Aquaculture Steering Group EGs Resolutions

Resolutions approved in 2024

Working Group on Ecological Carrying Capacity to Aquaculture (WGECCA)

2024/MT/ASG01 The **Working Group on Ecological Carrying Capacity to Aquaculture** (WGECCA), chaired by Antonio Agüera*, Norway and Sophie Koch*, Denmark will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2025	monthly	Teams		Outgoing chairs: Carrie J. Byron and Dror Angel Incoming chairs: Antonio Agüera and Sophie Koch
Year 2026				
Year 2027			Report is required in the third year and about 6 weeks after the last meeting of the three year term.	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Assess *response* of ecological carrying capacity of aquaculture from climate change *drivers* and make recommendations for sustainable management and adaptation strategies.	Examine how ecological carrying capacity of aquaculture is impacted by climate change. Assess the ways in which climate-induced altering of marine ecosystems impact the function of existing energy fluxes and the interactions of cultivated species with the environment. This assessment will identify climate change drivers and the impact on carrying capacity thresholds and assess potential management for mitigation and adaptation strategies.	Use codes 2.1, 5.5, 5.6	years 1-3	Submitted peer-reviewed manuscript by 2027
b	Monitor trends and trajectories in research and application of ecological carrying capacity of aquaculture.	Track changes and needs related to the research and application of ecological carrying capacity of aquaculture: a) Science Requirements b) Advisory Requirements c) Requirements from other WGs	2.7, 5.5, 5.6	years 1-3	ICES reports capturing trending topics on ecological carrying capacity of aquaculture

Summary of the Work Plan

Year 1	Gathering of information: literature review, summarising of available data
Year 2	Continue the literature review. Start the preparation of data for reporting
Year 3	Report and manuscript writing

Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem effects of fisheries, especially with regard to the application of the Precautionary Approach. Deliverables are of importance for advisory mision of ICES and could be incorporated in the Aquaculture Overviews. Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group is normally attended by some 6-10 members and chair invited experts.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	Several members participate actively in WKs under ACOM for Aquaculture Overviews.
Linkages to other committees or groups	There is a very close working relationship with WGSEDA, with overlap in membership. It is also very relevant to all the Working Groups on aquaculture. And to the work in other WG like WGMPCZM.
Linkages to other organizations	Several members are active participants in EAS and/or WAS, ICES Symposium, EAS 2025.

WGPDMO - Working Group on Pathology and Diseases of Marine Organisms

2024/MT/ASG02 A **Working Group on Pathology and Diseases of Marine Organisms (WGPDMO)**, chaired by Deborah Cheslett* (Ireland), Charlotte Axen* (Sweden) and Lone Madsen* (Denmark) will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments
Year 2025	April 1–4	Sweden	Interim report by 1 May to ASG	Outgoing chair: Richard Paley Incoming chairs: Deborah Cheslett, Charlotte Axen and Lone Madsen
Year 2026	TBD	TBD	Interim report by 1 May to ASG	
Year 2027	TBD	TBD	Final report by 1 May to ASG	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Summarize new and emerging disease trends in wild and cultured fish, molluscs and crustaceans based on national reports.	New disease conditions and trends in diseases of wild and cultured marine organisms will be reviewed. This is an annual, ongoing ToR for WGPDMO and will provide information for ToRs b-e.	Code 1.7, 5.2, 5.6	3 years	Summary in annual reports
b	Deliver at least two leaflets per year (at least six in total) on pathology and diseases of marine organisms.	A number of ICES publications currently in preparation will be reviewed by WGPDMO. This is an ongoing, annual ToR.	Code 1.7, 5.6	3 years	Publications in ICES Identification Leaflets for Diseases in Fish and Shellfish
c	Reporting upon request in relation to management of fish and shellfish diseases(e.g. to engage directly with the ICES Aquaculture Overview workshops for chapter 6: Ecosystem/environment interactions).	This is an annual ToR in compliance with requests from the ICES Data Centre.	Code 6.4	3 years	Reporting as requested
d	Develop a plan for a ToR addressing climate change in the context of aquatic animal disease trends.	Given the impacts of climate change and aquaculture on disease profiles for wild fisheries and aquaculture, a ToR addressing climate change will be developed.	Code 1.4, 1.7, 5.6	Year 2	Confirmed ToR

Summary of the Work Plan

Year 1	Complete annual work on ToRs a-c, Consider proposal of new ToRs as necessary. Complete interim report.
Year 2	Complete annual work on ToRs a-c, Consider proposal of new ToRs as necessary. Complete interim report.
Year 3	Complete annual work on ToRs a-c, and if necessary ToR d. Consider proposal of new ToRs as necessary. Complete final report for the cycle.

Supporting information

Priority	The current activities of this Group provide essential perspective on diseases of economic and ecological significance in the ICES, including intersections with fisheries and aquaculture industries. Identifying strategies for aquatic animal health management through a better understanding of diseases is a fundamental interest. Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group is normally attended by some 15-20 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	FRSG and ASG
Linkages to other committees or groups	There is a relationship with all groups in the ASG, genetics in aquaculture being the obvious group to foster stronger links. There is a data collection link with Working Group on Biological Effects of Contaminants (WGBEC) and strong overlap with WGCRAB.
Linkages to other organizations	

Workshop on the Genetic Intrusion Risk Assessment Framework for salmon aquaculture (WKGIRAF)

2024/WK/ASG03 The **Workshop on the Genetic Intrusion Risk Assessment Framework for salmon aquaculture (WKGIRAF)**, chaired by Phillip McGinnity* (Ireland) and reviewed by Kjetil Hindar* (Norway), Ian Bradbury (Canada), and Monica Solberg* (Norway), will work on ToRs and generate deliverables as listed in the table below.

Meeting dates		Venue	Reporting details
Year 2025	17-21 February	Fornubúðir 5, 220 Hafnarfjörður, Iceland	Report by 24 February 2025

ToR descriptors

ToR	Description	Science Plan Codes	Expected Deliverables
a	Review the following aspects of the GIRAF: a. How are data collected to estimate intrusion and introgression b. How are the data processed c. Is current monitoring adequate? d. Are the data fit for purpose as used in GIRAF? e. Are mitigation measures adequately accounted for in the model? f. In the absence of data, how does the model account for uncertainty? g. Are the assumptions and the parameterization of GIRAF scientifically robust?	6.3 *5.6*	A workshop and review group report with a detailed discussion and review of each item, to be delivered by 24 February for ACOM's consideration.
b	Does the framework align with the precautionary approach in relation to: a. its estimation of genetic intrusion risk b. its estimation of the amount salmon predicted to be safely reared in pens?	See above	See above

Supporting information

Background	The government of Iceland requests that ICES conduct a review of data collection, data processing, and the underlying assumptions regarding the Genetic Intrusion Risk Assessment Framework (GIRAF) used for advice on the impact of aquaculture in net pens on wild salmon stocks. The GIRAF estimates the amount of fertile salmon that is considered precautionary to raise in the sea at any given time regarding the risk of genetic introgression into wild salmon populations. GIRAF is based on two main factors, the intrusion of farmed salmon, i.e. the likelihood that farmed salmon that has escaped from sea pens will enter river systems in a given year, and the risk that it will be able to mix with wild salmon so that genetic mixing/introgression takes place. The above-mentioned framework is part of the formal advice from the Marine and Freshwater Research Institution (MFRI) to the Ministry regarding management of cage-based salmon aquaculture in Iceland. The GIRAF was first published in 2017 and was developed with consultation from foreign experts in the field of population genetics. GIRAF became a legal requirement by amendments to law no. 101/2019 which amended the law on aquaculture no. 81/2008. In the initial legal draft, it is stated that one of the arguments for the legalization of the GIRAF is that the government's policy is to exercise a precautionary approach in the development of fish farming and that decisions will be based on the estimates of GIRAF. The 2019 law amendment also introduced provisional clause no. VII, that states that the Minister shall appoint a committee of three impartial scientists in the fields of fisheries, population genetics and/or ecology to review the methodology used by the MFRI in the assessment of carrying capacity and in the preparation of risk assessments. The scientific committee

	submitted a report in June 2021. In the report, it was stated that the model behind GIRAF stood up to a scientific scrutiny, but on the other hand, it remained to be seen how the framework responded to data collected from Icelandic rivers. This was one of main conclusion of the report, as most of the model's assumptions were based on data from Norway.
Priority	The GIRAF is part of the management of Atlantic salmon aquaculture in Iceland. As such its outcome is used for deciding if pens can be in a certain area and also the amount of salmon reared in a given area. Independent, consensus-driven advice based on the best available science, as provided by ICES, is invaluable in this process. This workhop is supported by long-standing ICES expert groups, the Working Group on North Atlantic Salmon (WGNAS), the Working Group on Risk assessment of Environmental Interactions of Aquaculture (WGREIA) and the Working Group on the Application of Genetics in Fisheries and. Aquaculture (WGAGFA). Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Secretariat facilities	ICES Secretariat support and ICES advisory process
Financial	Covered by the Icelandic Ministry of Food, Agriculture and Fisheries special requests (4025-17) to ICES
Linkages to ACOM and group under ACOM	To ACOM through the advisory process
Linkages to other committees or groups	There is a very close working relationship with groups under the FRSG and ASG. Specifically, it is very relevant to the Working Group on North Atlantic Salmon (WGNAS), the Working Group on Risk assessment of Environmental Interactions of Aquaculture (WGREIA), and the Working Group on the Application of Genetics in Fisheries and. Aquaculture (WGAGFA).
Linkages to other organizations	None

Resolutions approved in 2023

WGSEDA - Working Group on Socio-Economic Dimensions of Aquaculture

2023/MT/ASG01 The **Working Group on Social and Economic Dimensions of Aquaculture** (WGSEDA), chaired by Gesche Krause, Germany and Ramón Filgueira, Canada, will work on ToR and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments
Year 2024	29 April–3 May	Carril, Spain	Interim e-evaluation	
Year 2025	5-9 May	Cefas, Weymouth	Interim e-evaluation	
Year 2026	TBD	TBD	Scientific report by TBD	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Tools & Methods: Identify and develop methods to determine the social and economic effects of aquaculture	Continuous ToR to study the social, cultural, and economic implications of aquaculture production. Methods of how to capture and document observations on the social and economic effects of aquaculture development are still emerging, especially in relation to how to address these social effects across different scales and contexts of the industry. Links to Science plan topic "Sea and society".	7.1, 7.2	3 years	Summary within Report, and Research paper.
b	Trends & Trajectories: Identify trajectories and monitor emerging topics of social and economic concerns of aquaculture development	Continuous ToR to identify the emerging social and economic issues of aquaculture and related science advisory needs for maintaining the sustainability of living marine resources and protecting the marine environment. Further, factors causing an aquaculture system to garner social opposition/acceptance and if these factors are shared or differ across different aquaculture systems and countries. Links to Science plan topics "Seafood production", "Emerging techniques and technologies" and "Sea and society".	4.5, 5.8, 7.1	3 years	Summary within Report, and Policy Brief.

c	Transition to Sustainability: Explore governance and other social and economic interventions important for aquaculture development and the circular economy.	Continuous innovation and development in the aquaculture sector may pose new challenges to society or help to overcome issues. Further, new challenges arise as well due to climate change or broader societal and economic changes. Governance and other social and economic interventions need to adapt to provide a cost-effective and meaningful way to boost the sustainability of aquaculture. This ToR aims to identify trade-offs and suggest more contextualized aquaculture policies and measures to foster sustainability in a changing world. Links to Science plan topics "Conservation and management science" and "Sea and Society".	6.2, 7.4	3 years	Summary within Report, and Research Paper.
d	Towards Transdisciplinarity: Foster collaboration with other ICES working groups	Aquaculture development requires transdisciplinarity to reach sustainability from a holistic standpoint. WGSEDA generates tools, methods, and recommendations that emphasize the social and economic dimensions of sustainability. WGs with potential synergies with WGSEDA will be identified, and chairs will be approached to discuss potential future collaborations. This will increase the impact of WGSEDA and may help each other to efficiently use resources and overcome lack of availability of social scientists to support advice and assessment in other areas of ICES. This ToR contributes to the Science Plan topic "Sea and Society".	7.6	3-years	Collaborative work with other WGs, and Online Workshop.

Summary of the Work Plan

Year 1	Publish the perspective paper "Regionalisation alone will not make marine aquaculture more sustainable" (ToR a), finalize the Policy Brief " Exploring the gaps of aquaculture development policies through their social acceptability" (ToR b), discuss emerging topics of social and economic concerns of aquaculture development (ToR b), and interact with other working groups to explore WGSEDA synergies within ICES (ToR d).

Year 2	Publish the Policy Brief " Exploring the gaps of aquaculture development policies through their social acceptability" (ToR b), start working on the exploration of governance and economic interventions important for the social and economic dimensions of aquaculture (ToR c), discuss emerging topics of social and economic concerns of aquaculture development (ToR b), and keep fostering the interaction with other working groups (ToR d).
Year 3	Finalize deliverable on governance and economic interventions important for the social and economic dimensions of aquaculture (ToR c), start new deliverable related to ToR a or ToR b based on the discussion on emerging topics, discuss emerging topics of social and economic concerns of aquaculture development (ToR b), and keep fostering the interaction with other working groups (ToR d).

Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the impacts of seafood production (aquaculture) on society focusing on economic and social aspects. Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group is normally attended by some 8-16 members and guests. During the virtual meeting in 2020, 25 members/guest attended.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and group under ACOM	ACOM, WGEIA
Linkages to other committees or groups	Through the shared ToR a close working relationship will be build up with WGAGFA. It is also very relevant to the Working Group on WGSOCIAL, WGSCENARIO, WGICZM, WGMSP, WGECON and HUDISG.
Linkages to other organizations	STECF

WGREIA - Working Group on Risks assessment of Environmental Interactions of Aquaculture

2023/MT/ASG03 The **Working Group on Risk assessment of Environmental Interactions of Aquaculture (WGREIA)**, chaired by Ellen Sofie Grefsrud, Norway and Dounia Hamoutene, Canada will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments
Year 2024	27-30 May	Coimbra, Portugal	E-evaluation	In-coming chair: Dounia Hamoutene
Year 2025	17-19 June	Ottawa, Canada	E-evaluation	
Year 2026	TBD	TBD	Final report by TBD	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Workshop on risk assessment methodology. The group will choose one or two case studies and conduct risk assessments based on different methods aiming to identify the most efficient, understandable and useful way of doing environmental risk assessment of aquaculture impacts.	Various methodologies are used for environmental risk assessments (ERA) and it is a need (both by scientists and advisors) to develop a common platform for ERA in aquaculture. We will compare ERA methodology used by ICES countries and China and evaluate the usefulness, validity and realiability of the two methodological approaches.	5.5, 5.6, 6.3	Year 1, 2	Scientific paper based on the results of the workshop. Journal for publishing could be e.g. ICES Journal of Marine Science or similar
b	Establish common risk terminology for use in environmental risk assessments.	Common risk terminology is crucial for communicating risk between risk assessors and risk managers. Today there is a lack of common risk terminology, not just between risk assessors and risk managers, but also between risk assessors from different fields of research. Based on the latest thinking in risk science we aim to bridge this gap and further use the outcome as a starting point to improve risk communication between scientist, risk managers, decision makers and other stakeholders.	5.5, 6.1	Year 1, 2, 3	Technical report and ICES document guidance on common terminology for environmental risk assessments to improve communication with risk managers, decision makers and other stakeholders within the field of aquaculture. (Part 1)

c	Communication of uncertainty in environmental risk assessments.	The goal of a risk assessment is to create risk understanding and risk acknowledgement to support decision-making under uncertainty, but one of the major challenges is how to incorporate various dimensions of uncertainty in risk assessments.	6.4	Year 2, 3	Technical report and ICES document guidance on how to communicate uncertainty in environmental risk assessments to risk managers, decision makers and other stakeholders. (Part 2)

Summary of the Work Plan

YEAR	
Year 1	ToRa (Review of laws and regulatory standards for monitoring and prioritised research) will be reported as a peer-review paper, and ToR b (Risk assessment methods) will be initiated.
Year 2	Continue discussion on risk assessment methods aiming to make a foundation for a common understanding on best practice within risk assessment and risk analysis of environmental impact of aquaculture. Peer-review publication of when and how risk assessment is used for aquaculture
Year 3	ToRb will be reported included a TIMES publication detailing Risk assessment methods for environmental impacts of aquaculture

Supporting information

Priority	The current activities of this Group will continue to lead ICES into issues related to aquaculture including elucidating the legal structure under which the environmental interactions of aquaculture are managed in different ICES countries. Scientific work on ecosystem interactions will lay the scientific foundation for further sustainable aquaculture growth to meet or surpass legal requirements. Consequently, these activities are considered to have a high priority.
Resource requirements	
Participants	The Group will be established of 15-25 experts of aquaculture - environment interactions, regulators, legal expertise, risk experts and others
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	This WG sets the stage for future advice products from ICES as governments need to do risk assessment of the growing aquaculture industry in Europe and North America.
Linkages to other committees or groups	There is a very close working relationship with all the groups of the Aquaculture Steering Group. We will seek to form links with the Working Group on Socio-Economic Dimensions of Aquaculture (WGSEDA) Working Group on Pathology and Diseases of Marine Organisms (WGPDMO), Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM), Working Group on Scenario Planning on Aquaculture (WGSPAQ), and Working Group on Ecological Carrying Capacity (WGECCA)
Linkages to other organizations	National regulatory authorities in ICES countries and China, EU, FAO.

WKGNSAO - Workshop on the Greater North Sea ecoregion Aquaculture Overview

2023/WK/ASG04 Workshop on the Greater North Sea ecoregion Aquaculture Overview (WKGNSAO) chaired by Ellen Sofie Grefsrud, Norway, Marnix Poelmann, Netherlands, and Henn Ojaveer, ICES will be established and meet (hybrid meeting) in Copenhagen, Denmark during September-October (dates TBD) 2024 to:

a) Review and report the data and information collected for the Greater North Sea ecoregion aquaculture overview, identify the gaps and agree next steps to complete the draft overview;

b) Collate datasets and information resources used in the development of the aquaculture overview by completing the ICES Data Profiling Tool (https://www.ices.dk/data.aspx); and

c) Produce a workshop report detailing the conclusions of ToRs a and b. This report will serve as the foundation for the Greater North Sea ecoregion aquaculture overview.

WKGNSAO will report by TBD for the attention of the ACOM.

Supporting information

Priority	Aquaculture is a high-priority topic for ICES. ICES efforts on aquaculture is part of a wider portfolio of work that seeks 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. The ICES Strategic Plan states: 'We will regularly publish, update, and disseminate overviews on the state of fisheries, aquaculture, and ecosystems in the ICES region, drawing as appropriate on analyses of human activities, pressures, and impacts, and incorporating social, cultural, and economic information.'
Scientific justification	The process of establishing ICES AOs was initiated in 2019, with: i) forming a core group consisting of representatives from ACOM leadership, SCICOM and Secretariat, and ii) agreeing on the directions and procedure of further work of the core group. The objectives AOs are to: i) synthesise regional and temporal information on aquaculture activities, practices and production of the cultured taxa; ii) consider environmental and socioeconomic interactions of aquaculture activities and practices; iii) provide insights on cross-sectorial interactions of aquaculture; and, iv) consider future perspectives. The overview will have ten sections: 1) executive summary; 2) introduction; 3) description and location of marine aquaculture activities and practices; 4) production over time; 5) policy and legal foundation; 6) management frameworks; 7) ecosystem/environment interactions; 8) social and economic context; 9) interaction of environmental, economic and social drivers; and 10) future projections, and emerging threats and opportunities.
Resource requirements	There are already suggested experts from severel countries (Norway, England, Scotland, Denmark, Netherlands, Germany and France). The lead authors of the Greater North Sea ecoregion AO have started establishing contacts with these experts.
Participants	The WK will be attended by experts contributing to the Greater North Sea ecoregion AO, as well as other interested scientists from ASG.
Secretariat facilities	Setting up conference calls and hosting physical meeting.
Financial	No financial implications.
Linkages to advisory committees	Direct link to ACOM.
Linkages to other committees or groups	ASG, HUDISG, WGAGFA, WGECCA, WGOOA, WGPDMO, WGREIA, WGSEDA, WGEEL, WGSOCIAL, WGECON, SICCME.
Linkages to other organizations	DGMARE

Resolutions approved in 2022

WGOOA - Working Group on Open Ocean Aquaculture

2022/MT/ASG03 A **Working Group on Open Ocean Aquaculture** (WGOOA), chaired by Tyler Sclodnick, Canada, and Bela H. Buck, Germany, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2023	9–12 May	Portland, ME, USA	Interim report by July 7, 2023	
Year 2024	21–23 August	Malmo, Sweden	Interim report by July 26, 2024	
Year 2025	15-19 September	Panama City, Panama	Final report by December 2025	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Describe the effect of OOA on ecosystem health, ecosystem services, carbon footprint, carrying capacity, and resource value relative to alternative uses including traditional nearshore farming	Uncompleted ToR from 2018 resolution. This ToR remains an important area of investigation as aquaculture of all forms is frequently criticized for negative environmental impacts and held to higher standards than incumbant ocean uses and protein producers. A thorough understanding of these factors is essential to industry planning and the effective communication and promotion of open ocean farming.	5.6, 5.7, 5.8, 6.6	Years 1 & 2	Review paper
b	Review the regulatory environment for several key ICES countries to assess their effectiveness at encouraging industry development, protecting natural resources, and accomodating competing ocean user groups	As an emerging industry, aquaculture, and open ocean aquaculture in particular, is subject to a diverse array of regulatory environments, many of which are still developing. The effectiveness of these regulatory systems in encouraging development while protecting resources and managing competing uses is widely varied. Many of these challenges are unique to open ocean operations. Providing a review, through a scientific and industry-development lense, would enable the WG to make a recommendation to ICES on how the industry can be most effectively managed.	5.5, 5.7, 5.8, 7.5	Year 1 & 2	Position paper

c	Investigate and describe key differences in capital expenses, operations, and production efficiencies between open ocean farms and traditional nearshore farms to characterise financial potential of open ocean aquaculture in different environments.	Several open ocean facilities for each major species group (seaweed, bivalve, and finfish) have been in operation for several years, creating an opportune time for new insights. Aquaculture is ultimately a business activity and it is critical to consider the economic potential of open ocean farming, especially relative to other farming methods.	5.7, 5.8, 7.3	Years 2 & 3	Review paper

Summary of the Work Plan

Year 1	The first priority is to complete efforts of the previous ToRs. We will ensure we have the necessary expertise within the group to complete the current resolution and recruit new members to fill any gaps. Research and analysis will begin on ToRs A & B.
Year 2	Work will continue on ToRs A & B as well as coordinating publication. Efforts will begin on ToR C.
Year 3	Complete and publish remaining work.

Supporting information

Priority	Open ocean aquaculture is an important and growing industry in the ICES region and is likely to become a major ocean use and significant producer of sustainable seafood. As a new sector, the industry is at a critical junction and can benefit greatly from expert analysis.
Resource requirements	The working group operates mainly on the volunteered time of its membership. Although obtaining time commitment can be challenging, the team is committed to the completion of this work. Additional resource requirements are negligible. The group will cooperate and engage with funded research projects to extent resource usage where specific opportunities allow.
Participants	The working group is normally attended by 20–25 members consisting of biologist, farmers, engineers, economists, and spatial analysts from academia and industry.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	This project sets the stage for future advice products from ICES as governments need to manage open ocean aquaculture development.
Linkages to other committees or groups	There is a close working relationship with all the groups of the Aquaculture Steering Group. We will seek to form links with the Working Group on Socio-Economic Dimensions of Aquaculture (WGSEDA), Working Group on Pathology and Diseases of Marine Organisms (WGPDMO), Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM), Working Group on Environmental Interactions of Aquaculture (WGEIA), Working Group on Scenario Planning in Aquaculture (WGSPA), and Working Group on Ecological Carrying Capacity in Aquaculture (WGECCA). There are also likely linkages to other groups not listed.
Linkages to other organizations	EFARO, EATiP, DGMARE, AORA, EAS (European Aquaculture Society), WAS, NOAA, DFO, SINTEF, Cawth. Industry – aquaculture businesses and producer groups, marine management organizations.

WGAGFA - Working Group on Application of Genetics in Fisheries and Aquaculture

Was transferred from ASG to DSTSG in 2024

EGs dissolved in 2024

Res. Code	EG name	Chairs
2022/WK/ASG01	Workshop on the Bay of Biscay and Iberian Coast ecoregion Aquaculture Overview	Myriam Callier (France), Francis O'Beirn (Ireland)