

**WKFATHOM – Workshop on Egg staging, Fecundity and Atresia in Horse mackerel and Mackerel
2017/2/EOSG09**

The **Workshop on Egg staging, Fecundity and Atresia in Horse mackerel and Mackerel (WKFATHOM)** chaired by Maria Korta*, Spain, and Matthias Kloppmann*, Germany, will meet in Bremerhaven, Germany, on 8–12 October 2018 (egg staging) and in IJmuiden, The Netherlands, on 19–23 November 2018 (fecundity) to:

- a) Carry out comparative plankton sorting trials on typical survey samples. This should follow the pattern of trial – analysis – re-trial – identification of problem areas;
- b) Carry out a comparative egg staging trial for mackerel and horse mackerel eggs following the pattern used in the 2009 egg staging workshop;
- c) Update a set of standard pictures and descriptions for species identification and egg staging;
- d) Review available documentation on identifying eggs to species and define standard protocols;
- e) Carry out inter-calibration work on fecundity and atresia determination and POFs staging;
- f) Update a set of standard pictures for both oocytes and POFs stages;
- g) Harmonize the analysis and interpretation of fecundity and atresia samples;
- h) Review the methodology in use and available documentation on fecundity determination in order to redefine the standard protocols.

WKFATHOM will report by 11 January 2019 for the attention of EOSG.

Supporting information

Priority	Information quality, used to provide fisheries advice through WGWIDE, will be impaired if this workshop is not conducted.
Scientific justification	<p>Sorting eggs from plankton samples, identification of eggs to species and the staging of those eggs remains one of the key areas in the execution of the mackerel and horse mackerel egg surveys. As this process 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 regular workshops 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 2018. It is expected that 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.</p> <p>The workshop will also be tasked to update a standard manual of descriptions and photographs to assist in the plankton sample handling procedure. This material was assembled and embedded into the agreed MEGS standard survey manual at previous workshops.</p> <p>In the context of these surveys, and equivalent to egg staging, fecundity estimation is fundamental for conversion of egg production to spawning stock biomass in western and</p>

southern mackerel stock components. Both fecundity and atresia estimation are carried out using histological and image analysis methods, and the analysis and interpretation of these material also 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 as in the case of egg staging workshop, it is recommended that experiences gathered during these workshops be extended during the consecutive workshop in 2018. It is expected that the workshop will refine the developed methodologies for fecundity estimation to overcome problems identified during surveys by means of several inter-institutes exercises that may test the new techniques.

In this sense, the workshop will also update the manual assisting the fecundity estimation from sampling to analysis procedures. As in the case of egg staging, the material will improve the agreed MEGS standard survey manual.

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 and GWIDE
Linkages to other organizations	None.
