EOSG Steering Group EGs Resolutions

Resolutions pending approval

WGISDAA - Working Group on Improving use of Survey Data for Assessment and Advice - placeholder

2024/MT/EOSSG00

WGNEPS - Working Group on Nephrops Surveys - placeholder

2024/MT/EOSSG00

Resolutions approved in 2024

WGIPS - Working Group of International Pelagic Surveys

2024/MT/EOSSG01 The **Working Group of International Pelagic Surveys (WGIPS)**, chaired by Serdar Sakinan*, Netherlands and Sven Gastauer*, Germany, will meet to work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2025	20–24 January	Aberdeen, United Kingdom	Interim report by 7 March 2025 to EOSG, SCICOM & ACOM	Incoming chairs Serdar Sakinan, Netherlands and Sven Gastauer, Germany
Year 2026	19–23 January	Bergen, Norway	Interim report by 6 March 2026 to EOSG, SCICOM & ACOM	
Year 2027	25-29 January	Copenhagen, Denmark	Final report by 5 March 2027 to EOSG, SCICOM & ACOM	

ToR descriptors

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Combine and review annual ecosystem survey data to provide: indices of abundance and spatial distribution for the stocks of herring, sprat, mackerel, boarfish and blue whiting in Northeast Atlantic waters.	a) Advisory Requirements b) Requirements from other EGs	3.2	years 1–3	Survey reports containing indices of stock biomass and abundance at age, spatial distributions of stocks and hydrographic conditions. Survey summary tables delivered to: HAWG, WGWIDE
b	Coordinate the timing, area and effort allocation and methodologies for individual and multinational acoustic surveys on pelagic resources in the Northeast Atlantic waters covered (Multinational surveys: IBWSS, IESNS, IESSNS, HERAS, and individual surveys: CSHAS, ISAS, ISSS, PELTIC,	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	3.1	years 1–3	Cruise plans for international and individual surveys.

	GERAS, WESPAS, 6aSPAWN)				
c	Review and evaluate survey designs and methodologies used across all WGIPS coordinated surveys to ensure the integrity of survey deliverables.	a) Science requirements b) Advisory Requirements c) Requirements from other EGs	3.1, 3.3	years 1–3	Optimized and harmonised sampling designs and precision estimates for the different surveys to ensure survey quality.
d	Adopt standardized analysis methodology and data storage format utilizing the ICES acoustic database repository for all acoustically derived abundance estimates of WGIPS coordinated surveys	a) Science Requirements b) Advisory Requirements	3.2	years 1–3	Progress on the adaption of standardized analysis methodology and data storage format utilizing the ICES pelagic acoustic database repository for WGIPS coordinated surveys.
e	Periodically review and update the WGIPS acoustic survey manual as needed to address and maintain monitoring requirements for pelagic ecosystem surveys	a) Science requirements b) Advisory requirements	3.1	years 1–3	WGIPS survey manual that is up to date.
f	Assess and compare scrutinization procedures employed for the analysis of raw acoustic data from WGIPS coordinated surveys. Advise on possible inter-calibration scrutinising Workshop if necessary.	a) Science requirements b) Advisory requirements	3.2, 3.3	year 1-3	Documented standardised scrutinization recommendations; Update of survey manual to address and maintain monitoring requirements for pelagic ecosystem surveys.
g	Assess developing pelagic ecosystem surveying technology (e.g. optical technology, multibeam and wideband acoustics) to: (i) achieve monitoring of different ecosystem components, and/or (ii) give input to the development of ecosystem indicators from surveys covered	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	3.1, 3.3, 4.1	years 1–3	Update ecosystem metrics that are collected by WGIPS coordinated surveys; and protocols/recommendations for practical implementation of new technologies.

	by WGIPS, (iii) continue to support the development of tools to improve the accuracy and precision of survey estimates.

Summary of the Work Plan

Year 1	General meeting, preceded by 4 post-cruise meetings which collate data of multinational surveys. Session to review and evaluate survey designs across all WGIPS coordinated surveys and coordinate planning and discuss designs for surveys taking place in Year 1. Session to assess auxiliary pelagic ecosystem surveying technology focusing on methods currently used to monitor different ecosystem components across WGIPS coordinated surveys. Session on the future and development of databases (more specifically the ICES DB and the PGNAPES database), use of StoX and TAF. Session on stock discrimination projects and the consequences for biological sampling on WGIPS surveys. [Engage with EOSG on the topic of loss of survey area due to increased pressure of marine spatial planning (windfarms, MPAs etc.). To be clarified by EOSG]
Year 2	General meeting, preceded by 4 post-cruise meetings which collate data of multinational surveys. Session to review and evaluate survey designs across all WGIPS coordinated surveys and coordinate planning and discuss designs for surveys taking place in Year 2. Session to assess auxiliary pelagic ecosystem surveying technology focusing on methods currently used to monitor different ecosystem components across WGIPS coordinated surveys. Session on the future and development of databases (more specifically the ICES acoustic database and the PGNAPES database), use of StoX and progress on TAF. Session on stock discrimination and the consequences for biological sampling on WGIPS surveys. [Engage with EOSG on the topic of loss of survey area due to increased pressure of marine spatial planning (windfarms, MPAs etc.). To be clarified by EOSG]
Year 3	General meeting, preceded by 3 post-cruise meetings which collate data of multinational surveys. Session to review and evaluate survey designs across all WGIPS coordinated surveys and coordinate planning and discuss designs for surveys taking place in Year 3. Session to assess auxiliary pelagic ecosystem surveying technology focusing on methods currently used to monitor different ecosystem components across WGIPS coordinated surveys.

Session on the future and development of databases (more specifically the ICES acoustic database and the PGNAPES database), use of StoX and progress on TAF.

Session on stock discrimination and the consequences for biological sampling on WGIPS surveys.

[Engage with EOSG on the topic of loss of survey area due to increased pressure of marine spatial planning (windfarms, MPAs etc.). To be clarified by EOSG]

Supporting information

Priority	The Group has a high priority as the work provides essential data in the form of survey indices used in the stock assessments carried out under WGWIDE and HAWG. The Group's core task is the standardisation, planning, coordination, implementation, and reporting of acoustic surveys for the main pelagic fish species including herring, sprat, blue whiting, mackerel, and boarfish in Northeast Atlantic waters. Its members have expertise in design and implementation of acoustic-trawl surveys, including sampling of additional ecosystem parameters. It will therefore also directly contribute to the implementation of integrated pelagic ecosystem monitoring programmes and assessments in the ICES area.
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 20–25 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	WGWIDE, HAWG
Linkages to other committees or groups	There is a very close working relationship with other groups in EOSG and DSTSG, especially relevant links to WGAcousticGov, WGACEGG, WGALES, WGBIFS, WGFAST, WGFTFB, WGISDAA, WGISUR, WGMEGS, WGINOR, WGINOSE, WGIAB, WKSIDAC, WGSPF.
Linkages to other organizations	

IBTSWG - International Bottom Trawl Survey Working Group

2024/MT/EOSSG02 International Bottom Trawl Survey Working Group (IBTSWG), chaired by Patrik Börjesson, Sweden, and David Stokes, Ireland, 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	1–4 April	Belfast, Northern Ireland	Report by 30 May 2025 to EOSG	Outgoing: Pia Schuchert (UK Northern Ireland) and Jim Ellis (UK England). Incoming: Patrik Börjesson (Sweden) and David Stokes (Ireland).
Year 2026	TBC	Online	Report by 30 May 2026 to EOSG	
Year 2027	TBC	TBC	Report by 30 May 2027 to EOSG	

ToR descriptors

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Coordination and reporting of North Sea and North-eastern Atlantic bottom trawl surveys, including appropriate field sampling in accordance with the EU Data Collection Framework. Review and update (where necessary) IBTS survey manuals in order to achieve additional updates and improvements in survey design and standardization. (ACOM).	Intersessional planning of Q1, Q3 and Q4 surveys; communication of coordinators with cruise leaders; combining the results of individual nations into an overall survey summary. Intersessional activity in order to improve survey and manuals quality.	3.1, 3.2	years 1-3	1) Survey summary including collected data and description of alterations to the plan, to relevant assessment WGs and other EGs (WGCSE, WGNSSK, HAWG, WGBIE, WGDEEP, WGWIDE, WGEEL, WGCEPH, WGEF, WGML) and SCICOM. 2) Indices for the relevant species available for the assessment WGs (see above) 3) Planning of the upcoming surveys for the survey coordinators and cruise leaders 4) Updated version of survey manual, whenever substantial changes are made.
b	Address DATRAS-related topics in cooperation with WGDG: data quality checks and the progress in re-uploading corrected datasets, quality checks of indices calculated, and prioritizing further developments in DATRAS (ACOM)	Issues with data handling, data requests or challenges with re-uploading of historical or corrected data to DATRAS have been identified and solutions are being developed	3.1, 3.2, 3.5	years 1-3	Prioritized list of issues and suggestion for solutions and for quality checking routines, as well as definition of possible new DATRAS products, submitted to DATRAS group at ICES. Annual check of recent survey data.

c	Finalise the description of a new survey trawl gear to replace the existing standard GOV survey trawl, agree an appropriate implementation plan, and introduce the new gear for relevant surveys (SCICOM; ACOM).	IBTSWG members have developed a new survey trawl, with some relatively minor modifications to the gear to be implemented and tested. IBTSWG will, in liaison with other expert groups, need to agree a strategy (based on a previously outlined concept) for introducing the new survey trawl into relevant surveys in the current period. There will also be a need to monitor progress in introducing the new trawl.	3.1, 3.2	years 1-3	Full documentation of the final design of the gear, including how it should be rigged and operated at sea. The roadmap for implementing the new trawl in the North Sea IBTS (and other relevant survey) will be agreed following on from earlier meetings (e.g. WKFDNG workshop, WKUSER2, support from WGISDAA and WGFTFB). There will also be linkages with the relevant assessment groups using IBTS data (WGNSSK, WGCSE, WGBIE, WGWIDE, WGEF).
d	In order to be able to provide appropriate and robust indices (and biological information) for assessed fish stocks, whilst considering other factors (e.g. environmental impacts), there is a continued need to (i) Evaluate current survey designs, explore modifications or alternative survey designs (identifying any potential benefits and drawbacks) with respect to changes in spatial distribution, frequency of sampling, and alternative or additional approaches. (ii) Consideration of the effects of enforced changes in the distribution of survey stations due to loss of survey area (e.g. MPAs, OWFs and other offshore infrastructure), how the loss of survey area	The requirements for the surveys are evolving continuously. The ecological footprint and environmental impacts of trawl surveys (e.g. fuel consumption, carbon footprint, vessel costs, bottom impact, impact of MPAs, animal welfare) are increasingly discussed topics that have potential consequences for current survey designs. Consequently, work in relation to how trawl survey design may need to evolve to address such issues needs to be conducted. Furthermore, in order to get more value from such surveys (which might help offset the perceived costs and impacts of surveys) may also be	3.2, 3.4	years 1-3	This work is relatively dynamic and will depend on a range of factors. Consequently, specific deliverables cannot be given at the present time. IBTSWG will schedule appropriate time, including intersessional subgroups, to address the various topics, and this information will be included in the annual reports produced by IBTSWG.

	may impact on stock assessments, and how lost survey areas can be monitored.	considered. Indeed, there is continued and increasing interest in using trawl surveys as platforms for other data collection (e.g. dietary data ichthyoplankton, eDNA, remote underwater camera).			
	(iii) Explore potential additional data collection that may be conducted during bottom trawl surveys and aid the work of assessment and ecosystem working groups, e.g. stomach sampling, parasites, genetic sampling, tagging, and engage with relevant groups.				
	(iv) Consider new techniques and technologies that may help augment trawl surveys for the collection of data relevant to fishery-dependent data				
e	To develop strategies and methods for evaluating the effect of replacing research vessels, gears or technologies, and to identify potential factors contributing to country/vessel effects in modelled survey indices.	Several IBTS participants are either planning to replace, or have recently replaced, their research vessels. New vessels usually have more modern equipment, e.g. faster trawl winches and net drums, and may use different types of warps. Direct intercalibration between incoming and outgoing vessels is unrealistic due to the exceedingly high number of comparative tows needed to obtain statistically significant conversion factors for the requested set of species and age/length groups. Hence, alternative approaches are needed to ensure	3.2, 3.3	years 1-3	Significant country/vessel effects have been detected in various models on survey indices despite considerable effort towards standardization, e.g. by using swept area-based indices. Hence, other country/vessel specific factors likely play a role such as winch speed, which may affect the amount of fishing time outside the nominal tow duration. These factors should be identified and evaluated, aiming at the development of more standardized protocols e.g. for deploying and retrieving the trawl.

		the consistency of survey time series.			
f	Sharing the data, expertise and knowledge of IBTSWG through (i) participation in WGNETSEA, and (ii) maintaining active communications with relevant expert groups (e.g. assessment groups and other ICES end-users, OSPAR, scientific projects).	IBTS/DATRAS has got a wealth of data, which might be used in a number of applications. Originally set up to collect data on target species, data on other species and environmental factors were often collected (sometimes sporadically), and the identification to species-level of some taxa has been dependent on the available time, the SIC at the time and the knowledge of the team. Using data without previous knowledge on all these factors could result in invalid assumptions. To get the most value out of the surveys, there needs to be a clear communication established with data users and the survey team.	3.5, 3.3	years 1-3	Ensure appropriate active participation in the WGNETSEA process. Maintain close coordination and communication channels with relevant user groups, including assessment working groups, as well as other relevant groups, such as WGML and WGBIOP.

Summary of the Work Plan

YEAR 1	
Year 2	
Year 3	
Recurrent annual activity	General meeting, Session to review and evaluate survey designs across all IBTS coordinated surveys and coordinate planning and discuss designs for surveys taking place in the current Year. Session to further the implementation and progress of the new survey trawl Session on the future and development of DATRAS and DATRAS products. Session survey design and additional work that has been conducted on surveys Session on the use of IBTS data, and exchange with data users. [Engage with EOSG on the topic of loss of survey area due to increased pressure of marine spatial planning (windfarms, MPAs etc). To be clarified by EOSG]

Supporting information

Priority	Essential. The general need for monitoring fish abundance using surveys is evident in relation to fish stock assessments, and it has increasing importance in relation to MSFD GES descriptors, including biodiversity, foodwebs, populations of commercially exploited fish species, sea floor integrity and marine litter.
Resource requirements	A 4 or 5-day IBTS meeting. Prepared documents from members following ToR Leaders identified above. 8-day Chair's time to edit. It is estimated that each ToR will require at least 8 hours of preparation.
Participants	The Group is normally attended by some 25–30 members and guests.
Secretariat facilities	SharePoint plus normal secretariat support. Members of the ICES data centre are required to participate in the DATRAS ToRs.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	ACOM. IBTS indices are used in the assessment of multiple stocks.
Linkages to other committees or groups	There are relations with other bottom-trawl surveys (WGBEAM, WGBIFS) that also use DATRAS as the international repository for its data (WGDG, DIG). There are also linkages with the assessment WGs using IBTS indices, notably WGNSSK, WGCSE, WGBIE, HAWG, WGWIDE and WGEF. Also collect data to support the Working Group on Marine Litter (WGML). Also relevant to the Working Group on Biological Parameters (WGBIOP), Working Group on Ecosystem Effects of Fishing Activities (WGECO) , the Working Group on Improving use of Survey Data for Assessment and Advice (WGISDAA), Working Group on Integrating Surveys for the Ecosystem Approach (WGISUR), Working Group on Biodiversity Science (WGBIODIV), and the Working group on network for surveys towards ecosystem advice in the Greater North Sea (WGNETSEA).
Linkages to other organizations	IOC, GOOS, OSPAR, Regional Coordination groups (DCF).

WKDISM - Workshop to Develop an ICES Survey Mitigation Strategy

2024/WK/EOSG/03 Workshop to Develop an ICES Survey Mitigation Strategy (WKDISM), chaired by Pia Schuchert, UK, Andrew Lipsky, USA and Duane Stevenson, USA, will be established and meet in Copenhagen, Denmark, 23-27 June 2025, to:

a) **Describe and evaluate the interactions of MPA and OREs on long-term scientific surveys across ICES regions**

i) Identify spatial and temporal overlaps between multi-annual scientific survey programmes and existing and future proposed OREs and MPA's

ii) Review the types of potential impacts caused by ORE developments and MPAs on surveys and the potential cosquences for assessments and advice

(Science Plan codes: 3.2, 3.3,3.4,3.5, 4.4);

b) What scientific and management approaches are being taken and are needed to address the impacts from MPAs and OREs on long-term scientific surveys

i. Identify the scientific survey needs to adjust to large scale ORE and MPA development, including:

ii. Inventory mechanisms, strategies and programs, including regulatory or non-regulatory approaches, to mitigate the impacts (as described in ToR A) on scientific surveys, including on case studies where survey mitigation is being implemented

(Science Plan codes: 2.7, 3.1, 3.2,3.3,3.4,6.27.4);

c) Develop a work plan to establish an ICES Strategy to mitigate the impacts of OREs and MPA on scientific surveys and scientific assessment and advice

(Science Plan codes : 2.7, 3.2, 3.4,3.6,4.5, 5.1, 7.3);

WKDISM will report by 11th July 2025 for the attention of the SCICOM/ACOM.

Supporting information

Priority	ORE Roadmap released in 2023 identifies goals, objectives, and priority actions. This workshop addresses multiple goals and objectives in the roadmap with a particular focus on Priority Action 4 for 2024: the assessment of OMRE developments on fishery and ecosystem observation surveys, fisheries management advice, and recurrent ICES advice.

Scientific justification	The loss of long term survey areas and the required adjustmentst needs to be carefully considered within the ICES member countries. As per the ORE Roadmap, ICES needs to develop a strategy to address the impacts of ORE and MPAs on long-term scientific surveys in order to continue to provide timely, accurate, and precise scientific advice to support fisheries and ecosystem management. Many ICES member countries are experiencing large-scale offshore renewable energy development and will require tools and methods to modify and modernize scientific surveys. Specific activities for each of the above ToRs would include the fillowing: **ToR A** 1. What is the impact of losing survey activity in the area or changes in the productivity of areas on the assessment of a stock 2. Assess if and in what cases ORE or MPA monitoring activities can supplant long-term scientific survey effort 3. Identify assessments and advice setting processes that maybe impacted by ORE and MPA survey disruptions 4. Identify and advance methods,to quantify potential costs of these impacts, including loss of biological data, and downstream impacts on stock assessments 5. Describe new survey and monitoring demands due to the creation of new habitats and or sampling strata due to ORE/MPAs **ToR B** 1. How can sampling designs be adapted to address changes to areas accessible to existing surveys and changing habitats due to ORE and MPA establishment. 2. What scientific sampling methods and approaches, including traditional and new sampling technologies, are being considered to address survey compatibility with ORE and MPAs 3. Identify methods to quantify potential downstream impacts due to increased uncertainty in assessments and advice **ToR C** 1. Develop goals, objectives, and priority actions to guide efforts to understand and mitigate the impacts from ORE and MPAs on scientific surveys 2. Coordinate across expert working groups to address this cross-cutting topic, including coordination with ORE WGs and efforts to standardize methods and data availability from ORE and MPA monitoring programs 3. Identify actions to increase communication and dataflow between ICES and other parties with regard to institution for survey mitigation programs and activities. 4. Develop ICES engagement and stakeholder engagement plan to advance ToRs
Resource requirements	None

Participants	• SCICOM Country Representatives • Survey working group representatives, WKUSER • HAPISG Working ORE Groups, WGOWDF ToR B leads • Key expertise, e.g. statisticians (WKUSER/WGISDAA) • Members of planning groups/with ORE/MPA/ spatial planning knowledge • Members of the ORE industry, including ORE experts from WGOWDF/ Conservation/MPA scientists
Secretariat facilities	ICES HQ as meeting place and support
Financial	No financial implications.
Linkages to advisory committees	The loss of and changes to survey areas and the loss of extraction of animals will have considerable impact on the future of fisheries and ecoysystem advice.
Linkages to other committee or groups	This workshop straddles already different commitiees and groups, such as EOSG, HAPI, as well as FRSG and HUDI
Linkages to other organizations	The work should be closely linked with the work of ORE and MPA managers and specialists.

WKUSER3- Workshop on unavoidable survey effort reduction 3

2024/WK/EOSG/04 The **Workshop on unavoidable survey effort reduction 3 (WKUSER3)**, chaired by Stan Kotwicki, US, Kotaro Ono, Norway, and Casper Berg, Denmark will meet in ICES headquarters in Copenhagen, Denmark 27-31 October 2025 to roadmap on how to adapt fisheries independent surveys to the changing environments and arising challenges. WKUSER3 will review the following building blocks of change:

a) Preparation for change: Assessing necessity for change. Planning. Assessment of needed resources (money, time, and people). Existing knowledge. Assessment of the need for collaboration (scientists and stakeholders). Filling knowledge gaps – conducting research.
b) Testing and evaluation methods of new survey designs, sampling methods, and data products.
c) Transition from old to new time series in production of survey data products and in stock assessments.
d) Review new technologies and sampling methods that can complement or replace existing surveys.

WKUSER3 will report to by 12 December 2025 for the attention of ACOM/SCICOM trough EOSG.

Supporting information

Priority	Fisheries-independent surveys (hereafter surveys) are conducted worldwide to support fisheries and ecosystem management by providing consistent time series data for use in stock assessment ecosystem assessments, process studies, and ecological forecasting. However, the consistency of survey time series may be impacted by natural forces (e.g., changes in environment, stock distribution, weather) or due to anthropogenic or intentional actions (e.g., new sampling objectives, new technology, reduction of sampling area due to conservation or renewable energy production, funding and vessel availability). These issues, and others, are increasingly common due to changes in marine ecosystems, increased human activities in and around survey areas, and development of new survey technologies and statistical methods. The previous workshops WKUSER1 (2020) and WKUSER2 (2022) identified that such changes are affecting many monitoring agencies, and more coherent planning and a long-term response strategy (roadmap) for adapting surveys to new conditions is desirable. It is in the interest of national governments making the decisions and ICES using such information for their advice to have a better understanding and strategy for providing advice on how to implement changes to long-standing surveys while minimizing the impact of such events on stock assessment and fisheries management.
Scientific justification	Surveys are foundational for modern fisheries stock and ecosystem assessments, and fisheries research. Survey data products are often the only reliable and consistent source of information o population abundance, spatial distribution, and demographic structure, and ecosystem condition. The major utility of survey data is that they provide consistent information to facilitat the detection of changes in populations and ecosystems characteristics across time and space. This consistency of information needs to be assured when implementing changes to surveys. Historically, suggestions to change survey protocols have often been met with strong resistance, because of the risk to the consistency of time series. However, as indicated in conclusions from previous WKUSER workshops, the change is often unavoidable. Many agencies are currently faced with the unavoidable changes to surveys. However, there is common lack of advice on hov to prepare and implement these changes. WKUSER3 will provide a general roadmap on how to make changes to surveys while minimizing the disruption to the continuity of the data products
Resource requirements	5 meeting rooms at ICES HQ and hybrid meeting support for all rooms.
Participants	Expected attendance 30–50 survey and assessment scientists along with monitoring program managers.
Secretariat facilities	ICES HQ as meeting place and support.
Financial	No financial implications.
Linkages to advisory committees	There is a direct link with the advisory committee as they require knowledge on the sensitivity o the advice to changes in surveys in order to provide precautionary advice when survey information is compromised.
Linkages to other committees or groups	The workshop should link closely back to WGISDAA, which will maintain the tools / methods and broaden the approach over time. Work with stock assessment WGs is essential. There is also a link to survey planning and coordinating groups responsible for implementing survey changes such as IBTSWG and WGBIFS. There is a close connection to WKDSIM and WKOMO.
Linkages to other organizations	The work of this group is closely aligned with similar work in FAO and in the Census of Marine Life Programme.

WGSINS - Working Group on Surveys on Ichthyoplankton in the North Sea and adjacent Seas

2024/MT/EOSSG05 The **Working Group on Surveys on Ichthyoplankton in the North Sea and adjacent Seas (WGSINS)** is chaired by Bastian Huwer, Denmark, and 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	24 - 28 November	IJmuiden, The Netherlands	Interim report by 9 January 2026 to ACOM/SCICOM	Bastian Huwer (DK) continues as chair for another 3-year term
Year 2026				
Year 2027				

ToR descriptors

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Planning and execution of ichthyoplankton surveys in the North Sea, Irish Sea & Baltic Sea used for assessment and management purposes.	Ichthyoplankton surveys in the North Sea and adjacent Seas deliver abundance data of early life history stages used to produce estimates of fish SSB and/or recruitment for the assessment of several fish stocks.	3.1, 3.2,	year 1, 2, 3	Survey Plan
b	Provide quality assurance of the survey indices time series to assessment working groups	Consistency in generation of data is a crucial prerequisite for the use of a time series in the assessment.	3.1, 3.2, 5.2	year 1, 2, 3	
c	Update manuals for ichthyoplankton surveys in the North Sea and adjacent seas	Existing manuals should be updated regularly as new information becomes available.	3.1	year 3	Updated manuals as needed and conversion to TIMES format where appropriate
d	Provide quality assurance of ichthyoplankton identification.	The accurate identification of ichthyoplankton and the developmental stages is crucial for species specific abundance estimates.	3.1, 3.2	year 1, 2, 3	Contribute to quality assurrance of ichthyoplankton identification through SMARTDOTS
e	Standardization of sampling and sample processing procedures.	Standards of sampling and sample processing procedures need to be regularly reviewed and optimized w.r.t. efficiency.	3.3	year 1, 2, 3	Workshop to compare and evaluate sub-sampling procedures during WGSINS 2025
f	Archiving of data generated by surveys coordinated by WGSINS in the ICES Eggs and Larvae Database (ELDB).	Data generated by surveys coordinated by WGSINS need to be prepared and submitted to the ICES Eggs and Larvae Database (ELDB) by each institute.	3.2	year 1, 2, 3	Updated datasets in the ICES Eggs and Larvae Database (ELDB)

g	Promote and provide a platform for broader and innovative uses of data, samples and information collected on WGSINS co-ordinated surveys, to support the implementation of an ecosystem approach to fisheries management.	Ichthyoplankton surveys are able to provide additional samples & data beyond those needed for the original survey objectives, which can contribute valuable and unique information for our understanding of the state and functioning of marine ecosystems. Detailed overviews of current additional sample & data collections on all surveys co-ordinated by WGSINS were compiled and made available in the 2024 WGSINS report.	3.1, 3.3	year 1, 2, 3	Dedicated sessions on added value & additional data sources and their application during annual WGSINS meetings. Liaise with EOSG & WGNS-NETSEA. Maintaining overview tables of additional sample & data collections when necessary.

Summary of the Work Plan

Year 1	Plan and execute the International herring larvae surveys in the North Sea (IHLS), the North Sea Midwater Ring Net survey (MIK), the Downs recruitment survey (DRS), the Northern Irish Northeastern Larvae Survey (NINEL), the Northern Ireland MIK Survey (NI-MIK), the Rügen herring larvae survey (RHLS) and the Baltic Ichthyoplankton Surveys (BIS) & pilot surveys
Year 2	Plan and execute the IHLS, the MIK, the DRS, the NINEL, the NI-MIK, the RHLS and the BIS & pilot surveys
Year 3	Plan and execute the IHLS, the MIK, the DRS, the NINEL, the NI-MIK, the RHLS and the BIS & pilot surveys

Supporting information

Priority	This working group is important for the fisheries advisory process. The different ichthyoplankton surveys in the North Sea and adjacent seas provide important fishery-independent stock and/or recruitment data used in the assessment of herring stocks in the North and Baltic Seas, cod in the Baltic and haddock in the Irish Sea, and also inform management of cod, herring & whiting in the Irish Sea
Resource requirements	None
Participants	The working group is normally attended by 15 – 20 members and guests
Secretariat facilities	ICES data center
Financial	No financial implications
Linkages to ACOM and groups under ACOM	HAWG, WGBFAS, WGCSE
Linkages to other committees or groups	EOSG, WGALES, WGBIOP, IBTSWG, WGNSNETSEA, WGZE, WGELFADG, WGSMART, DSTSG
Linkages to other organizations	None

Resolutions approved in 2023

WGBIFS - Baltic International Fish Survey Working Group

2023/MT/EOSG/01 **The Baltic International Fish Survey Working Group (WGBIFS)**, chaired by Sven Stötera, Germany and Niklas Larson, Sweden, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2024	21–22 March	Online		Tiit Raid and Olavi Kaljuste appointed as chairs
	3-5 April 2024	Gdansk, Poland	Interim report by 15 May 2024 to, SCICOM and ACOM	
Year 2025	24-28 March	Finland	Interim report by 15 May 2025 to, SCICOM and ACOM	Sven Stötera and Niklas Larson appointed as new chairs.
Year 2026	TBD	TBD	Final report by 15 May 2026 to, SCICOM and ACOM	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Coordinate and plan acoustic surveys including any experiments to be conducted	Acoustic surveys provide important fishery-independent stock estimates for Baltic herring and sprat stocks	3.1	Year 1-3	Finalized planning for the surveys for WGBIFS
b	Combine and analyse the results of acoustic surveys and experiments	Acoustic surveys provide important fishery-independent stock estimates for Baltic herring and sprat stocks	3.1	Year 1-3	Updated acoustic tuning indices for WGBFAS
c	Update the hydroacoustic databases	The aim of BIAS, BASS and GRAHS databases is to store the aggregated data that are used for the calculation of the survey indices. The aim of ICES database is to ensure that the standardized and quality-controlled scrutinized data from the acoustic-trawl surveys will be stored centrally in a safe way and enables easy access to the data, which will facilitate usage for many different analyses by a wider range of users	3.1	Year 1-3	Updated hydroacoustic databases

d	Conduct the analyses related to the improvement of quality of acoustic indices and evaluate the survey methodology and alternative tools for the calculation of WGBIFS acoustic stock estimates	Acoustic surveys provide important fishery-independent stock estimates for Baltic herring and sprat stocks. Alternative tools and methodologies for the calculation of acoustic stock estimates using the data directly from ICES database will be evaluated. Comparison exercises will be performed to validate whether they allow WGBIFS to use them as a new standard tool for the calculation of annual acoustic survey estimates.	3.1, 3.2, 3.3	Year 1-3	Improved quality, transparency and reproducibility of acoustic indices, improved pace of work on the level of national data compilation and verification
e	Review and update the manual for International Baltic Acoustic Surveys (IBAS)	Acoustic surveys provide important fishery-independent stock estimates for Baltic herring and sprat stocks	3.1, 3.2	Year 3	Updated IBAS manual for publication in TIMES
f	Coordinate and plan demersal trawl surveys and experiments to be conducted	Demersal trawl surveys provide important fishery-independent stock estimates for Baltic cod and flatfish stocks	3.1	Year 1-3	Finalized planning for the surveys for WGBIFS
g	Coordinate the marine litter-sampling programme within the Baltic International Trawl Survey	Collected and registered information about the marine litter (mostly anthropogenic origin), occasionally appeared in the ground trawl fish control-catches, are additional source of data about present ecological status of marine seabed in investigated areas of the Baltic	3.1	Year 1-3	Coordinated marine litter sampling programme within the Baltic International Trawl Survey (BITS).
h	Review the fulfillment and results of BITS surveys	Demersal trawl surveys provide important fishery-independent stock estimates for Baltic cod and flatfish stocks	3.1	Year 1-3	Survey fulfilment data is provided to WGBFAS as background information about the data quality
i	Update the BITS-related databases	The aim of ICES database is to ensure that the standardized and quality-controlled scrutinized data from the acoustic-trawl surveys will be stored centrally in a safe way and enables easy access to the data, which will facilitate usage for many different analyses by a wider range	3.1	Year 1-3	Updated BITS data (including marine litter data) in DATRAS database for ICES Data Centre. Updated and corrected Tow Database

		of users			
j	Addressing issues related to the data quality of demersal trawl surveys	Neccessary analyses will be done to ensure data quality of demersal trawl surveys, including evaluation of the characteristics of TVL and TVS standard gears used in BITS			Improved quality and transparency of BITS data
k	Review and update the manual for Baltic International Trawl Survey (BITS)	Demersal trawl surveys provide important fishery-independent stock estimates for Baltic cod and flatfish stocks	3.1, 3.2	Year 3	Updated BITS manual for publication in TIMES
l	Evaluate the effect of possible survey effort reduction on the indices, caused by the increase of restricted sea areas	Planned expansion of "no go" areas caused by the increase of offshore wind power plants would affect WGBIFS-coordinated surveys in the Baltic Sea	3.1, 3.2, 3.3	Year 1-3	Quality assurance of the survey indices.

Summary of the Work Plan

Year 1	Compilation the survey results from 2023 and the first quarter of 2024 and reporting to WGBFAS. Coordination and planning the schedule for surveys in 2024 and first half of 2025. Evaluate the survey methodology and alternative tools for the calculation of WGBIFS acoustic stock estimates. Conduct the analyses related to the improvement of quality of acoustic indices and estimation of the uncertainty in the acoustic surveys coordinated by WGBIFS. Evaluate the effect of possible survey effort reduction on the indices, caused by the increase of restricted sea areas. Coordinate the marine litter-sampling pro-gramme in the BITS surveys and registering the data in the ICES database.
Year 2	Compilation the survey results from 2024 and first quarter of 2025 and reporting to WGBFAS. Coordination and planning the schedule for surveys in 2025 and first half of 2026. Evaluate the survey methodology and alternative tools for the calculation of WGBIFS acoustic stock estimates. Conduct the analyses related to the improvement of quality of acoustic indices and estimation of the uncertainty in the acoustic surveys coordinated by WGBIFS. Evaluate the effect of possible survey effort reduction on the indices, caused by the increase of restricted sea areas. Coordinate the marine litter-sampling pro-gramme in the BITS surveys and registering the data in the ICES database.
Year 3	Compilation the survey results from 2025 and first quarter of 2026 and reporting to WGBFAS. Coordination and planning the schedule for surveys 2026 and first half of 2027. Implementation of TAF in the calculation process of stock indices for Baltic herring and sprat. Present the results of the analyses related to the improvement of quality of acoustic indices and estimation of the uncertainty in the acoustic surveys coordinated by WGBIFS. Present the quality checked, transparent and reproducible acoustic indices from the Gulf of Riga Acoustic Herring Survey. Estimate the effect of possible survey effort reduction on the indices, caused by the increase of restricted sea areas and propose potential solutions to reduce this effect. Coordinate the marine litter-sampling programme in the BITS surveys and registering the data in the ICES database. Reviewing and updating the BITS and IBAS survey manuals, and publication in TIMES.

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. 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 about 25 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	The survey data are prime inputs to the assessments of Baltic herring, sprat, cod and flatfish stocks carried out by WGBFAS. Linked to ACOM through the quality of stock assessments and management advice.
Linkages to other committees or groups	There is a very close working relationship with WGBFAS. It is also relevant to the HAPSISG, WGFAST and the working group on Marine litter (WGML).
Linkages to other organizations	No direct linkage to other organizations.

WGMEGS - Working Group on Mackerel and Horse Mackerel Egg Surveys

2023/MT/EOSG02 Working Group on Mackerel and Horse Mackerel Egg Surveys (WGMEGS), chaired by Maria Korta, Spain and Brendan O'Hea, Ireland, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	**Venue**	**Reporting details**	**Comments (change in Chair, etc.)**
Year 2024	29th April to 3rd May 2024	Ijmuiden, Netherlands	Interim report by 30th June 2024 to ACOM/SCICOM	Maria Korta confirmed as new chair, Brendan O' Hea to continue for two years.
Year 2025	TBD	TBD		
Year 2026	TBD	TBD		

WGMEGS ToRs 2024 – 2026

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Plan and coordinate the Mackerel/Horse Mackerel Egg Surveys in the ICES areas 4 to 9, 12.	The egg surveys in the Northeast Atlantic (ICES areas 4 to 9, 12) and the North Sea (ICES area 4) provide important data for fishery-independent SSB indices for Northeast Atlantic Mackerel and for the western Horse mackerel stocks. The surveys are part of a time-series that commenced in 1977. With	3.1	years 1 – 2	Continuously updated survey plans and survey summary sheets in 2025 on the WGMEGS SharePoint

		up to 10 nations participating in the surveys, and up to 18 individual cruises taking place, careful and detailed planning, and coordination of the survey is essential.			
b	Plan and Coordinate the sampling and laboratory analysis for Mackerel/Horse mackerel adult parameters.	Reliable reproductive parameter estimates are needed to convert the egg abundance data to indices of SSB. International coordination is needed to ensure that the samples collected on different surveys are representative, and collections and sample analysis are of good quality.	3.1	Year 1 - 3	Planning description for the survey in 2025 on the WGMEGS SharePoint
c	Review and update the manuals for the Mackerel/ Horse Mackerel Egg Surveys sampling design and Adults parameters estimation. Produce these manuals in the TIMES format.	Well defined, standardized sampling and laboratory procedures are necessary to properly interpret the monitoring data, as well as ensuring that rigorous and transparent QAQC procedures have been applied and can be evaluated by external reviewers.	3.1, 3.2	Year 1 - 3	Updated manuals for both, egg surveys and adults parameter estimation for WGMEGS on the SharePoint in years 1 and 2, for publication in TIMES format in years 1, 2.
d	Coordinate the quality-controlled data delivery to the ICES databases for both egg abundance and adult parameters data.	Egg ID and staging data will be uploaded to the ICES egg and larval database over the next few weeks by the national labs. Adult parameter data is stored until the ICES fecundity and atresia database is finally rolled out.	3.1	Year 3	Updated survey data submissions to the ICES egg and larval database, and the ICES fecundity and atresia database.
e	Organise and evaluate workshops aimed at developing survey specific expertise in fish egg identification and staging, and evaluation of ovarian development and fecundity estimation.	For quality assurance in the year before the surveys two workshops will be organized in which survey participants are obliged to participate, in order to standardize egg identification and staging, and ovary histological	3.2, 3.3	Year 1 - 2	WKMACHIS 2 and WKAEPM 2 reports

		evaluation and fecundity procedures.			
f	Provide relevant fisheries resources assessment groups with quality-controlled time series of indices on spawning stock biomass for Mackerel/Horse mackerel and hake, in time for their assessments.	Provisional index of mackerel SSB, and egg production of horse mackerel and hake are delivered in the year of the survey. The indices however are finalized during the WGMEGS meeting in the year after the surveys.	**1.3, 3.1, 5.1, 5.2**	Year 2 - 3	Preliminary and finalized results of the mackerel SSB index, western horse mackerel and hake egg production for WGWIDE and WGBIE.
g	Review and implement the recommendations of the WKMADE workshop for Mackerel/Horse mackerel.	An extensive review of the application of DEPM in northern and southern NE Atlantic mackerel from 2013 to 2022 will be carried out. Outputs may affect both survey sampling design and adults samples procedures and will be considered by the WKMACHIS 2 and WKAEPM 2.	3.1	Year 1	Update the manuals for both egg surveys and adults parameter estimation, partiuclarly DEPM sections, for WGMEGS

Summary of the Work Plan

Year 1	Planning of the egg survey in 2025, conduct 2 workshops to develop survey specific expertise.
Year 2	**Survey year, the surveys will be conducted in 2025. A meeting will take place in year 2, after the surveys, to collate the survey data and provide preliminary results. A report, with the updated planning and manuals, and the preliminary results of the 2025 surveys, will be published.**
Year 3	**Reporting and finalizing of the results of the 2025 egg surveys.**

Supporting information

Priority	Essential. The egg survey provides important fishery-independent SSB data used in the assessment for Northeast Atlantic mackerel and for the western horse mackerel stocks.
Resource requirements	No additional resources needed for ICES. For participants the surveys are all part of the national programs. The surveys and associated meetings are also partially funded under the EU fisheries data directive.
Participants	Usually ca. 15–20 participants from FAR, NOR, NLD, POR, ESP, UK (ENG), UK (SCO), GER, DEN, IRL.
Secretariat facilities	None.
Financial	No financial implications.

Linkages to advisory committees	ACOM
Linkages to other committees or groups	SCICOM, WGMEGS, WGBIOP, WGALES WGISDAA WKAEPM WKMACHIS WGBIE and WGWIDE
Linkages to other organizations	None.

WGNSNETSEA – Working group on the network for surveys towards ecosystem advice in the Greater North Sea

2023/AT/EOSG05 Working group on the network for surveys towards ecosystem advice in the Greater North Sea (WGNSNETSEA), chaired by Ingeborg de Boois, The Netherlands, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2024	**MEETING CANCELLED**			
Year 2025	TBD	TBD	Interim report by TBD to ACOM/SCICOM through EOSG and DSTSG	
Year 2026	TBD	TBD	Final report by TBD to ACOM/SCICOM through EOSG and DSTSG	

ToR descriptors[1]

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
	This should capture the objectives of the ToR	Provide very brief justification, e.g. advisory need, links to Science Plan and other WGs	Use codes *(max 3 per ToR)*	1, 2 or 3 years	Specify what is to be provided, when and to whom

[1] Avoid generic terms such as "Discuss" or "Consider". Aim at drafting specific and clear ToR, the delivery of which can be assessed

a	Synthesize and compare survey information on a regional level for integrated ecosystem assessment. The main focus will be on biological data from fishery-independent surveys.	Currently there is no systematic interaction flow between survey groups and WGINOSE. A group where WGINOSE and survey groups take both part in will increase the visibility of the data use (relevant for survey groups), and improve understanding of the data and the possibilities for combining data series (relevant to WGINOSE)	3.2	3	Year 1: List of ecosystem information that is collected during the different fish surveys in the region. Evaluation of the current use of survey data in ecosystem assessments Year 2, 3: indication which (combination of) survey(s) can be best used for different ecosystem assessments, by comparing the survey specific information.
b	Improve alignment on common issues for all fishery-independent survey types in the Greater North Sea	Currently, each survey coordination group finds solutions for its own situation. Improved alignment on strategies to deal with survey effort reduction, or expanding data collection (e.g. stomach) as well as optimisation of biological parameters on a regional level (e.g. number of otoliths). This may lead to more effective use of funding, and comply with animal welfare ambitions to reduce the number of animals used for scientific purposes.	3.1	3	List of common issues for all surveys in the region, and potential solutions to overcome or deal with those issues.
c	Provide quality assured fishery-independent survey data and/or indices for FRSG working groups on a regional (or stock) level in the benchmark process	In the benchmark process the timing is tight, and involvement of survey experts in the data preparation groups is limited. WGNSNETSEA could and should play a role in the benchmark process, e.g. prepare indices for upcoming benchmarks and/or new monitoring series, and evaluate its added value to the existing time series.	3.2	3	Standardised methdology for comparison of survey results from different origins/survey types. Comparative analyses of survey results for the same species, and indication if patterns in timeseries are consistent or differ. If possible, an clarification on potential causes for different patterns. Identification of knowledge gaps.

d	Stimulate development and implementation of improved/new survey technologies as well as additional data collection	Currently, development for technology and/or additional data collection is done on a case-by-case basis. Discussing new technologies and stimulating implementation on a regional level may either lead to increased or improved data collection, or to more effective use of ship time. Regional priorities for additional data collection can be set based on gaps highlighted by WGINOSE.	3.3	3	Based on input WGINOSE, and on outcomes tor a) and c) of WGNSNETSEA: list of options to incorporate additional sampling in specific surveys.
e	Interact with RCG and other relevant regional bodies on embedding of and data use from fishery independent monitoring.	Regional bodies may be able to make decisions on e.g. new sampling methodologies or effort allocation. In the Greater North Sea it is important to communicate with especially the EU Regional Coordination Group (RCG) from the start. For data use, close connection to OSPAR is preferred, especially in development of indices from surveys data. The RCG will create regional work plans (mid 2023), including fishery independent monitoring. This could serve as a starting point for WGNSNETSEA.		3	Frequent communication with the RCG NSNABA chairs.

Summary of the Work Plan

Year 1	An ad-hoc core group will meet once, online, in 2024, to plan the 2024 WGNSNETSEA meeting, including inviting experts needed to work on the tasks (fixed resolutions and specific requests); in the 2024 meeting the core group for 2025 and 2026 will be defined. WGNSNETSEA plenary: prima focus on data collation by working on ToR c), and on common issues for all surveys in the region (ToR b))
Year 2	In general, the core group should take care of the group's focus (long-term goals), and make sure the WGNSNETSEA builds upon previous work. For 2025 onwards, the core group should meet 3-4 times a year, online for approx. 2 hours, also focussing on: • Evaluate requests on fisheries independent monitoring (data collection, use, availability, ...) in dialogue with the requester; • Prioritise those requests (in case of urgency -e.g. interbenchmark-: organise ad-hoc meeting with dedicated experts); • Monitor follow-up of actions. WGNSNETSEA plenary: to be decided by core group, based on WGNETSEA 2024 outputs

Year 3	In general, the core group should take care of the group's focus (long-term goals), and make sure the WGNSNETSEA builds upon previous work. For 2025 onwards, the core group should meet 3-4 times a year, online for approx. 2 hours, also focussing on: • Evaluate requests on fisheries independent monitoring (data collection, use, availability, ...) in dialogue with the requester; • Prioritise those requests (in case of urgency -e.g. interbenchmark-: organise ad-hoc meeting with dedicated experts); • Monitor follow-up of actions. WGNSNETSEA plenary: to be decided by core group, based on WGNETSEA 2025 progress

Supporting information

Priority	High priority. The EOSG structure aims to develop groups that make better use of the collective data within a region, in this case NETSEA meetings. This information is important requested to feed a variety of policy objectives (fishing opportunities, biodiversity conservation, spatial management, …) and for science groups alike. The WGNSNETSEA will also provide evaluations of data collections in the North Sea which will be critical to the regional coordination of the data collection for fisheries independent data undertaken within RCGs and their establishement of Regional Work Plans replacing National Work Plans in some parts. The prime perspective of the WGNSNETSEA will be data use of regular fishery-independent surveys. Other information will be taken into account, and optimisation of sampling regimes may follow from data evaluation, but are not considered to be the main task in the first years of the WGNSNETSEA
Resource requirements	There are no additional resources required from ICES, but national support in the form of contributing members to the group will be important. RCG NANS&EA supports this initiative.

<table>
<tr><td>Participants</td><td>Maximum number of participants core group: 10.
The following expertises should be represented in the core group to het the WGNSNETSEA set up:
<table><tr><td>Expertise field</td><td>group</td><td>number of people</td></tr><tr><td>Otter trawl surveys</td><td>IBTSWG</td><td>1</td></tr><tr><td>Beam trawl surveys</td><td>WGBEAM</td><td>1</td></tr><tr><td>Acoustic surveys</td><td>WGIPS</td><td>1</td></tr><tr><td>Tv surveys</td><td>WGNEPS</td><td>1</td></tr><tr><td>Plankton surveys</td><td>WGSINS</td><td>1</td></tr><tr><td>Ecosystem assessment</td><td>WGINOSE</td><td>1</td></tr><tr><td>Statistical/modelling</td><td>-</td><td>1-2</td></tr><tr><td>Sampling design</td><td>-</td><td>1</td></tr><tr><td>Chair</td><td>-</td><td>1</td></tr></table>As the core group members will represent the expertise field in the region, it is advised that people with good insight in the surveys of a certain type in the region as well as a network within the ICES community participate in the core group. This could for example be a former chair.

Maximum number of participants WGNSNETSEA: 30.
Expertise needed for WGNSNETSEA depends on the topic, and will be further specified when the first meeting is prepared, but in broad sense it is: end-user expertise from stock assessment and ecosystem assessment working in North Sea area (e.g. WGINOSE, WGNSSK, HAWG, WGCRAN) as well as expertise in data analysis, survey design (e.g. WGIPEM, WGISUR, WGISDAA) and cruiseleaders/scientific leaders from all surveys in the area (representation from WGIPS, WGSINS, IBTSWG, WGBEAM, WGMEGS, WGNEPS).</td></tr>
<tr><td>Secretariat facilities</td><td>Involvement of ICES Data Centre is preferred in case of questions related to data download issues, or questions about alignment of vocabulary between datasets.</td></tr>
<tr><td>Financial</td><td>No financial implications.</td></tr>
<tr><td>Linkages to ACOM and groups under ACOM</td><td>There is a direct link to the advisory committee to facilitate the ecosystem approach.</td></tr>
<tr><td>Linkages to other committees or groups</td><td>WGNSNETSEA combines outcomes of the Workshop on Realigning of the Ecosystem Observation Group (WKREO, 2019), the workshop to plan an integrated monitoring programme in the North Sea in Q3 (WKPIMP, 2016) and the lessons learnt in the EU project ‘Towards a Joint monitoring programme for the North Sea and the Celtic Sea (JMP NS/CS)’, and the Workshop on Pilot North Sea Fisheries Independent Regional Observation (WKPILOT-NSFiRMOG) (WKPILOT-FiRMOG, 2022).

There are close linkages to survey coordination groups (WGIPS, WGSINS, IBTSWG, WGBEAM, WGMEGS) as well as WGISDAA, WGIPEM, WGINOSE, WGNSSK, HAWG, WGNEPS.</td></tr>
<tr><td>Linkages to other organizations</td><td>There is an important link to the RCGs and the EU Commission through the potential impact this work could have on the datacollection in the area regulated under DCF. Similar linkages exist at the national level for non-EU member countries. In future, also regional organisations like OSPAR and HELCOM may benefit from the methodologies developed in the WGNSNETSEA.</td></tr>
</table>

WGSSSE - Working Group on Size and Species Selection Experiments

2023/MT/EOSG06 Working Group on Size and Species Selection Experiments (WGSSSE), chaired by Haraldur Arnar Einarsson, Iceland/FAO, and Michael Pol, USA will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2024	2 June	St. John's, Canada		One-day meeting before or after WGFTFB
Year 2025	14 May	Mazara del Vallo, Italy		Election of new chairs(s)
Year 2026	TBD		Final report by TBD to ACOM/SCICOM	

ToR descriptors[2]

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Review historical and newly developed analytical and statistical methodologies to estimate size and species selection in towed and static fishing gears, including consideration of environmental covariates (both instantaneous and modelled).	Estimates of the selectivity of commercial fishing gear are critical to fisheries management through the assessment process and the development of more selective management measures. A shared understanding of the pros and cons of different methods of estimating selectivity is vital to progress. It can be helpful to understand the process of developing new survey gear.	5.4.	1, 2 or 3 year	Continuously under scrutiny in connection to the revision of research guideline
b	Write guidelines for field data collection, including covariates which may affect size and species selection.	Knowledge of the data requirements of the different methods will result in more consistent data collection across studies, even if conducted by non-experts.	5.4.	2, 3 year	Manuscript prepared for final processing before publication.

[2] Avoid generic terms such as "Discuss" or "Consider". Aim at drafting specific and clear ToR, the delivery of which can be assessed

c	Develop comprehensive guidelines for accurately estimating size and species selection for a global audience, with the best possible statistical methods and modelling known.	Wileman, et al. (1996) published a manual on the methodology for estimating retention or selectivity. WGFTFB members see a need to update the methodological information and augment it to include additional gear.	5.4.	1, 2 year	Manuscript prepared for final processing before publication.
d	Compiling the guidelines on field data collection and methods for accurately estimating fishing gear size and species selectivity into a technical report for ICES and possibly the FAO.	WGFTFB has been seeking to produce a much-needed updated manual to estimate selectivity but has struggled with time and resource issues to produce this. This WG, consisting of members of WGFTFB, aims to resolve this issue.	5.4.	1, 2, 3 year	Final technical report and guidelines

Summary of the Work Plan

Year 1	The first in-person meeting of the WG. We will review the obtained text and address pertinent issues and strategies for ongoing tasks.
Year 2	Bring text together for group editing, approval, and product near/final draft.
Year 3	Produce the final draft and determine the future of the WGSSSE.

Supporting information

Priority	The activities of this group will provide a much-needed update to a primary reference document, ICES Cooperative Research Report No. 215: Manual for Methods of Measuring the Selectivity of Towed Fishing Gears. The Manual is now over 25 years old and was developed before the availability of open-source statistical software and newer statistical methodology accessible due to computing power. ICES Report No. 215 is a foundational document for gear technologists.
Resource requirements	No resource requirements for ICES. Additional resources for these activities are minimal and will be drawn from members' institutions.
Participants	The Group consist of approximately 50 members, mostly drawn from WGFTFB.
Secretariat facilities	Standard support.
Financial	Publication of CRR
Linkages to ACOM and groups under ACOM	There are no obvious direct linkages.
Linkages to other committees or groups	There is a close working relationship with WGFTFB.
Linkages to other organizations	Fishing technology and operations team (NFIFO) / Food and Agriculture Organization of the United Nations (FAO)

Resolutions approved in 2022

WGBEAM - Working Group on Beam Trawl Surveys

2022/FT/EOSG01 The **Working Group on Beam Trawl Surveys** (WGBEAM), chaired by Ingeborg de Boois, the Netherlands, 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	20-23 March 2023	Hafnarfjörður, Iceland	First interim report by 30 April 2023 to SCICOM and ACOM	Chair: Ingeborg de Boois Additional chair to be defined
Year 2024	19-22 March 2024	Bremerhaven, Germany	Second interim report by 19 April 2024 to SCICOM and ACOM	
Year 2025	25-29 March 2025	Lowestoft, United Kingdom	Final report by 10 May 2025 to SCICOM and ACOM	

ToR descriptors[3]

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Coordinate inshore and offshore surveys, in the ICES areas as well as in the Adriatic Sea. Industry surveys are also included.	Dates, sampling areas and contact details of key persons are shared in order to (a) identify opportunities for tows on the same location, to support the deltaGAM methodology for index calculation in combining different survey gears. (b) coordinate effort in case of unforeseen circumstances hampering one of the surveys, primarily North Sea (c) Unaggregated beam trawl survey data are stored in DATRAS up and until the survey of the year previous to the meeting year. Data from the year(s) before	3.1	annually	(1) Finalized planning for the inshore and offshore beam trawl surveys, including areas where overlappinig tows may occur. (2) Updated ICES database for inshore and offshore beam trawl surveys. (3) Survey summary sheet by region.

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
		that, should be checked for completeness (final data submitted) (d) Report on the performance and abnormalities in the inshore and offshore surveys in the past year			
b	Review and if needed update the manuals for offshore and inshore beam trawl surveys	Review and update the survey manuals if needed.	3.1	annual check, finalisation in Year 3	Up-to-date manuals for offshore and inshore beam trawl surveys. If no changes occur over the time period, a time stamp identifying the latest review will be added to the latest version. Otherwise updated manuals will be provided.
c	Evaluate the offshore and inshore beam trawl survey data by region, as well as cross-regionally in a systematic and reproduceable manner. Document inconsistencies, or correct errors or omissions identified.	Evaluation by region will ensure that patterns in the data (e.g. time-series, cohort strength) are clear, even when inter-survey trends contradict. Evaluation across regions will provide insight in the commonalities and differences in e.g. stock dynamics, species abundance and/or length groups in different regions. Evaluation of e.g. species composition, length measurements and litter registrations will ensure that patterns in the data are based on correct data and not due to artefacts. By doing this in a reproduceable manner (R script), the focus can be shifted or extended over the years without re-inventing the wheel. Moreover, traceability of analyses increases. Evaluation of age-based information is relevant for stock assessment. As almost all final fisheries-	3.2, 3.3	annually	(a) Updated, consistent (e.g. species composition, litter coding, consistent species identification in overlapping survey areas) and quality controlled beam trawl survey data are available in DATRAS; (b) Up-to-date R script (github) to evaluate the results by region, and cross-regionally

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
		independent timeseries are generated by stock assessors themselves, the survey coordination group should make sure that there is sufficient insight prior to stock assessment on the development of age groups over time, regions, and species.			
d	Investigate growth patterns in plaice (*Pleuronectes platessa*), for small fish (day rings) as well for 1+ fish, over the areas.	Dutch research on histological maturation of plaice as well as field observations in the offshore beam trawl survey in the southwerstern North Sea show that plaice spawns in August/September in that area. It is unclear if the spawning results in reproduction. Additional data collection will be done, in order to do day-ring analayses for the 0-group plaice. Next to that, growth rates of fish (i.a. plaice) are changing directly affecting the length at age. As stock assessments are age based, a decrease of length at age will affect the available fish within the commercial length range.	3.2, 5.2	Year 3 finalising	Peer reviewed publication on plaice

Summary of the Work Plan

Year 1	(1) Compilation of survey summary sheets (2) Provide tabular overview of survey planning, including geographical areas for overlapping tows (3) Data for all beam trawl surveys (inshore and offshore) including litter uploaded in DATRAS for at least the past two years, as far as DATRAS allows the survey data to be submitted. For datasets where index calculation is done directly from DATRAS, as many years of the time-series should be uploaded as is feasible (4) R scripts for and results from the data evaluation by region as well as across regions (5) If relevant, updated inshore and offshore survey manual at sharepoint (6) Data collection and analyses on growth rates of plaice

Year 2	(1) Compilation of survey summary sheets (2) Provide tabular overview of survey planning, including geographical areas for overlapping tows (3) Data for all beam trawl surveys (inshore and offshore) including litter uploaded in DATRAS for at least the past two years, as far as DATRAS allows the survey data to be submitted. For datasets where index calculation is done directly from DATRAS, as many years of the time-series should be uploaded as is feasible (4) R scripts for and results from the data evaluation by region as well as across regions (5) If relevant, updated inshore and offshore survey manual at sharepoint (6) Data collection and analyses on growth rates of plaice
Year 3	(1) Compilation of survey summary sheets (2) Provide tabular overview of survey planning, including geographical areas for overlapping tows (3) Data for all beam trawl surveys (inshore and offshore) including litter uploaded in DATRAS for at least the past two years, as far as DATRAS allows the survey data to be submitted. For datasets where index calculation is done directly from DATRAS, as many years of the time-series should be uploaded as is feasible (4) R scripts for and results from the data evaluation by region as well as across regions (5) If relevant, updated inshore and offshore survey manual at sharepoint, and versions ready for review and publication (6) Finalisation of analyses on growth rates of plaice, first draft of peer reviewed publication ready.

Supporting information

Priority	The scientific surveys coordinated by this Group provide major fishery-independent tuning information for the assessment of several fish stocks in the a number of regions. 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 about 12 beam trawl survey experts
Secretariat facilities	Report finalization, support ICES Data Centre with respect to DATRAS-related topics
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	The survey data feed into to the assessments of flatfish stocks, brown shrimp and elasmobranch species carried out by various stock assessment EGs. Linked to ACOM through the quality of stock assessments and management advice.
Linkages to other committees or groups	Outcomes of and data supplied by WGBEAM are relevant to WGML, possibly to BEWG, and integrated ecosystem assessment groups.
Linkages to other organizations	The offshore beam trawl survey data are used in the large fish indicator (OSPAR).

WGNAEO - Working Group on Northwest Atlantic Ecosystem Observations

2022/FT/EOSG02 A **Working Group on Northwest Atlantic Ecosystem Observations** (WGNAEO), chaired by Lindsay Beazley, Canada, 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	June 13-14, 2023	Online meeting	Interim report by 12 July 2023 to Ecosystem Observation Steering Group	Lindsay Beazley (Canada) will replace Don Clark (Canada) as Chair
Year 2024	18 June 2024	Online meeting	Interim report by 7 July 2024 to Ecosystem Observation Steering Group	Philip Politis steps down as chair of the group. Incoming chair is TBD
Year 2025	TBD	Canada	Final report by July 2025 to Ecosystem Observation Steering Group	

ToR descriptors [4]

ToR	Description	Background	Science Plan codes	Duration	Expected Deliverables
a	Coordinate US and Canadian resource and ecosystem survey strategies for enhanced regional evaluation in the Northwest Atlantic.	Canada and the U.S. aer expecting to undertake a coordinated spring bottom trawl survey, which would entail addressing differences in strata design, gear, and ecosystem observations. The main product of this ToR would be an operational plan to coordinate surveys, subject to review by DFO and NEFSC leadership. After implementation of the Plan, the WG would review the coordinated survey activities.	3.1, 3.2	3 years	GIS Shapefile for strata boundaries. Planned sampling intensity by stratum for NEFSC and DFO. Trawl catch samping objectives by area. Trawl description and coordination plan to ensure consistency in trawl design and survey protocols.

[4] Avoid generic terms such as "Discuss" or "Consider". Aim at drafting specific and clear ToR, the delivery of which can be assessed

b	Coordinate and develop access, metadata, and methods for integrating historical Canadian and U.S. trawl survey data to facilitate scientific analyses	With ongoing concerns over the changes in species distribution and changes in species productivity on the Northwest Atlantic shelf, approaches for combining the two nation's datasets would be extremely valuable to regional science and management entities. The purpose here would be to develop data sharing methods and methods for analyzing combined data.	3.1, 3.2, 3.3	3 years	Trawl data set for coordinated survey will be made available with recommendations on how to combine data for joint analyses. Review methods for including trawl and oceanographic data in a combined data set.
c	Collate and review ocean observations collected in the Northwest Atlantic Ocean and conduct gap analyses to inform integrated ecosystem assessments and ecosystem science activities.	There are long-standing oceanographic monitoring programs underway in the Northwest Atlantic Ocean. Under this ToR, the WG will aim to optimize current ocean monitoring activities in support of marine resource management.	3.1, 3.2	3 years	ToR c will focus on optimizing oceanographic data collection for client (e.g. WGNARS) needs, while improving data accessibility in conjunction with ToR B. A sub-group will be established to oversee zooplankton data collection on future coordinated surveys. A technical paper led by ToR c will be published on oceanographic and fisheries data collection on the first coordinated survey.

Summary of the Work Plan

YEAR 1	THE WG WILL MEET AND REVIEW COMPLETED GIS SHAPEFILES, PLANNED SAMPLING INTENSITY, SAMPLING PROTOCOLS AND TRAWL DESIGN FOR TOR A.). DEFINE DATA ELEMENTS FOR A COMBINED DATA SET FOR TRAWL AND ELEMENTS OF OCEANOGRAPHIC DATA. REVIEW OPTIONS AND SELECT A MODE FOR MAKING TRAWL SURVEY DATA AVAILABLE AS A COMBINED DATA SET (TOR B). TOR C WILL FOCUS ON OPTIMIZING OCEANOGRAPHIC DATA COLLECTION AND ACCESSIBILITY, AND IDENTIFY AND ESTABLISH STRONG LINKAGES WITH CLIENT (E.G. WGNARS, CAUSES) NEEDS. A TOR C ZOOPLANKTON SUBGROUP WILL BE ESTABLISHED THAT WILL OUTLINE THE SELECTION PROCESS FOR DUAL TOWS ON FUTURE COORDINATED SURVEYS, IN CONJUNCTION WITH THE ACTIVITIES OF TOR A.

Year 2	The WG will complete the trawl survey coordination plan and deliver to U.S. and Canadian leadership for review (ToR a). The WG will also make recommendations as to combining data for joint analyses (ToR b). The ToR c will establish a pathway for additional inter-comparative analyses to evaluate the differences between bongo vs. ring net tows with a focus on identifying species/taxa that could be combined across the northwest Atlantic.
Year 3	The WG will review status of coordinated surveys (ToR a). Trawl survey data will be made available either jointly or with described methods on how to combine (ToR b). A technical paper describing oceanographic and fisheries data collection on the first coordinated survey led by ToR c will be published.

Supporting information

Priority	High priority. The ToRs of this working group are closely aligned with a number of the observation and exploration priorities described in the ICES Science Plan. Additionally, this expert group will conduct survey coordination, data complication, and oceanographic information that will aid WGNAM to assess environmental and ecosystem effects on mackerel stock dynamics.
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 will be attended by 15-25 members.
Secretariat facilities	WebEx Coordination may be requested
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are no immediate linkages but developing the expertise could link to ACOM in the future especially WGNAM.
Linkages to other committees or groups	There is a very close working relationship WGNARS. In addition connections will be developed with WGOH and other EOSG groups including WKUSER 1 and 2.
Linkages to other organizations	There are linkages to a number of organizations and institutions throughout the western North Atlantic engaged and interested in ecosystem observations including academic, government, non-governmental organizations, and marine industries.

WGIDEEPS - Working Group on International Deep Pelagic Ecosystem Survey

2022/FT/EOSG03 A **Working Group on International Deep Pelagic Ecosystem Surveys** (WGIDEEPS), chaired by Hannes Höffle, Norway, and Matthias Bernreuther, 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	13-14 June 2023	Online meeting	Interim report by 12th July 2023 to ACOM-SCICOM	Hannes Höffle and Matthias Bernreuther will continue as chairs (Hannes Höffle until Summer 2023).
Year 2024	13-15 February	ICES HQ, Copenhagen	Interim report by 28 March 2024 to ACOM-SCICOM	
Year 2024	13-15 August	Hafnarfjordur, Iceland	Interim report by 10 September 2024 to ACOM-SCICOM	
Year 2025	TBD January/February	TBD	Interim report by 1 March 2022 to ACOM-SCICOM	
Year 2025	TBD	TBD	Final report by 15 September 2022 to ACOM-SCICOM	

ToR descriptors [5]

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Update former SISP 11, incorporating the Norwegian Sea survey, and publish in TIMES	So far, the Nowegian Sea survey on pelagic Sebastes mentella has not been incorporated into the IDEEPS SISP 11.	3.2	Year 1 (2023)	Updated TIMES survey protocol1
b	Finalise transfer of trawl survey data from international deep pelagic ecosystem surveys coordinated by the group to ICES DATRAS or Acoustic Trawl Survey databases	Data is now stored by individual nations/participants. ICES has committed to a fully transparent and documented quality assurance framework for all data products and assessment results derived from data collated within the ICES working groups, this underpins agreements with all the recipients of ICES advice.	3.2	Year 1 (2023)	Inclusion of data in DATRAS or Acoustic Trawl Survey database

[5] Avoid generic terms such as "Discuss" or "Consider". Aim at drafting specific and clear ToR, the delivery of which can be assessed

c	Coordinate the international deep pelagic ecosystem survey with special emphasis on redfish to be carried out in the Irminger Sea and adjacent waters in June/July 2024	The WG has been responsible for the planning of the international trawl/acoustic surveys on pelagic redfish (*Sebastes mentella*) in the Irminger Sea and adjacent waters since 1994 and producing reports on the survey results and outcomes.	3.1, 3.2	Year 2 (January/ February meeting)	WGIDEEPS 2024 – 1 report chapter 1 March 2024 SCICOM
d	Report on the outcome of the Irminger Sea survey	a) Provide sound, credible, timely, peer-reviewed, and integrated scientific advice on fishery management and the protection of the marine environment. b) Redfish indices are being used by assessment working groups.	3.1, 3.2	Year 2 (August meeting)	WGIDEEPS 2024 – 2 report chapter 1 September 2024 SCICOM
e	Coordinate the international deep pelagic ecosystem survey with special emphasis on redfish to be carried out in the Norwegian Sea and adjacent waters in August 2025	The WG has been responsible for the planning of the international trawl/acoustic surveys on pelagic redfish (*Sebastes mentella*) in the Norwegian Sea since 2008 and corresponding reports on the survey results.	3.1, 3.2	Year 3 (January/ February meeting)	WGIDEEPS 2025 – 1 report 1 March 2025 SCICOM
f	Report on the outcome of the 2025 Norwegian Sea survey	a) Provide sound, credible, timely, peer-reviewed, and integrated scientific advice on fishery management and the protection of the marine environment. b) Redfish indices are being used by assessment working groups.	3.1, 3.2	Year 3 (September meeting)	WGIDEEPS 2025 – 2 report chapter 15 September 2022 SCICOM

Summary of the Work Plan

YEAR 1	Carry out ToR a-b
Year 2	Carry out ToR c-d
Year 3	Carry out ToR e-f

Supporting information

Priority	Essential, primary basis for the advice on the stock status of pelagic redfish in the Irminger Sea and adjacent waters and in the Norwegian Sea.

Resource requirements	N/A
Participants	Less than 12 participants (incl. the cruise leaders of each vessel and the principle experts involved in abundance and biomass calculations and deep sea ecology).
Secretariat facilities	N/A
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	NWWG, AFWG, WGDEC
Linkages to other committees or groups	SCICOM, WGOH, WGBIODIV, WKFAST, WGISDAA, ICES data centre
Linkages to other organizations	NAFO, NEAFC

WGALES - Working Group of Atlantic Fish Larvae and Eggs Surveys

2022/FT/EOSG05 A **Working Group of Atlantic Fish Larvae and Eggs Surveys** (WGALES), chaired by Maik Tiedemann, Norway, and Carolina Giraldo, France 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	7-8 November	Online	E-evaluation by Nov 2023 to EOSG	New Chairs (term 2023-26): Maik Tiedemann, Norway (Maik.Tiedemann@hi.no) Carolina Giraldo, France (Carolina.Giraldo@ifremer.fr) (Patrick Polte remains Co-Chair for a transition period until interim meeting 2023)
Year 2024	4-8 November	Vigo, Spain	Interim report by 20 Dec 2024 to EOSG	
Year 2025	Oct 2025	Online	E-evaluation by Oct 2025 to EOSG	
Year 2026	Oct 2026	TBD	End-of-Term report, Dec. 2026 to EOSG	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Review ichthyoplankton surveys in the light of their original purposes, with respect to design, estimation methods and challenges.	Ichthyoplankton surveys collect abundance data on fish early life history stages useful for estimating spawning stock biomass (SSB) and recruitment of several fish stocks. Effects of expanding ocean uses (e.g. wind farms, aquaculture, shipping etc.) could be evaluated.	1.4, 2.2, 3.2	year 2, 4	Review of (part of) ichthyoplankton surveys in respect to issues that arise when conducting the survey or assessing results from the surveys. Results presented as a part of the report.
b	Survey scientists work together to evaluate and recommend methodologies and research needs for sampling, processing and data analyses for ichthyoplankton surveys, concerning the early life history stages and the contributions from the adult components. WGALES also offers the possibility for data users to gain insights into the rationale, methodology and potential applications of fish early life stage ecology (and adult fish maturity) research.	Ichthyoplankton surveys need to keep pace with developing data needs and technological developments. The provision of a workshop/conference environment provides a forum for improvement, development of new ideas and innovative insights for these surveys, spatial distribution, behaviour and population resilience. WGALES explores the relations between environmental drivers and fish reproductive success.	1.4, 3.2, 4.4	year 2, 4	Standardization and calibration of methods, data provision across surveys. Outlook for future needs for and of early life stages research. Results presented as a part of the report.

c	Identifying the potential of ichthyoplankton surveys. to address additional research needs and knowledge gaps on ecosystem function. Additionally, collaboration with research on fish maturity will be facilitated to link fish maturation to reproductive success.	Plankton surveys are uniquely suited to addressing questions of broader ecosystem function. These surveys include additional sampling of environmental parameters (e.g. hydrography, zooplankton). Ichthyoplankton surveys deliver important information on e.g. climate change related shifts in species phenology, physiology, spatial distribution, behaviour and population resilience. WGALES explores the relations between environmental drivers and fish reproductive success.	1.4,1.8,2.2	year 2, 4	Dedicated theme sessions for WGALES meeting.
d	Present and report on the effects of changing reproductive dynamics and fish early life strategies on current ichthyoplankton surveys.	Successful surveys are dependent on understanding the life-history dynamics of the target organisms and understanding how these may change with ecosystem variability.	1.7, 2.2, 3.2	year 2, 4	Evaluation of ichthyoplankton surveys in the light of changes in reproduction or early life strategies.
e	To work together with ichthyoplankton data providers and experts to evaluate and improve surveys. This will include collaboration across members in several ICES expert groups including WGACEGG, WGMEGS, WGSINS, WGBIOP, WGSMART.	Specialist working groups need a forum with experts from other types of ichthyoplankton surveys and personnel working in different areas to seek guidance and advice.	2.3, 3.2, 3.4	year 1, 2, 3, 4	Combined meetings with experts from other ICES working groups.
f	Provide a standardized framework for ichthyoplankton data bases and facilitate implementation of new survey data into the ICES egg and larvae data base in collaboration with the ICES Data Center.	Ichthyoplankton data needs to be of high quality and openly accessable for the assessment working groups and the scientific community to generate indices and scientific output.	3.2, 4.2	year 1, 2, 3, 4	Updated dataset on the ICES egg and larval database

Summary of the Work Plan

YEAR 1	WGALES will meet online to act upon urgent ToR's from ichthyoplankton survey groups (ToRs e,f)
Year 2	WGALES will meet to address ToRs a, b, c, d, e, f

Year 3	WGALES will meet online to act upon urgent ToR's from ichthyoplankton survey groups (ToR d)
Year 4	WGALES will meet to address ToRs a, b, c, d, f

This Working Group meets every two years in a four-year term with shorter annual online meetings if required to work on particular ToRs. The meeting format covers general matters concerning ichthyoplankton surveys and includes specialised theme sessions on current topics and relevant innovations. These topics can range from new innovations in survey equipment and design to evaluation of current ichthyoplankton surveys and their protocols. New topics are chosen at the end of each meeting to encourage participants to address concerns and emerging issues in the period between meetings. As such, new meeting ToRs can arise every two years to add content to the biannual meeting.

Supporting information

Priority	The activities of WGALES are vital for the delivery of state-of-the-art ichthyoplankton surveys, ensuring high standards and incorporating new techniques and developments for the future. WGALES will lead to the cross fertilization of ideas, methodologies, developments and standardization of ichthyoplankton surveys in the ICES area. Hence providing a platform from which to improve the assessments based on the ichthyoplankton surveys.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed.
Participants	The Group is normally attended by 20–30 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are linkages with ACOM through the individual ichthyoplankton surveys groups that are associated with WGALES and their assessment groups that use plankton data.
Linkages to other committees or groups	There is a close working relationship with the all the ICES expert groups of ichthyoplankton surveys, WGMEGS, WGSINS, WGACEGG, their assessment groups, WGWIDE, HAWG, WGHANSA, WGBFAS and cross-group collaboration on particular subjects with WGBIOP and WGSMART.
Linkages to other organizations	No formal linkages.

WGACEGG - Working Group on Acoustic and Egg Surveys for small pelagic fish in NE Atlantic

2022/FT/EOSG07 The **Working Group on Acoustic and Egg Surveys for small pelagic fish in NE Atlantic (WGACEGG)**, chaired by Guillermo Boyra, Spain and Paz Diaz, Spain, 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	13-19 November	Pasaia, Spain	Interim report by 17 December 2023 to EOSG	**Outgoing chairs:** Jeroen van der Kooij, U.K and Maria Manuel Angélico, Portugal **Incoming chairs:** Guillermo Boyra, Spain and Paz Diaz, Spain
Year 2024	18-22 November	Galway, Ireland	Interim report by 3 January 2025 to EOSG	
Year 2025	TBD	TBD	Final report by TBD to EOSG	Select new chairs for new term (2026-2028)

ToR descriptors[6]

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Evaluate and provide echo-integration and/or Daily Egg Production Method (DEPM) estimates for sardine, anchovy horse mackerel, boarfish, herring, and sprat, chub mackerel, blue whiting, in ICES sub-Areas 6, 7, 8 and 9	a) Data provide backbone of relevant stock assessments for key species at relevant WGs (Advisory Requirements) b) Requirements from other EGs	3.1	annually	Abundance and biomass estimates by age and/or length group . Fish spatial distribution will be provided to WGHANSA, WGWIDE, HAWG by the end of the WGACEGG meeting. Datasets will be published in the ICES repository when available.
b	Analyse sardine, anchovy (adults and eggs), and other SPF spatial and temporal distribution and their habitats in European waters	a) Surveys collect additional data on the wider ecosystem; interannual variation in sardine, anchovy biomass and other SPF distribution will be studied in relation to ecological processes. Science Requirements b) Requirements from other EGs	1.5	Year 2	Aim to publish results: Ecological processes driving: 1. seasonal, and 2. Longterm distributions in a peer reviewed paper in 2026; with decision to be made following review of results and progress in 2023.

[6] Avoid generic terms such as "Discuss" or "Consider". Aim at drafting specific and clear ToR, the delivery of which can be assessed.

c	Provide ecosystem data such as temperature, salinity, plankton diversity, top predators abundances, egg densities and backscattering for small pelagic fish for pelagic ecosystem monitoring (e.g. MSFD)	a) Combining the data from concurrent surveys (e.g. spring) provides improved insight into large scale features potentially affecting local survey observations and will ultimately help improve (understanding of both) the stock assessment and ecosystem dynamics. (Science Requirements) b) Requirements from other EGs	1.4, 1.5	annually	Gridded maps updated every year for temperature, salinity, egg densities and backscattering for small pelagic fish . Datasets will be published in the ICES repository when available
d	Assess developments in the technologies and data analyses for the application of both acoustics and the DEPM (on egg production or adult parameters).	a) Ensure best practise is applied. Science Requirements b) Advisory Requirements c) Requirements from other EGs	3.3	3 years	Report relevant new methodologies in annual WG report, available to the public one month after the meeting.
e	Improve and assess the suitability of CUFES data for anchovy and sardine egg production estimates in areas 8 and 9.	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	3.3	3 years	Report relevant new developments in annual WG report, available to the public one month after the meeting.
f	Develop and standardise data processing methods for DEPM and acoustics for surveys in Atlantic and Mediterranean waters	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	3.1, 3.2	3 years	Updated data processing protocols shared with the other relevant survey and data governance groups
G	Provide echo-integration estimates for other species (mainly blue whiting, mackerel, herring, sprat, horse mackerel, chub mackerel, pearlsideand boarfish) ICES sub-Areas 6, 7, 8 and 9	a) Surveys collect additional distribution, abundance and biological data on pelagic fish species, that are not currently used in stock assessment – make available for studies and possible future inclusion in assessment or ecological studies Advisory Requirements b) Requirements from other EGs	3.5	3 years	Biomass per age group when available otherwise per length classes and spatial density distribution. Datasets will be published in the ICES repository when available.
H	Coordinate surveys and develop and review the protocols for the WGACEGG surveys (DEPM: BIOMAN, SAREVA, PT-DEPM-PIL, BOCADEVA; Acoustic: PELAGO, PELACUS, PELGAS, ECOCADIZ, WESPAS, ECOCADIZ RECLUTAS, IBERAS-JUVESAR, JUVENA, PELTIC, CSHAS) in line with ICES QAprocedures	ICES aims to have a quality assurance process for data collections used in the provision of advice. One element of this is that all procedures describing the data collection are adequately described.	3.1	annually	Review acoustic and DEPMsurvey manuals, (TIMES) for the data collection, processing and deliverables and if required, submit new versions for publication.

I	Compare acoustic and DEPM biomass estimates of anchovy and sardine and evaluate their respective bias and precision with a view to providing improved data to stock assessment WGs	a) Currently, DEPM and acoustic derived indices for anchovy and sardine are presented separately to stock assessment working groups. Data from either methods may be used to validate the other method and improve information provided to assessment WGs. Science Requirements b) Advisory Requirements c) Requirements from other EGs	-	3 years	Report relevant developments in annual WG report,
J	Ongoing development on the use of image recognition techniques to characterise the distribution of mesozooplankton and possibly microplastics in areas 6, 7, 8 and 9, based on CUFES and/or plankton nets.	a) Science Requirements b) Requirements from other EGs	1.2	3 years	
	Use of emerging techniques (eg. genomics) to monitor the pelagic environment				Report annually on the progress
K	Collaborate with groups wishing to utilize available timeseries from WGACEGG coordinated surveys.	a) Science Requirements	3.2	Years 1-3	Facilitate collaborative activities with other groups, by contributing expertise and data to large scale studies on small pelagic fish.

Summary of the Work Plan

Year 1	Annual meeting, including if convenient, a joint session with other shared interest groups: • Evaluation of echo-integration and/or Daily Egg Production Method (DEPM) estimates for sardine, anchovy, horse mackerel, boarfish, herring, and sprat in ICES sub-Areas 6, 7, 8 and 9 • Update of gridded maps of ecosystem data derived from surveys, and assessment of feasibility of production of megafauna and mesozooplankton grid maps for ecosystem assessment • Session on historic data series consolidation and storage • Update of the WGACEGG DEPM and acoustic Survey Protocols (TIMES) if required • Session on acoustic data collection and analysis, including a topic on the analysis of acoustic data in presence of mixed mesopelagic and juvenile anchovies assemblages • Session on DEPM data collection and analysis • Session on comparison of acoustic and DEPM indices • Session on results of the analysis on time series of gridded maps of species-and ecosystem data • Session to analyse progress on sardine and anchovy egg production estimates from CUFES

Year 2	Annual meeting, including if convenient, a joint session with other sahred interest groups: • Evaluation of echo-integration and/or Daily Egg Production Method (DEPM) estimates for sardine, anchovy, horse mackerel, boarfish, herring, and sprat in ICES sub-Areas 6, 7, 8 and 9 • Update of gridded maps of ecosystem data derived from surveys, historic data series consolidation and storage • Session on historic data series dissemination and valorisation • Update of the WGACEGG DEPM and acoustic Survey Protocols (TIMES) if required • Session on acoustic data collection and analysis • Session on DEPM data collection and analysis • Session on comparison of acoustic and DEPM indices • Session to analyse progress on sardine and anchovy egg production estimates from CUFES • Session on the use of image recognition techniques to characterise the distribution of (surface) mesozooplankton communities
Year 3	Annual meeting, including if convenient, a joint session with other shared interest groups: • Evaluation of echo-integration and/or Daily Egg Production Method (DEPM) estimates for sardine, anchovy, horse mackerel, boarfish, herring, and sprat in ICES sub-Areas 6, 7, 8 and 9 • Update of gridded maps of ecosystem data derived from surveys, historic data series consolidation and storage • Update of the WGACEGG DEPM and acoustic Survey Protocols (TIMES) if required • Session on developments in acoustic data analysis • Session on developments in DEPM data analysis • Session on comparison of acoustic and DEPM indices • Session to analyse progress on sardine and anchovy egg production estimates from CUFES • Session on the use of image recognition techniques to characterise the distribution of (surface) mesozooplankton communities

Supporting information

Priority	The current activities of this Group will ensure the provision and the quality of the data provided to ACOM advisory groups in charge of the assessment of anchovy, sardine, blue whiting, Atlantic and horse mackerels, boarfish, herring and sprat in ICES sub-Areas 6, 7, 8 and 9. The activities of the group will also lead to the provision and analyses of a series of gridded maps of data on the hydrology, phytoplankton, small pelagic fish and megafauna of the North Eastern Atlantic pelagic ecosystem. Those spatially explicit data will be useful to any group interested in assessing the state of the North Eastern Atlantic pelagic ecosystem. 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 15–30 members and guests.
Secretariat facilities	None.
Financial	No financial implications.

Linkages to ACOM and group under ACOM	WGACEGG is cooperating with the following advisory structures a) ICES Assessment Working groups: WGHANSA, WGWIDE, HAWG together with related Benchmark WG and Workshops b) Advice drafting Groups: ADGHANSA
Linkages to other committees or groups	There is a close working relationship with the following SCICOM groups: WGFAST, WGALES WGEAWESS and WGMEGS. Similarly, it is anticipated that close collaboration will be createdwith WGSPF, which will benefit from WGACEGG's expertise and data.
Linkages to other organizations	

WGFTFB - ICES-FAO Working Group on Fishing Technology and Fish Behaviour

2022/FT/EOSG08 The ICES-FAO Working Group on Fishing Technology and Fish Behaviour (WGFTFB), chaired by Noëlle Yochum (United States), Paul Winger (Canada), and Jon Lansley (on behalf of FAO), will meet to work on the following Terms of References (ToRs) and produce deliverables as listed in the following table for the years 2024 through 2026. WGFTFB will report on the activities and findings within three months of meetings to EOSG.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2024	3-7 June	St. Johns, Canada	Final report by September 30, 2024 to EOSG	Outgoing chair: Daniel Stepputtis Incoming chair: Noëlle Yochum Renew FAO chair: Jon Lansley
Year 2025	15-20 May	Mazara del Vallo, Italy	Final report by September 30 2025 to EOSG	Outgoing chair: Antonello Sala. Incoming chair: Paul Winger
Year 2026	TBD	Queensland, Australia	Final report within three months of the meeting to EOSG	FAO-sponsored meeting. Election of new chair(s)

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	During annual meetings, deliberate, discuss and synthesize recent research on topics related to: i) designing, planning, and testing of fishing gears used in abundance estimation; ii) selective fishing gears for the reduction of bycatch, discard and unaccounted mortality; iii) environmentally benign fishing gears, including innovations to mitigate ALDFG and the risk of 'ghost fishing' and methods; iv) improving fuel efficiency and reduction of emission from fisheries; v) fish behaviour near and inside fishing gear as it relates to the previous topics; vi) summaries of relevant research activities by nation; and vii) innovative technologies improving the safety of fishing operations.	Through open sessions and focused, multi-year topic groups, the Working Group provides opportunities for collaboratively developing research proposals, producing reports and manuscripts, and creating technical manuals on current developments and innovations.	3.3, 4.5, 5.4	Years 1 and 2	ICES report
b	Organize an FAO-ICES symposium as described in (a) with additional thematic sessions to be determined in year 2.	Under mutual agreement between ICES and FAO, FAO develops and leads a symposium of relevant topics, while also continuing ICES commitments.	2.1, 4.5, 5.4	Year 3	ICES- FAO joint report
c	Support FAO members, and ICES working groups and workshops with fishing gear and fish behaviour expertise upon request.	EOSG has identified gear expertise gaps in other working groups (e.g. survey) and workshops.	3.2	Years 1-3	Report of relevant working groups or associated workshops

Summary of the Work Plan

Year 1	Organize an annual meeting; produce a meeting report; provide expertise to FAO and other ICES WGs and workshops upon request
Year 2	Organize an annual meeting; produce a meeting report; provide expertise to FAO and other ICES WGs and workshops upon request
Year 3	Organize an FAO-ICES symposium; produce meeting reports (ICES and FAO); provide expertise to FAO and other ICES WGs and workshops upon request

Supporting information

Priority	The activities of WGFTFB will provide ICES and FAO members with knowledge, expertise, and guidance on issues related to the ecosystem effects of fisheries, especially the evaluation and reduction of the impact of fishing on marine resources and ecosystems and the sustainable use of living marine resources and other topics related to the performance of commercial fishing gears and survey gears and their safe operation.
Resource requirements	The research programmes that provide the main input to this working group already exist, and resources are already committed by individual institutions. FAO has committed to supporting the WG by sponsoring a WG symposium every third year. There are no additional resource requirements for the EG beyond the secretariat support for group organization.
Participants	The group is normally attended by about 60–100 regular members and chair-invited members. Participation is approximately 100-150 in the year when FAO-ICES symposium is held. The numbers of attendees to the meeting have been growing in recent years.
Secretariat facilities	None
Financial	A new group website (wgftfb.org) was developed during the 2020-2023 term. Funds for hosting maintenance going forward may be covered by FAO. Apart from these costs, there are no additional resource requirements for the WGFTFB beyond the secretariat support for group organisation. There are no financial commitments required for membership or participation in the annual meetings.
Linkages to ACOM and groups under ACOM	Linkages to advisory groups as required.
Linkages to other committees or groups	There is a very close working relationship with other ICES groups, e.g. WGSSE, WGFAST, WGBYC, WGING and DSTSG.
Linkages to other organizations	The WG is jointly sponsored by the FAO.

EGs to be dissolved by the end of 2024

Res. Code	EG name	Chairs
2023/WK/EOSG03	WKAEPM 2 – The Workshop on Adult Egg Production Methods Parameters estimation in Mackerel and Horse Mackerel 2	Maria Korta, Spain
2023/WK/EOSG/04	WKMACHIS 2 - Workshop on Mackerel, Horse Mackerel and Hake Eggs Identification and Staging 2	Ewout Blom, Netherlands, and Hannah Holah, Scotland, UK
2022/WK/EOSG06	WKTAG - Workshop on Mark-Identification Tagging	Sophy McCully Phillips, UK and Pia Schuchert, UK