

2014/MA2/SSGIEOM22 The Working Group of International Pelagic Surveys (WGIPS), chaired by Sascha Fässler*, Netherlands, and Matthias Schaber*, Germany, will meet in Dublin, Ireland, 18–22 January 2016, to work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2016	18–22 January	Dublin, Ireland	Interim report by 5 March 2016 to SSGIEOM, SCICOM & ACOM	
Year 2017			Final report by XXX 2017 to SSGIEOM, SCICOM & ACOM	
Year 2018			Final report by XXX 2018 to SSGIEOM, SCICOM	

ToR descriptors

ToR	DESCRIPTION	BACKGROUND	SCIENCE PLAN TOPICS ADDRESSED	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	Goal 3	years 1–3	Survey reports containing indices of stock biomass and abundance at age, spatial distributions, zooplankton biomass, and hydrographic conditions. HAWG WGWIDE
b	Coordinate the timing, area and effort allocation and methodologies for individual and multinational acoustic and larvae surveys on pelagic resources in the Northeast Atlantic waters covered (Multinational surveys: IBWSS, IESNS, IESSNS, HERAS, IHLS and individual surveys: CSHAS, BFAS, ISAS, PELTIC, GERAS).	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	Goal 1 & 3	years 1–3	Cruise plans for international and individual surveys. HAWG WGWIDE
c	Adopt standardized analysis methodology and data storage format utilizing the ICES pelagic database repository for all acoustically derived abundance estimates of WGIPS coordinated surveys	a) Science Requirements b) Advisory Requirements	Goal 3, 4 & 5	years 1–3	Common acoustic database for WGIPS coordinated surveys; Common analysis tools for acoustic and trawl data from WGIPS coordinated surveys including software scripts to produce results in common formats WKEVAL

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	Goal 3	years 1–3	Updated WGIPS survey manual.
e	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	Goal 3	years 1–3	Optimal sampling designs and precision estimates for the different surveys as a measure of survey quality. HAWG WGWIDE
f	Assess and compare scrutinisation procedures employed for the analysis of raw acoustic data from WGIPS coordinated surveys	a) Science requirements b) Advisory requirements	Goal 3	year 1	Documented standardized scrutinisation recommendations; Update of survey manual to address and maintain monitoring requirements for pelagic ecosystem surveys. WKSCRUT
g	Develop alternative analysis methods (e.g. using geostatistics) to monitor the pelagic ecosystem by extracting metrics from the collected survey data other than those required for single-species stock assessments	a) Science requirements b) Advisory requirements	Goal 1 & 3	years 1–3	Manuscripts and working documents.
h	Assess auxiliary pelagic ecosystem surveying technology (e.g. optical technology, multibeam and wideband acoustics) to: (i) achieve monitoring of different ecosystem components, and/or (ii) derive ecosystem indicators from surveys covered by WGIPS	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	Goal 1 & 3	years 1–3	Overview of possible ecosystem indicators that can be derived from WGIPS surveys; and protocols/recommendations for practical implementation of auxiliary pelagic surveying technologies.
i	Develop and refine methods to derive stock- or spawning component-specific survey indices for herring based on biological criteria (e.g. otolith shape analysis or morphometric measurements)	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	Goal 1 & 3	years 1–3	Provide survey indices of stock biomass and abundance at age for herring in the North Sea and areas IIIa and Via, separated by spawning component/stock based on biological criteria.

Summary of the Work Plan

Year 1

General meeting, preceded by 3 post-cruise meetings which collate data of multinational surveys

Workshop to evaluate and develop joint methods from current participant-specific acoustic abundance estimation methods used in the HERAS surveys (WKEVAL)

Workshop to standardize scrutinisation procedures for pelagic ecosystem surveys covered by the WG (WKSCRUT)

Session to familiarise WG members with the use of the new standardized acoustic survey analysis tool (StoX) and data storage format from the ICES pelagic database repository

Session to review and evaluate survey designs across all WGIPS coordinated surveys done in Year 1; and coordinate planning and discuss designs for surveys taking place in Year 2

Session to review and provide possible updates for the WGIPS acoustic survey manual

Session to: (i) explore alternative analysis methods (e.g. geostatistics); and (ii) assess and document auxiliary pelagic ecosystem surveying methodology (e.g. optical technology, multibeam and wideband acoustics), in order to monitor components of the wider ecosystem and derive ecosystem indicators from surveys covered by WGIPS

Session to review and adapt stock and spawning component splitting methods applicable to herring in the North Sea, and areas IIIa and Via; and plan methods used on surveys in Year 2 accordingly.

Contributing to Session C "Ecosystem Monitoring in Practice" at the 2015 ICES ASC through active involvement of WG members as session convener and presenters

Contributing a paper analysing the HERAS survey time-series to the ICES Symposium on "Marine Ecosystem Acoustics (SOMEACOUSTICS)

Submission of a manuscript on blue whiting distribution from the WGIPS survey time-series to a peer reviewed Journal

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 done in Year 2; and coordinate planning and discuss designs for surveys taking place in Year 3

Session to exchange experiences and analyse progress with the use of the new standardized acoustic survey analysis tool (StoX) and data storage format from the ICES pelagic database repository

Session to compare and evaluate scrutinisation of Year 2 survey databased on the standardized procedures developed in WKSCRUT

Session to review and provide possible updates for the WGIPS acoustic survey manual

Session to review and adapt stock and spawning component splitting methods applicable to herring in the North Sea, and areas IIIa and Via; and plan methods used on surveys in Year 3 accordingly.

Session to draft a manuscript on an example of alternative analysis methods (e.g. geostatistics) used with WGIPS survey data

Session to analyse progress and draft recommendations for auxiliary pelagic ecosystem surveying methodology (e.g. optical technology, multibeam and wideband acoustics) for monitoring components of the wider ecosystem in surveys covered by WGIPS

Session to draft a list of potential ecosystem indicators to be measured during 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 done in Year 3

Session to analyse progress with the use of the new standardized acoustic survey analysis tool (StoX) and data storage format from the ICES pelagic database repository

Session to review and provide possible updates for the WGIPS acoustic survey manual

Session to review and adapt stock and spawning component splitting methods applicable to herring in the North Sea, and areas IIIa and Via used on surveys in Years 1–3.

Session to evaluate progress to draft a manuscript on an example of alternative analysis methods (e.g. geostatistics) used with WGIPS survey data

Session to update recommendations for auxiliary pelagic ecosystem surveying methodology (e.g. optical technology, multibeam and wideband acoustics) for monitoring components of the wider ecosystem in surveys covered by WGIPS

Session to evaluate progress in listing potential ecosystem indicators to be measured during WGIPS surveys

Supporting information

Priority	The Group has a very high priority as its members have expertise in design and implementation of larval and 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 standardization, planning, coordination, implementation, and reporting of acoustic and larvae surveys for main pelagic fish species 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 committee: or groups	There is a very close working relationship with other groups in SSGIEOM, especially relevant links to WGACEGG, WGALES, WGBIFS, WGFAST, WGFTFB, WGISDAA, WGISUR, WGMEGS, WGTC, WGINOR, WGINOSE, WGIAB, WKEVAL, WKMSMAC2, WKSCRUT, WKSUREQ
Linkages to other organizations	EU H2020 project 'AtlantOS'