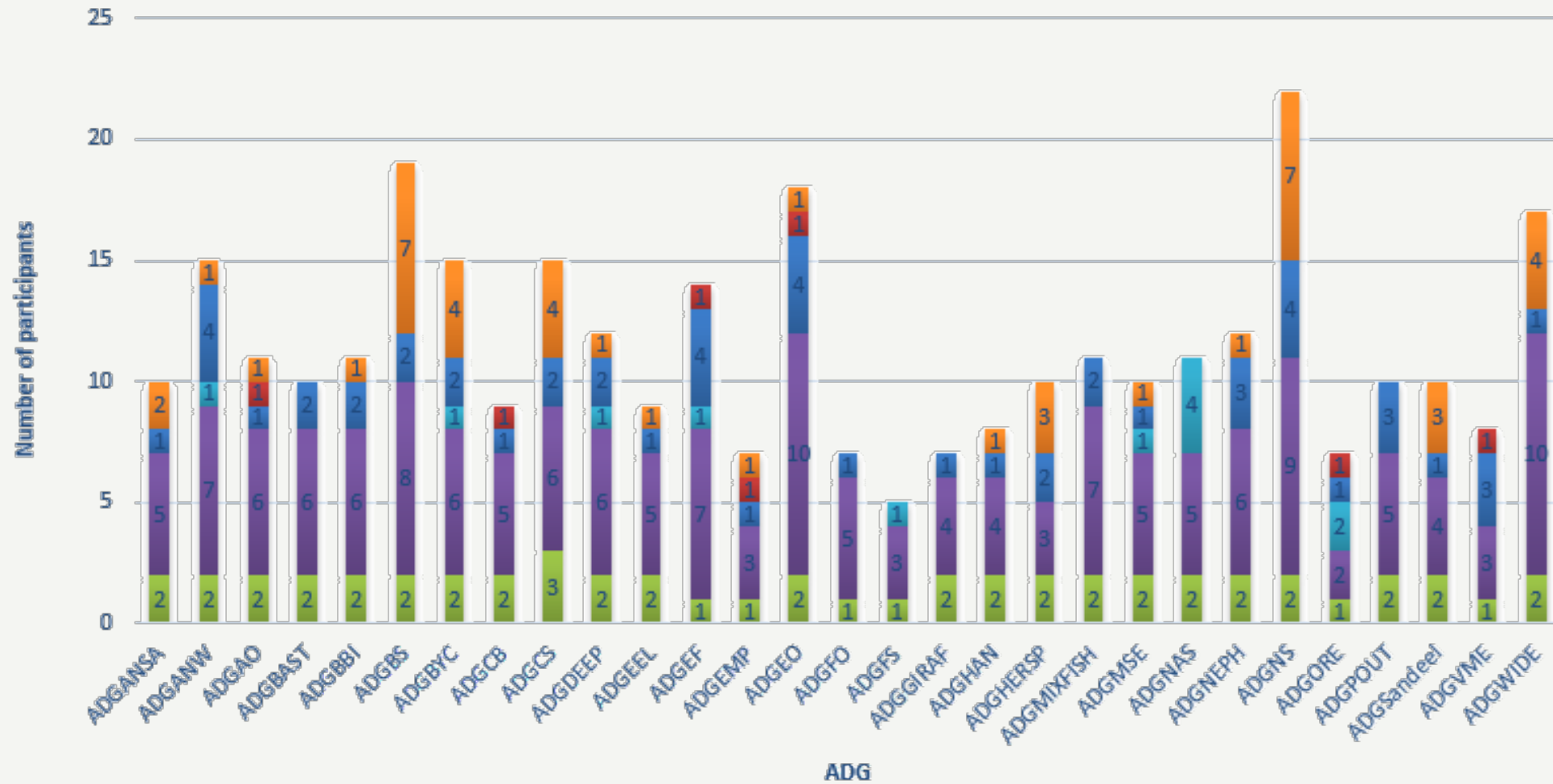
SSB only	2019	%	2020	%	2021	%	2022	%	2023	%	2024	%	2025	%
Stocks with Mohn's rho values reported	71		54		74		70		73		93		72	
Stocks without large retrospective inconsistency	52	73	37	69	52	70	54	77	53	73	76	82	59	82
Stock with large retrospective inconsistency	19	27	17	31	22	30	16	23	20	27	17	18	13	18

F only	2019	%	2020	%	2021	%	2022	%	2023	%	2024	%	2025	%
Stocks with Mohn's rho values reported	71		54		74		70		73		93		72	
Stocks without large retrospective inconsistency	53	75	42	78	51	69	53	76	56	77	75	81	57	79
Stock with large retrospective inconsistency	18	25	12	22	23	31	17	24	17	23	18	19	15	21

SSB or F	2019	%	2020	%	2021	%	2022	%	2023	%	2024	%	2025	%
Stocks with Mohn's rho values reported	71		54		74		70		73		93		72	
Stocks without large retrospective inconsistency	47	66	34	63	44	59	46	66	48	66	73	78	54	75
Stock with large retrospective inconsistency	24	34	20	37	30	41	24	34	25	34	20	22	18	25



ADG Participation 2025



Overview of meeting participation 2025

Requester/Organisation	Number of meetings/presentations
Coastal States	6
EU DGMARE	6
BALTFISH	2
NASCO	1
NEAFC	5
OSPAR	1
GNSBI	1
Iceland	1
ASCOBANS	2
BSAC	4
NWWAC	7
PELAC	3
NFA	1
Conference	1
FAO	2



New developments in 2025



- **Economic, social and ecological impacts of offshore wind farms (OWFs) and floating offshore wind farms (FLOWs) on fisheries in the Baltic Sea, Celtic Seas, and Greater North Sea**
<https://doi.org/10.17895/ices.advice.28759328>
- **WKOMO** – Workshop to scope harmonized regional monitoring schemes to assess the impact of offshore windfarms on fish, pelagic, benthic communities and ecosystem functions (26 – 28 May) <https://www.ices.dk/community/groups/Pages/WKOMO.aspx>
- **WKDISM** – Workshop to develop an ICES Survey mitigation strategy (23 – 27 June 2025) <https://www.ices.dk/community/groups/Pages/WKDISM.aspx>
- **The Netherlands request on Cumulative Impact Assessment, on behalf of the Greater North Sea Basin Initiative (GNSBI)**

<https://doi.org/10.17895/ices.advice.30530813>

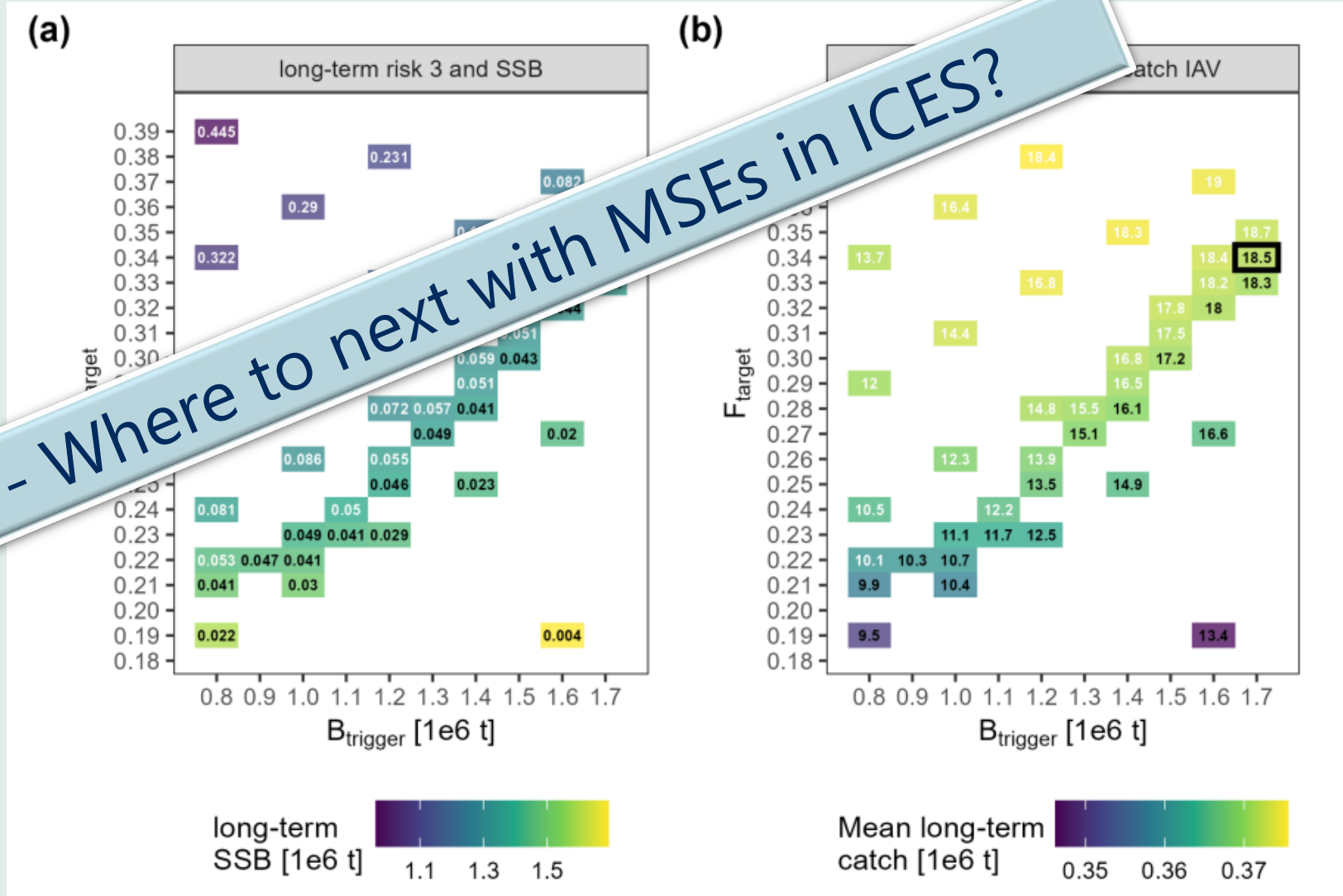
Management Plan Evaluations

Herring in the North Sea

Haddock in Iceland

Saithe in Iceland

Agenda Item 13 - Where to next with MSEs in ICES?



Special Requests- GIRAF Iceland

The request

Review and provide advice on the following aspects of GIRAF :

- a) **How data are collected** to estimate genetic intrusion and introgression
- b) How the **data** are **processed**
- c) The **adequacy** of current **monitoring programme**
- d) Are the **data fit for purpose** as used in GIRAF?
- e) Are **mitigation measures** adequately accounted
- f) In the absence of data, how does the model **account**
- g) Are the **assumptions** and the **parameterization**
- h) Does the framework **align with the precautionary**
 - i. its estimation of genetic intrusion risk
 - ii. its estimation of the amount salmon predicted

Learning

- Clearer alignment with the management objectives in place at the request formulation stage (e.g. risk management of harvestable as opposed to all wild salmon populations)
- Realistic timelines to avoid ICES suggesting more work



Ecosystem and climate informed advice in 2025



Developing science in support of actionable, ecosystem informed advice



ICES and BlueMissionAA Webinar

Recovery & Restoration
Policy needs from Science



WORKSHOP ON NATURE RESTORATION AND RECOVERY (WKREST)

VOLUME 7 | ISSUE 46

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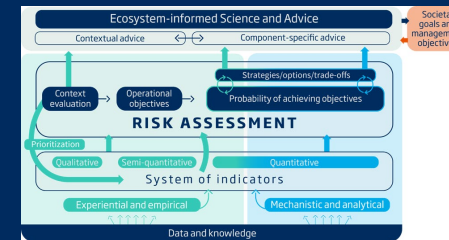
<https://doi.org/10.17895/ices.pub.28759463>



WORKSHOP ON FOURTH GENERATION ECOSYSTEM OVERVIEWS (WKEO4; outputs from 2025 meeting)

VOLUME 8 | ISSUE 4

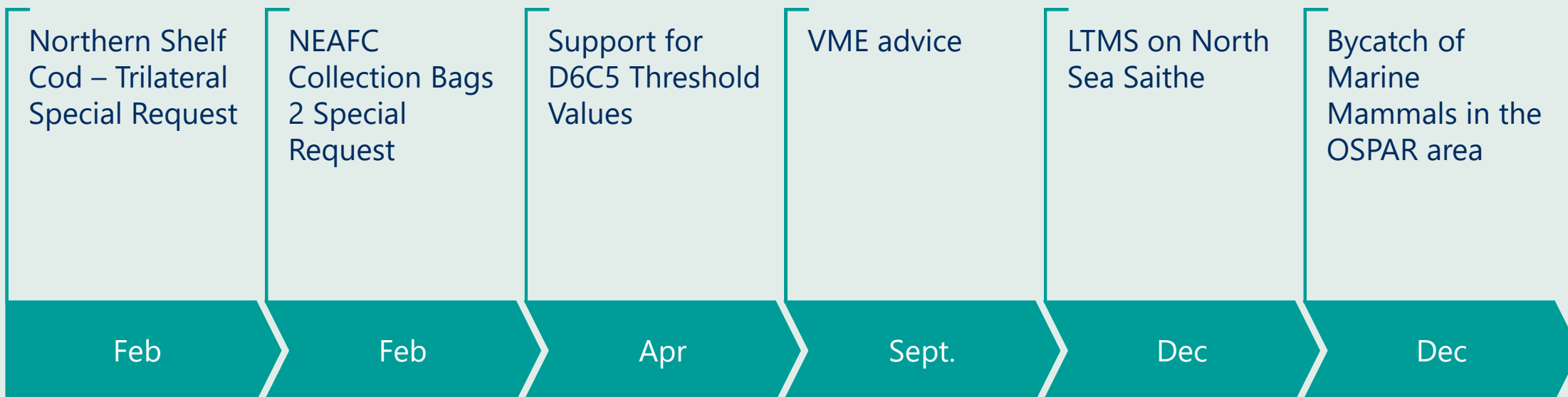
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<https://doi.org/10.17895/ices.pub.31065283>

Looking Forward to 2026 Special Requests



PowerBi [Link](#) to 2026 Advice Process

To be scheduled

- UK-GNSBI Request on Nature Restoration In the North Sea
- DGENV Request on D3C3
- DGENV Request on MS bycatch monitoring programmes
- DGMARE Request on VMEs

Benchmark planning

<https://www.ices.dk/about-ICES/how-we-work/Pages/benchmarks.aspx>

Current benchmark processes

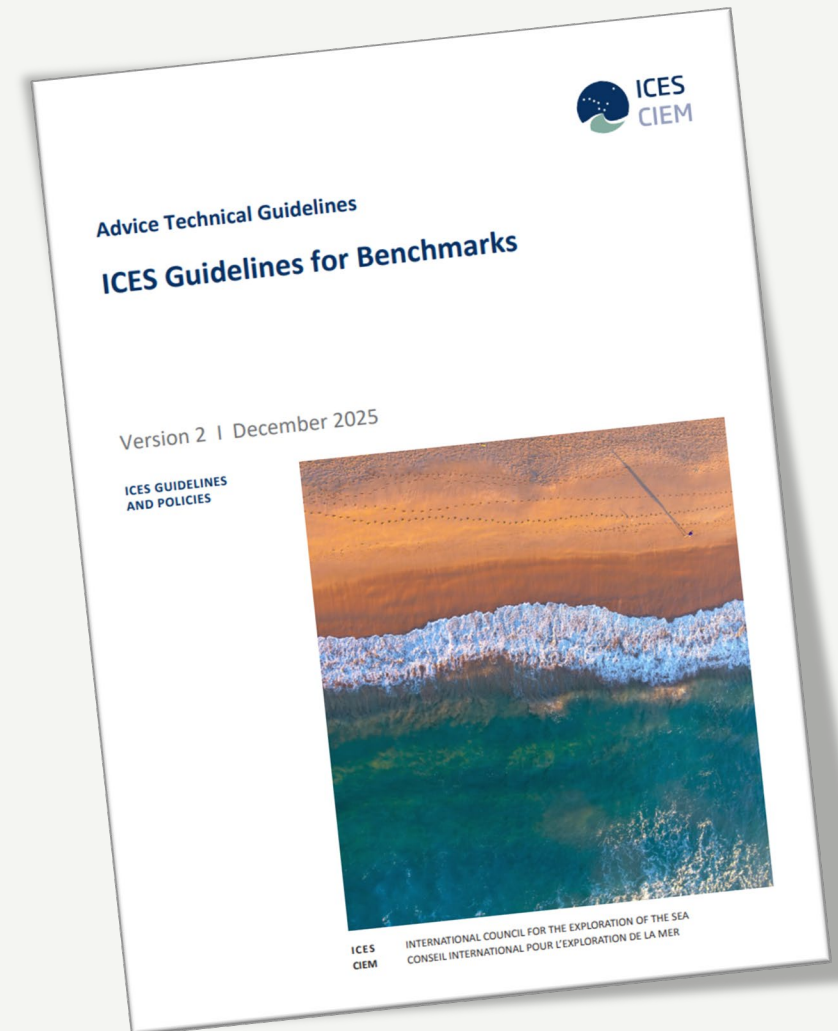
> Reporting in 2026

WKBMSYSPICT4 fle.27.2223 fle.27.3a4 lez.27.4a6a nep.fu.2829 nep.fu.30 nep.fu.31	Benchmark workshop 4 on the development of MSY advice using SPiCT	Data: 8–12 December 2025 Benchmark: 2–6 February 2026
WKBHERSPR her.27.20–24 spr.27.3a4	Benchmark workshop on selected herring and sprat stocks	Data: 2–4 September 2025 Benchmark: 1–5 December 2025
WKBWNG reg.27.1–2 whg.27.47d nop.27.3a4	Benchmark Workshop on Whiting, Norway Pout, and Golden Redfish	Data: 17–19 November 2025 Benchmark: 23–27 February 2026
WKBBEAM* Bycatch Evaluation and Assessment Matrix	Benchmark workshop on BEAM to evaluate bycatch risk	Data: 25 August 2025 Benchmark: 1–5 December 2025
Northern Shelf cod Tiger Team** WGNSSK subgroup	Review-level benchmark of Northern Shelf cod	September 2025–August 2026

Future benchmark processes

> Reporting in 2027 or later

WKBBS sal.27.32 sal.27.22–31	Benchmark workshop on Baltic salmon	Spring 2027 (TBD)
WKVMEBM2* VMEs	Benchmark workshop 2 on the occurrence and protection of vulnerable marine ecosystems (VMEs)	Spring 2027 (TBD)
WKBCAT1 whb.27.1–91214 lem.27.3a47d	Benchmark workshop on selected category 1 stocks	Spring 2027 (TBD)
WKBCAT3 dab.27.3a4 spr.27.67a–cf–k reb.27.14b	Benchmark workshop on selected category 3 stocks	Spring 2027 (TBD)
WKBEEEL ele.2737.nea	Benchmark workshop on eel	Spring 2027 (TBD)



<https://doi.org/10.17895/ices.pub.22316743>

Tiger team tackles Northern Shelf cod challenges

ICES has established a dedicated tiger team to carry out a review-level benchmark of the Northern Shelf cod stock.

Published: 5 December 2025

The latest scientific evidence confirms that Northern Shelf cod is a combination of distinct cod populations that seasonally overlap in northern shelf waters, combining to form (at least) three biologically distinct substocks: the Southern substock, the Northwestern substock, and the Viking substock. All three substocks mix outside their spawning season. A lack of real-time genetic data means that managing these substocks separately is currently impossible.

The southern substock is now below critical biological limits (B_{lim}); therefore, recent advice has called for zero catch to protect this most vulnerable component and to allow for stock rebuilding (ICES, 2025).

The tiger team aims to strengthen the scientific basis for assessment and advice, ensuring more robust management of Northern Shelf cod. Work commenced in September 2025 and is expected to be finished in August 2026. The revised assessment and forecast developed by the team will be used as the basis for draft advice for 2027. Regular updates and opportunities for stakeholder engagement will be provided throughout this period.

Assessing assessments

Due to the uncertainties about the stock structure and extent of mixing between substocks, the Advisory Committee (ACOM) decided to establish a [review-level benchmark](#) of the Northern Shelf cod stock assessment. The objective of this process is to explore alternative

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A **tiger team** is a team of specialists assembled to work on a specific goal, or to solve a particular problem.

 [REQUEST LINK TO STAKEHOLDER MEETING](#)

Options discussed & conclusions of the TT

Task/Option Discussed	Conclusion / Group Consensus
Single Stock SAM (including 6A)	Will be revisited as a baseline; not the old North Sea SAM, but including 43a20 and 6a.
Multi-Stock SAM	Will be used as-is (from the working group) or with minor tweaks if feasible; no major changes expected this year.
Stock Synthesis Model	Not prioritized for this cycle; because it may not add value without spatially disaggregated data; possible for future work.
Management Strategy Evaluation (MSE)	Not feasible within the current timeline; may be recommended for future exploration and the single stocks and multi-stock model could be used to condition Operating Models for testing the performance of the single stock model.
Forecast Method Improvements	Focus on improving forecast methods, especially to address causes of the perceived optimistic stock development. Furthermore consideration should be given to better match advisory needs.
Data Compilation (spatial catch-at-age)	Recognized as a limitation; not possible for this cycle, but flagged as important for future benchmarks.
Stakeholder/Working Group Involvement	Assessment working group and stakeholders to review and approve work plan before starting; maintain communication.

Thank you

Open for questions and comments

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