

**2013/MA2/SSGESST12 Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES Areas VII, VIII and IX (WGACEGG)**, co-chaired by Maria Manuel Angélico, Portugal, and Pablo Carrera, Spain, will meet in Cefas, Lowestoft, UK from 16–20 November 2015, to work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2014	17–21 November	Vigo, Spain	Interim report by 30 January 2015 to SSGIEOM, SCICOM and ACOM	
Year 2015	16–20 November	Cefas, Lowestoft, UK	Interim report by 30 January 2016 to SSGIEOM, SCICOM and ACOM	
Year 2016			Final report by “DATE” to “SGXX”, “SCICOM” ...	

### ToR descriptors

TO R	DESCRIPTION	BACKGROUND	SCIENCE PLAN TOPICS ADDRESSED	DURATION	EXPECTED DELIVERABLES
a	Provide echo-integration and DEPM estimates for sardine and anchovy in ICES sub-Areas VII, VIII and IX	a) Advisory Requirements b) Requirements from other EGs	1.4, 1.6	1 <sup>st</sup> to 3 <sup>rd</sup> years	Biomass by age group and SSB estimations, distribution area. WGHANSA
a,b	Analyse sardine and anchovy distribution (adults and eggs), aggregation patterns and their habitats in European waters (Atlantic and Mediterranean waters)	a) Science Requirements b) Requirements from other EGs	1.4, 1.6	1 <sup>st</sup> to 3 <sup>rd</sup> year	Manuscript comparing sardine (and anchovy) population dynamics and habitats among European waters (third year) WGHANSA
c	Provide information on hydrographical and ecosystem indicators such as temperature, salinity, plankton characteristics, top predators abundances, egg densities for sardine and anchovy and backscattering acoustic energy from pelagic fish	a) Science Requirements	1.6.1, 1.6.2, 3.3.5	1 <sup>st</sup> to 3 <sup>rd</sup> years	Update grid maps Habitat characterization

d	Investigate the use of the acoustic survey data to provide indices and/or biological information on other pelagic fish species such as mackerel, horse mackerel, boar fish and blue whiting by improving survey strategies, acoustic data post-processing and research on target strength	a) Science Requirements b) Requirements from other EGs	1.4, 1.6	2nd-3rd years	Biomass by age group estimations, distribution area. Third quarter of the year Updated survey protocols WGWIDE
d	Asses developments in the technologies and data analysis for the application of the Daily Egg production method (on Egg Production or adult parameters)	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	1.4	1 <sup>st</sup> to 3 <sup>rd</sup> years	Anchovy and Sardine egg production WGHANSA
e	Develop CUFES as an indicator of anchovy and sardine egg production	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	1.4	2nd-3rd year	Anchovy and Sardine egg production WGHANSA
f	Asses developments in technologies and data analysis for providing MSFD indicators and survey-base operational products for stakeholders	a) Science Requirements b) Advisory Requirements c) Requirements from other EGs	1.4	1 <sup>st</sup> to 3 <sup>rd</sup> years	List of common possible MSFD indicators, including protocols to monitor them or to complement data from other surveys/monitoring programs Manuscripts describing practical implementation and results
g	Coordination and standardization of the surveys	a) Science Requirements b) Advisory Requirements	1.4	1 <sup>st</sup> to 3 <sup>rd</sup> years	Annual plan for coordinated surveys Updated survey protocols

## Summary of the Work Plan

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Year 1	<p>General meeting, including joint session with MEDIAS (Mediterranean acoustic survey on small pelagic)</p> <p>Session for acoustic data analysis and post-processing techniques</p> <p>Session to improve egg production estimations, including new approaches for egg mortality, and the acoustic survey design aiming at to estimate sardine and anchovy egg production from CUFES and from Pairovets.</p> <p>Session to analyse the proposed list of MSFD indicators by country (France, Ireland, Portugal, Spain and United Kingdom), aiming at to choose a list of potential candidates to be measured during the WGACEGG surveys</p>
Year 2	<p>General meeting</p> <p>Session to analyse progress on acoustic data analysis and post-processing techniques</p> <p>Session on the analysis of discrepancies between egg and acoustic survey indices (in collaboration with WGISDAA)</p> <p>Session to analyse progress on MSFD indicator measurements</p> <p>Session to analyse possible survey-base operational products for stakeholders</p> <p>Session to analyse progress on sardine and anchovy egg production estimates from CUFES and Pairovet</p> <p>Work by correspondence with MEDIAS (Mediterranean acoustic survey on small pelagic)</p>
Year 3	<p>General meeting, including joint session with MEDIAS (Mediterranean acoustic survey on small pelagic).</p> <p>Session to analyse progress on acoustic data analysis and post-processing techniques</p> <p>Session to analyse progress on MSFD indicator measurements</p> <p>Session to analyse possible survey-base operational products for stakeholders</p> <p>Session on the analysis of discrepancies between egg and acoustic survey indices (in collaboration with WGISDAA)</p> <p>Session to analyse progress on sardine and anchovy egg production estimates from CUFES and Pairovet</p>

## Supporting information

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Priority	<p>The Group has high priority as it is responsible for providing direct monitoring for two major small pelagic stocks (sardine and anchovy) in this area. These stocks are distributed across national boundaries, including Mediterranean Sea. The most important part of its work is to standardize, plan and analyse all the relevant surveys and to integrate these together to give the best possible advice to the WGHANSA for integrated assessment purposes. In addition, acoustic surveys would also provide both useful biological information (age composition, distribution) of main pelagic species assessed in WGWIDE at the main spawning period and, in the medium term, a biomass indices estimated by echo-integration.</p>
Resource requirements	<p>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.</p>

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	ACOM
Linkages to other committees or groups	WGHANSA, WGSPEC, WGFE, WEGEGGS, WGFASST/WGFTFB, WGISUR, WGEAWESS, WGALES, WGWIDE, WGISDAA.
Linkages to other organizations	Other countries/institutions applying the DEPM, or carrying out integrated acoustic-egg surveys worldwide. Linkage with Mediterranean small pelagic acoustic committees (MEDIAS) is also expected.