Ecosystem Observation Steering Group EGs Resolutions

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 Tiit Raid, Estonia and Olavi Kaljuste, 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	TBD	TBD	Interim report by 15 May 2025 to, SCICOM and ACOM	
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.

WKAEPM 2 - Workshop on Adult Egg Production Methods Parameters estimation in Mackerel and Horse Mackerel 2

2023/WK/EOSG03 **The Workshop on Adult Egg Production Methods Parameters estimation in Mackerel and Horse Mackerel 2 (WKAEPM 2)** chaired by Maria Korta*, Spain, will meet in San Sebastian, 11-15 November 2024 to:

a) Inter-calibration of egg production methods (Annual and Daily Egg Production Methods), including historical re-evaluation of histological samples for maturity, fecundity, batch fecundity Estimation and atresia and post-ovulatory follicle classification. **ICES Science plan** 3.1, 3.3, 5.1

b) Comparison of egg production indices based on harmonized maturity, fecundity, atresia and POF estimates with currently used egg production estimates. **ICES Science plan** 3.1, 3.3, 5.1

c) Review existing, previously utilized and newly developed methods and calculations for realised fecundity estimation as well as batch fecundity and spawning fraction estimation, and document changes in procedures and their consequences in a protocol to be stored on the WGMEGS GitHub. **ICES Science plan** 3.1, 3.3, 5.1

d) Review available documentation on adult parameters estimation, both textual and figures, to redefine the standard protocols and update the survey manual. **ICES Science plan** 3.1, 3.3, 5.1

WKAEPM 2 will report by 31st January 2025 for the attention of EOSG, WGMEGS, WGALES and WGBIOP

Supporting Information

Priority	Data quality, used to provide fisheries advice through WGWIDE, will be impaired if this workshop is not conducted.
Scientific justification	Adult reproductive parameters estimation is fundamental for conversion of egg production into spawning stock biomass of western and southern mackerel and horse mackerel stock components. Both (batch) fecundity and atresia estimation as well as spawning fraction estimation are carried out using histological and image analysis methods, and the analysis and interpretation of these materials requires standardization across participating institutes. The standardization in this aspect is carried out in workshops since 2001 which have been extremely helpful for agreed practices among institutes and is recommended that experiences gathered during these workshops be extended during a workshop in 2024. It is expected that the workshop will refine the developed methodologies and clarify established calculations for these adult parameters estimation to obtain unbiased biomass output from the egg surveys.

	The workshop will update a TIMES manual with regards to any new findings in the fecundity, batch fecundity, atresia, and spawning fraction estimation from sampling, as well as the evaluation procedures and final calculations, for appropriate quality assurance purposes.
Resource requirements	None
Participants	Mainly scientists and technicians (approximately 20) involved in the surveys.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	ACOM
Linkages to other committees or groups	SCICOM, WGMEGS, WGBIOP, WGALES WGISDAA and WGWIDE
Linkages to other organizations	None.

WKMACHIS 2 - Workshop on Mackerel, Horse Mackerel and Hake Eggs Identification and Staging 2

2023/WK/EOSG/04 Workshop on Mackerel, Horse Mackerel and Hake Eggs Identification and Staging 2 (WKMACHIS 2) chaired by Ewout Blom*, Netherlands, and Hannah Holah*, Scotland, will meet in Bremerhaven, Germany, 21-25 October 2024 to:

c) Carry out internationally comparative plankton sorting trials on typical MEGS survey samples to evaluate and standardize the effectiveness of plankton sampling procedures. This should follow the pattern of trial – analysis– identification of problem areas – retrial; **ICES Science plan** 3.1

d) Carry out comparative egg identification and staging trials for mackerel, horse mackerel and hake eggs following the methodology used in the previous egg staging workshops in order to quality assure the egg production estimates for the target species; **ICES Science plan** 3.1

e) Discuss sources of misidentification and -staging of fish eggs and prepare an uncertainty matrix of mackerel, horse mackerel and hake egg identification and staging; **ICES Science plan** 3.1

f) Review available documentation on species identification and staging of fish eggs, define standard protocols and update relevant descriptions and pictures in the survey manual; **ICES Science plan** 3.1

WKMACHIS 2 will report by 19th December 2024 for the attention of EOSG, WGMEGS and WGBIOP.

Supporting Information

Priority	High priority to ensure the quality of data provided to WGWIDE for the production of advice.
Scientific justification	Sorting fish eggs from plankton samples, their staging and identification to species remains one of the key proficiencies in the execution of the mackerel and horse mackerel egg surveys. As this is carried out by a number of different operators in many different countries, and then the data combined, it is vital that the process be standardized. WGMEGS strongly feels that this is best done through the mechanism of a regular workshop to compare results between survey participants. In the context of the triennial egg surveys, it proved appropriate to hold a workshop prior to every survey to standardize approaches and methodologies in the run-up to the surveys. This will have the advantage of training new operators as well as harmonizing the approach of experienced operators. Egg staging workshops were held since 2000, and were very successful in achieving these aims. It is recommended that experiences gathered during these be used for setting up the procedures for the proposed workshop in 2024. The workshop will use the proven method of carrying out a set of sorting trials, analysing the results and identifying problems, and then repeating the trials on the basis of the new understanding. The workshop will also be tasked to update the descriptions and photographs given in the MEGS manual to assist in the plankton sample handling procedure.
Resource requirements	None
Participants	Mainly scientists and technicians (approximately 20) involved in the surveys.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	SCICOM, ACOM
Linkages to other committees or groups	WGMEGS, WGBIOP, WGALES 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	25-29 November	ICES HQ, Copenhagen, Denmark	Interim report by 10 January 2025 May ACOM/SCICOM through EOSG and DSTSG	
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
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.

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

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.
Participants	Maximum number of participants core group: 10. The following expertises should be represented in the core group to het the WGNSNETSEA set up:

Expertise field	group	number of people
Otter trawl surveys	IBTSWG	1
Beam trawl surveys	WGBEAM	1
Acoustic surveys	WGIPS	1
Tv surveys	WGNEPS	1
Plankton surveys	WGSINS	1
Ecosystem assessment	WGINOSE	1
Statistical/modelling	-	1-2
Sampling design	-	1
Chair	-	1

	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).
Secretariat facilities	Involvement of ICES Data Centre is preferred in case of questions related to data download issues, or questions about alignment of vocabulary between datasets.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There is a direct link to the advisory committee to facilitate the ecosystem approach.

Linkages to other committees or groups	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.
Linkages to other organizations	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.

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	June	St. John's, Canada	Interim report by TBD to ACOM/SCICOM	One-day meeting before or after WGFTFB
Year 2025	TBD		Interim report by TBD to ACOM/SCICOM	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.
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

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

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	The 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	The second interim report by 19 April 2024 to SCICOM and ACOM	chair to be defined
Year 2025	2025 TBD	TBD		chair to be defined

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 that, should be	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
		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 Philip Politis, USA, and 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	
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	TBD August	*To be decided*	Interim report by 10 September 2024 to ACOM-SCICOM	
Year 2025	TBD January/February	*To be decided*	Interim report by 1 March 2022 to ACOM-SCICOM	
Year 2025	By correspondence		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

WKMADE - Workshop on Mackerel Daily Egg production

2022/WK/EOSG04 The **Workshop on Mackerel Daily Egg production (WKMADE)**, chaired by Dolores Garabana*, Spain, and Anders Thorsen*, Norway, will be established and will meet in 13–17 November 2023 (start: Monday afternoon, end: Friday lunch) at Vigo, Spain to:

a) Evaluate the lab procedures used to analyse adult ovary samples. This includes histology screening, staging of post ovulatory follicles (POF, for spawning fraction) and batch fecundity. Alternatives to POFfor the estimation of spawning fraction will be explored. (Science Plan codes: 3.1, 3.3, 5.1).

b) Look into the calculations of spawning fraction and batch fecundity, and derive a Daily Egg Production Method (DEPM) based estimates of Spawning Stock Biomass (SSB) for each of the four survey years, 2013 to 2022. The accuracy and precision of the newly derived time series of the DEPM method will be compared to the timeseries of the standard Annual Egg Production Method (AEPM) (Science Plan codes: 3.1, 3.3, 5.1).

WKMADE will report by 5TH January 2024 for the attention of the EOSG, WGMEGS and WGWIDE.

Supporting information

Priority	In recent years questions have been raised as to whether mackerel is a determinate or indeterminate spawner. Work has been carried out by WGMEGS to try to answer this question. A thorough analysis of the information collected is now a necessity. Consequently these activities are considered to have a very high priority.
Scientific justification	For a number of years there has been a debate as to whether mackerel can still be classed as determinate spawner, or should they be reclassified as an indeterminate species. Currently the Annual Egg Production Method, AEPM, is used for mackerel SSB calculations. Since the 2013 triennial survey WGMEGS has been collecting additional adult samples to estimate (Daily Egg Production Method) DEPM adult parameters. It is expected that the workshop will refine the developed methodologies and clarify established calculations for these adult parameter estimation.
Resource requirements	None
Participants	The Group will be attended by some 20–25 survey participants and invited experts.
Secretariat facilities	None.
Financial	No financial implications.

Linkages to advisory committees	ACOM , SCICOM
Linkages to other committees or groups	WGMEGS, WGWIDE, WGALES, WGACEGG, WGBIOP
Linkages to other organizations	None

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, Carolina Giraldo*, France and Patrick Polte, 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	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 2023 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 ichthy-oplankton 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 group 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.

WKTAG - Workshop on Mark-Identification Tagging

2022/WK/EOSG06 The **Workshop on Mark-Identification Tagging** (WKTAG), chaired by Sophy McCully Phillips (UK) and Pia Schuchert (Northern Ireland), will be established and will meet 29-31 January 2024 to review recent tagging programmes for fish (including shellfish) in the ICES area, in order to:

(a) Summarise data from recent and ongoing tagging programmes, primarily focussing on mark-identification tagging, but also using the platform to collate summary information on acoustic and electronic tagging, conducted by national institutes (2000-2022) (Science Plan codes: 1.4,1.8,3.1,3.2,3.3,3.5, 4.2); including providing summaries of:

(i) Details of the species being tagged by ICES Division, year, season/quarter, and platform (e.g. chartered fishing vessel, research vessel);
(ii) The tag types used for the various species and attachment methods;
(iii) Mark-recapture data available;
(iv) Contact details for tag reporting and relevant publicity awareness information.

(b) Review relevant guidelines and protocols used by national institutes for handling, tagging and releasing fish, and identify best practices for both relevant tag types and species (Science Plan codes: 3.1,3.2,3.3, ,3.5,3.6).

(c) Identify opportunities for improved coordination and collaboration in relation to mark-recapture studies, including specifying where additional mark-recapture studies could address relevant data gaps for species and stocks assessed by ICES and where existing studies could be used to enhance assessments or ecosystem analyses (Science Plan codes: 1.4, 1.7, 1.8,3.1,3.2,3.3,3.5, 5.2).

(d) Identify an appropriate time-line for future Expert Group meetings on tagging (Science Plan codes: 3.1).

(e) WKTAG will report by 29 February 2024 for the attention of the EOSG committee.

Supporting information

Priority	High. Tagging, including mark-identification tagging provides important mark-recapture data that informs scientific knowledge of the movements, stock structure, growth and longevity of fish. Despite such studies being informative for various aspects of fisheries science, there has been reduced coordination in recent years, although many national laboratories still have some mark-identification tagging programmes. A dedicated Workshop on this topic is required in order to share best practice and to improve communication and collaboration.
Scientific justification	Terms of Reference a) Summarise data from tagging programmes Several countries and organizations have been putting considerate effort in tagging programs, both historically and ongoing. The various studies woud benefit from a review of progress and an evaluation of results and success. While workshops like this have been conducted as part of the salmon working groups, it has not been approached within ICES for more general species. Terms of reference b) Review relevant guidelines and protocols To-date, the vast number of tagging programmes operational across the ICES area has no form of knowledge sharing and best practice guidelines in terms of tag, anchor and leader selection, tag application, data collected or animal handling. Potential impacts on animal welfare through tagging programmes could be mitigated by the sharing of best practice and data. Terms of reference c) Identify opportunities for improved coordination and collaboration In order for tagging data to be most valuable for future use in assessments, some form of standardisation and data gathering would be beneficial. Furthermore, ultimately a reduction in the numbers of fish tagged could be achieved through this collaborative approach. Terms of reference d) Identify an appropriate time-line for future Expert Group meetings on tagging Depending on the outcomes of this Workshop the scientific justification for additional Workshops or even the consideration of an expert group will be appraised.
Resource requirements	A 5-day Workshop
Participants	Such a Workshop would require representation from relevant national institutes, including relevant data managers, field scientists, fish ecologists and assessment scientists.
Secretariat facilities	SharePoint plus normal secretariat support.
Financial	No financial implications.
Linkages to advisory committees	Mark-recapture data are often important for the consideration of stock units, and so are fundamental to the assessment and advisory process.
Linkages to other committees or groups	There are linkages with survey planning groups (e.g. IBTSWG and WGBEAM) that may provide platforms for mark-identification tagging, expert groups addressing biological sampling (WGBIOP) and stock identification (SIMWG), expert groups addressing defined taxonomic groups (e.g. WGEF, WGNAS), the regional assessment working groups (e.g. WGNSSK, WGCSE, WGBIE) and groups examining discard survival (WGMEDS).

Linkages to other organizations	ICCAT, sportfish tagging programmes, Regional Coordination groups, inshore assessment groups/fisheries management groups (crabs, scallops, etc), various fishery organisations, including market inspectors

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	TBD	TBD	Interim report by TBD 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.

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

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.
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 (U.S.A.), Antonello Sala (Italy), 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	TBD	TBD	Final report within three months of the meeting to EOSG	Outgoing chair: Antonello Sala. Incoming chair: Paul Winger

Year 2026	TBD	TBD	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	FAO report, ICES 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 groups of EOSG, e.g. WGFAST; DSTSG, and HAPISG.
Linkages to other organizations	The WG is jointly sponsored by the FAO.

Resolutions approved in 2021

IBTSWG - The International Bottom Trawl Survey Working Group

2021/FT/EOSG01 The **International Bottom Trawl Survey Working Group (IBTSWG)**, chaired by Pia Schuchert, Northern Ireland and Jim Ellis, UK, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2022	4-8 April	Online meeting	Report by 20 May 2022 to EOSG	Outgoing: Ralf van Hal (Netherlands) and Pascal Laffargue (France). Incoming: Pia Schuchert, Northern Ireland and Jim Ellis, UK
Year 2023	27-31 March	Lysekil, Sweeden	Report by 30 April 2023 to EOSG	
Year 2024	8 - 12 April	Online meeting	Report by 20 May 2024 to EOSG	

ToR descriptors

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	Coordination and reporting of North Sea and Northeastern Atlantic bottem trawl surveys, including appropriate field sampling in accordance to 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, ongoing in order to improve survey and manuals quality.	3.1, 3.2	Recurrent annual update	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 to 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 DGG: 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	2.1, 3.1	Multi-annual activity.	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	Develop a new survey trawl gear package to replace the existing standard survey trawl GOV. (SCICOM)	The divergence in the GOV specification from the one given in the survey manual due to historical drift and technical creep has been acknowledged by the group (IBTSWG 2015). Furthermore, the deviation from the specification contained in the manual and between users has widened to the point where it will never be reversed. Therefore, the perefered option is to maintain the status quo of national GOV specifications and develop a new survey trawl package to replace the GOV. A number of IBTS members are due to replace vessels in the next few years and this provides an oppertunity to review time-series and undertake inter-calibration trials between the GOV and a new trawl. A further driver for a new gear has been highlighted by the Celtic Sea area where the necessity to optimize sampling opportunities are not been provided by the GOV. In parellel with trawl development the process of replacing the GOV will need to be defined with reference to continuing the assessments and existing time-series. (For this ToR, the IBTS WG seeks support from gear technology experts and welcomes their advice and input into the development of the new survey gear package)	3.1, 3.2	3 years	Final design(s); Full documentation of the gear, and how it should be rigged and operated at sea. Roadmap for implementing the gear in the ongoing survey. This will be developed at the WKFDN workshop as well as WKUSER 2 with support from WGISDAA and FTFB. There will also be linkages with the relevant assessment groups using IBTS data (WGNSSK, WGCSE, WGBIE, , WGWIDE, WGEF).

d	Evaluate the current survey design and explore modifications or alternative survey designs, identifying any potential benefits and drawbacks with respect to spatial distribution and frequency of sampling. Consider the effects of enforced changes in the distribution of survey stations (e.g. in relation to MPAs and offshore indutries). Explore potential additional data collection, e.g. stomach sampling and tagging (SCICOM) and engage with the Workshop on Pilot North Sea Fisheries Independent Regional Observation (WKPilot NS-FIRMOG).	The requirements for the surveys are continuously evolving. Additional information, like dietary data, are also required, while reductions in other parts being sampled might be possible and wished for in relation to ethical discussions. New techniques, like eDNA sampling, might be relevant to add to the surveys. Furthermore, the ecological footprint of the survey (fuel consumption, bottom impact, impact in MPAs) is a topic having potential consequences for the current survey design.	3.2	1-3 years	Resources permitting, stomach sampling program to be included in the NS-survey and in draft for the other regions

e	Making data from IBTS available to be used by different ICES end-users, such as assessment groups, OSPAR and others. Establish a communication with end user groups as to the needs of the users and the data available within DATRAS. Collate a user document that outlines the important caveats in the data with regards to non-target species (e.g. when a non-target species was first recorded as a species, the confidence in sampling). Establish a continued working relationship between user groups and survey group.	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 environmnental 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. Often the current SIC or survey team does not even know how the data were collected historically. It is important to get a deeper understanding of the historic processes and how to progress into the future.	Multi-annual project	1. Establish closer coordination and communication channels with user groups and possible user groups: how do they use the data, how can we enhance the value of the data, what questions do arise? 2. In which format should (historical) documentation be provided? Establish a guideline with user groups. What is actually being read, what is important. 3. Create a more detailed chronology of historical and contemporary surveys, with this bing a 'live document' (to be taken forward) about survey data capabilities and issues. 4. Enable users to interact with the survey team to establish new possibilities, e.g. use the data for multi-species analysis, biodiversity questions. Also a personal link between users and survey

	people will enable the users to form specific requests or propose collaborative work.

Summary of the Work Plan

YEAR 1	Develop a roadmap for the implementation of the new survey gear (ToR c) ; Develop a stomach sampling program for the NS-IBTS and drafts for the other regions (ToR d).
Year 2	Start the implementation of the roadmap for the new survey gear (ToR c); Depending on the outcomes of stomach sampling during the North Sea IBTS in year 1, and the resources available, refine and extend the stomach sampling programme as appropriate.
Year 3	Continue the roadmap of the new survey gear.
Recurrent annual activity	Updates for ToRs a, and b and initiate and updates for ToR e.

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 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.
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 Assessment WGs using IBTS indices. Also relevant to the 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 Biodiversity Science (WGBIODIV) and the Workshop on Pilot North Sea Fisheries Independent Regional Observation (WKPilot NS-FIRMOG).
Linkages to other organizations	IOC, GOOS, OSPAR, Regional Coordination groups (DCF).

WGIPS - Working Group of International Pelagic Surveys

2021/FT/EOSG02 The **Working Group of International Pelagic Surveys (WGIPS)** , chaired by Susan Maersk Lusseau, Denmark, 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 2022	24–28 January	Online Meeting	Interim report by 7 March 2022 to EOSG, SCICOM & ACOM	Incoming chair Susan Maersk Lusseau. Outgoing: Bram Couperus and Michael O´Malley
Year 2023	23–27 January	Belfast, Ireland	Interim report by 24 February 2023 to EOSG, SCICOM & ACOM	
Year 2024	22–26 January	Faroe Islands	Final report by 11 March 2024 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, GERAS, WESPAS, 6aSPAWN)	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs d) follow-up of WKPilot NSFIRMOG	3.1	years 1–3	Cruise plans for international and individual surveys.

c	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.
d	Periodically review and update the WGIPS acoustic survey manual to address and maintain monitoring requirements for pelagic ecosystem surveys	a) Science requirements b) Advisory requirements	3.1	years 1–3	Updated WGIPS survey manual in TIMES format.
e	Review the work, and report of workshops organised by WGIPS and develop formal ICES recommendations. This should include TIMES manual updates and adopting changes to survey coordination where deemed appropriate.	a) Science requirements b) Advisory requirements	3.1	years 1–3	Integrate results from WGIPS workshops into survey protocols where possible. Develop formal recommendations to other groups and agree answers to recommendations from other groups.
f	Review and evaluate survey designs 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	Optimize and harmonise sampling designs and precision estimates for the different surveys to ensure survey quality.
g	Assess and compare scrutinisation procedures employed for the analysis of raw acoustic data from WGIPS coordinated surveys	a) Science requirements b) Advisory requirements	3.2, 3.3	year 1-3	Documented standardised scrutinisation recommendations; Update of survey manual to address and maintain monitoring requirements for pelagic ecosystem surveys.
h	Collaborate with groups wishing to utilize available time-series from WGIPS coordinated surveys.	a) Science requirements	3.2	Years 1-3	Facilitate testing and developing forecast models provided by WGS2D. Make time-series data available for MEESO.

i	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 by WGIPS, (iii) continue to support the development of tools to improve the accuracy and precision of survey estimates.	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.
j	Continuted development of trawl sampling and hull mounted acoustic data collection during IBWSS surveys to support the routine reporting of mesopelagic fish abundance and distribution within established limitations. Leverage latest research from ongoing research projects (MEESO & SUMMMER) to improve data quality and reporting capacity	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	3.1, 3.4,	years 1–3	Ultimate goal is the routine reporting of mesopelagic fish abundance and distribution as part of the IBWSS survey and uptake by other candidate surveys within WGIPS. Upload of bioloigcal and acoustic data to the ICES trawl acoustic database. Provision of data to interested WGs and research projects.

Summary of the Work Plan

Year 1	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 1. Review the WGIPS acoustic manual in the TIMES format. 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 progress on TAF.
	Session on mesopelagic sampling: Review and feedback of sampling carried out in 2021. Update on reports from MEESO and SUMMER projects and workshops.
	Session on stock discrimination projects and the consequences for biological sampling on WGIPS surveys.
	Delivery of a WD on biological sampling strategies on HERAS surveys over time. Session on biological sampling strategies in WGIPS surveys
	Conduct a workshop on biological sampling strategies in WGIPS surveys.
Year 2	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 2.
	Review the WGIPS acoustic manual in the TIMES format, prepare for submitting for external review.
	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 mesopelagic sampling: Review and feedback progress of trawl sampling and acoustic sampling methods used.
	Session on stock discrimination and the consequences for biological sampling on WGIPS surveys.
	Session on biological sampling strategies in WGIPS surveys
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.
	Review the WGIPS acoustic manual in the TIMES format, submit for publishing.
	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 mesopelagic sampling. Update the group on progress of sampling and reporting of mesopelagic fish resources. Session on stock discrimination and the consequences for biological sampling on WGIPS surveys. Session on biological sampling strategies in WGIPS surveys

Supporting information

Priority	The Group has a very high priority as its members have expertise in design and implementation of acoustic-trawl surveys, including sampling of additional ecosystem parameters. It will therefore directly contribute to the implementation of integrated pelagic ecosystem monitoring programmes in the ICES area. 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. The work provides essential data in the form of survey indices to WGWIDE and HAWG in the aim to perform integrated ecosystem assessment.
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, WGMEGS, WGTC, WGINOR, WGINOSE, WGIAB, WKEVAL, WKMSMAC2, WKSCRUT, WKSUREQ, WGS2D, WKPilot NS-FIRMOG
Linkages to other organizations	

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

2021/FT/EOSG05 A **Working Group on Improving use of Survey Data for Assessment and Advice** (WGISDAA), chaired by Casper W. Berg, Denmark, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2022	25-27 October	DTU, Lyngby	Interim report by 24 of November 2022 to ACOM/SCICOM	
Year 2023	24-26 October	Online meeting	Interim report by 30 November 2023 to ACOM/SCICOM	
Year 2024	29-31 October	ICES HQ, Copenhagen	Final report by 12 December to ACOM/SCICOM	

ToR descriptors[7]

ToR	Description	Background	Science Plan Codes	Duration	Expected Deliverables
a	To work together with assessment working groups to provide resolution to assessment issues prioritized by the assessment working groups	Specific resolutions to individual assessment issues with a report to feedback into the assessment, or where necessary into the benchmark process. In addition, cataloguing and classification of issues and review of methods used to resolve problems in order to provide "self-help" options to resolve similar issues in other assessments.	3.2	Annually	
b	To work together with survey working groups to provide resolution to problems associated with index calculations, survey design changes (proposed or realized) to ensure efficient and effective use of survey resources.	Specific resolutions to individual survey issues with a report to feedback into the survey working group. In addition, cataloguing and classification of issues and review of the methods used to resolve them in order to provide "self-help" options for survey working groups.	3.1, 3.2	Annually	

c	Initiate with ACOM and Secretariat a process to identify upcoming issues associated with the use of survey data in benchmarks.	Survey data issues, as in ToR a, are often critical in the benchmarking process. WGISDAA can advise best if involved in this process from the start of the benchmark process and can collaborate with the operators and present conclusions at the benchmark.	3.2	As required	Reports and presentations to the appropriate Benchmark workshop.
d	Review and evaluate new developments in statistical approaches for analysing survey data, in particular model-based survey indices, and if possible provide guidelines for best practices.	Model-based survey indices are gaining popularity due to their ability to cope with changes in survey design. New and more advanced methods are frequently emerging, but they are often more difficult to apply in practice.	3.2	Annually	

Summary of the Work Plan

Year 1	All ToRs Review the outcomes of the WKUSER2 workshop and discuss possible future analysis/workshops.
Year 2	All ToRs.
Year 3	All ToRs.

Supporting information

Priority	This group will feed the results of its work directly into the assessment and hence advisory process. As such it should be considered central and of high priority Statistically rigorous approaches are important to ensure best possible science and efficient use of costly survey data.
Resource requirements	The key additional resource requirement is the group needs participation of the key players in the relevant assessment, survey or benchmark group. This would be in addition to work required for the normal operations of these groups. Essentially, this would involve key personnel attending the relevant WGISDAA meeting, and where required, personnel from WGISDAA attending the relevant requesting expert group.
Participants	Dependant on information requests, but normally less than 10 core members
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and group under ACOM	ACOM, Benchmark process and assessment EGs as well as Survey EGs will be the key clients for the work of WGISDAA.

Linkages to other committees or groups	WGISDAA will have strong links to survey working groups under EOSG. Given surveys as an important source of wider ecosystem data there will also be important links to groups under IEASG
Linkages to other organizations	None specific

WGNEPS - Working Group on Nephrops Surveys

2021/FT/EOSG06 A **Working Group on Nephrops Surveys (WGNEPS)**, chaired by Jónas Jónasson*, Iceland will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2022	15-17 November	Cádiz, Spain	1st Interim report by 13th December to EOSG	**Outgoing chair:** Jennifer Doyle
Year 2023	12-14 December	Barcelona, Spain	2nd Interim report by 25th January to EOSG	**Incoming chair:** Jónas Jónasson
Year 2024	19-21 November	Edinburgh, Scotland, UK	Final report by 2nd January 2025 to EOSG	TBC

ToR descriptors 2022 – 2024 cycle

ToR	Description	Background	Science Plan codes	Duration	Expected Deliverables
a	Coordination and reporting reviews of any changes to design, coverage and equipment for the various *Nephrops* UWTV and full-scale trawl surveys.	To ensure surveys used by WGCSE, WGBIE and WGNSSK are fit for purpose.	3.1, 3.2	Recurrent annual update	Survey summary including and description of alterations to the plan, to relevant assessment-WGs (WGCSE, WGNSSK, WGBIE) and SCICOM. Planning of the upcoming surveys for the survey coordinators and cruise leaders.
b	Develop an international database for *Nephrops* UWTV survey data which will hold burrow counts, ground shape files and associated data.	There is a need to centralize UWTV data in a single international database. Ensure data is available externally.	3.5	Year 1-3	ICES database

c	Update R scripts for *Nephrops* UWTV survey data processing including functions to quality control, analyze and visualize data, and interface the tools with the international database for *Nephrops* UWTV survey data	Improving standardisation of data QC and data processing. Support new developing surveys on data analysis.	3.1, 3.3	Recurrent annual update	Document and R packages for UWTV survey data on GitHub site.
d	To review video enhancement, video mosaicing, automatic burrow detection and other new technological developments applied in *Nephrops* UWTV surveys.	Periodic review of emerging technologies that might improve survey methodologies.	4.1	Recurrent annual update	Roadmap and publications as appropriate, section update in annual WG report.
e	Review and report on the utility of UWTV and trawl *Nephrops* surveys as platforms for collecting data for purposes other than *Nephrops* assessment (e.g. the collection of data for OSPAR and MFSD indicators).	*Nephrops* UWTV surveys have a role in relation to benthic habitat monitoring and the collection of other environmental and ecosystem variables.	1.5	Year 3	Meetings with data end users and section report
f	Analyse existing data from UWTV and trawl *Nephrops* surveys to evaluate possible factors affecting burrow emergence of *Nephrops* (e.g. currents, light, salinity and oxygen)	Recent behaviour aspects have been investigated in the laboratory. Important to investigate correlation with field data.	1.3	Year 1-3	Review paper
g	Review differences of new HD and previous used SD camera systems and its effect on burrow detection, edge effects and bias correction factors, and explore the possibility of HD system tools for providing estimates of burrow size distributions.	Recent changes from SD to HD technology for many survey areas. Important to investigate edge effects and correction factors with field data on burrow system size.	3.3	Year 1-3	Roadmap and publications as appropriate, section update in annual WG report.
h	Update TIMES on next cycle with items from all ToRs.	The group evaluates the TIMES content at least every three years to ensure the information is kept up to date	3.1	Year 3	To update TIMES based on conclusions if necessary. Other publications when appropriate.

Summary of the Work Plan

YEAR 1	All ToRs will be adressed in this year but the main task in year 1 will be to establish the UWTV database and to provide updated shape files of Nephrops FUs and survey domains (ToR b)
Year 2	All ToRs will be addressed in this year. In addition to this focus will be on ToR e in year 2
Year 3	All ToRs will be addressed in this year. Focus in year 3 will be on new technologies and, if appropriate, an update of the SISP (ToR b) as well on the review of field date on factors affecting burrow emergence and occupancy (ToR f)

Supporting information

Priority	*Nephrops* are a valuable species whose stocks are potentially susceptible to local depletion. UWTV/Trawl surveys are an integral part of the stock assessment and management advice provided by ICES. WGNEPS is the international co-ordination group for *Nephrops* surveys focusing on planning, collaboration, quality control and survey development issues. This work is considered high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group is normally attended by some 15–20 members and guests.
Secretariat facilities	ICES Data Centre
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	This group will feed into the assessment working groups and subsequently on to ACOM as well as to SCICOM
Linkages to other committees or groups	There is a very close working relationship with relevant to stock assessment expert groups that used the survey results i.e. WGCSE, WGBIE and WGNSSK. Close linkage to WGMLEARN (automatic classification systems) and WGDEC (survey data).
Linkages to other organizations	FAO , OSPAR

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

2021/FT/EOSG07 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 2022	29 November – 01 December	Belfast, Northern Ireland	Interim report by 7 January 2023 to ACOM/SCICOM	Incoming Chair Bastian Huwer (DK)
Year 2023	28 November – 01 December	Aberdeen, Scotland	Interim report by 1 January 2024 to ACOM/SCICOM	Bastian Huwer (DK)

Year 2024	26-29 November	Copenhagen, Denmark	Final report by 10th January 2025

ToR descriptors

ToR	Description	Background	Science plan codes	Duration	Expected Deliverables
a	Planning and execution of North Sea and adjacent seas ichthyoplankton surveys used for assessment and management purposes	Ichthyoplankton surveys in the North Sea and adjacent Seas deliver abundance data of early life history stages for fish SSB and/or recruitment for 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 Times manuals
d	Provide quality assurance of ichthyoplankton identification, including molecular methods	The accurate identification of ichthyoplankton and the developmental stages is crucial for species specific abundance estimates.	3.1, 3.2	year 1, 2, 3	
e	Standardization of sampling and sample processing procedures	Standards of sampling and sample processing procedures need to be optimized w.r.t. efficiency	3.3	year 1, 2, 3	
f	Prepare data for archiving in the ICES eggs and larvae database	WGSINS data need to be prepared and uploaded to the ICES eggs and larvae database by each institute	3.2	year 1, 2, 3	Updated dataset in the ICES eggs and larvae database
g	Assess possibilities for the different ichthyoplankton surveys to supply ecosystem data to support the implementation of an ecosystem approach to fisheries management	Ichthyoplankton surveys are able to provide additional data than needed for the original survey objectives. The acquisition of additional data has to be assessed.	3.1, 3.3	year 3	Provide an overview of current and potential new data collections, in addition to the target species, and their potential uses for ecosystem management

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)**
Year 2	Plan and execute the IHLS, the MIK, the DRS, the NINEL, the NI-MIK, the RHLS and the BIS
Year 3	Plan and execute the IHLS, the MIK, the DRS, the NINEL, the NI-MIK, the RHLS and the BIS

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 for herring stocks in the North and Baltic Seas as well as for cod in the Baltic and the Irish Sea, as well as for haddock in the Irish Sea and informs management of whiting in the Irish Sea.
Resource requirements	None.
Participants	The working group is normally attended by 8 – 15 members and guests.
Secretariat facilities	ICES data center
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	HAWG, WGCSE, WGBFAS
Linkages to other committees or groups	EOSG, WGBIOP, IBTSWG, WGALES, WGML, WGZE, DSTSG
Linkages to other organizations	None

EGs dissolved in 2023

2022/WK/EOSG04	WKMADE - Workshop on Mackerel Daily Egg production [to be dissolved after the meeting 13–17 November]	Dolores Garabana, Spain, and Anders Thorsen, Norway
2020/FT/EOSG07	WGELECTRA - Working Group on Electrical Trawling	Mattias van Opstal, Belgium, and Edward Schram, the Netherlands