

2020/WK/DSTSG06 The **Workshop on use of Ageing and Maturity Staging Error Matrices in Stock Assessment (WKAMEMSA)**, chaired by Alfonso Pérez-Rodríguez (IMR-Norway) and Karen Bekaert (ILVO-Belgium), will be established and will meet online, 27-29 September 2021, to:

- a) Revision of existing research on the effects of ageing and maturity staging error in stock assessment, including examples where incorporation of age/maturity error has been tested on the stock assessment output ([Science Plan codes: 5.1 & 5.2](#)).
- b) Review the existing SmartDots data output, the analysis applied and the report templates. Consider the current protocols for otolith and gonad selection outlined in the WGBIOP Guidelines for Exchanges and Workshops on Age Reading and Maturity Staging. Outline future work depending on the outcomes of this workshop ([Science Plan codes: 4.1 & 4.3](#)).
- c) Examine the potential to incorporate age and maturity error information into the main assessment models currently used within ICES. Identify the data input and modifications in the model structures that would be required, as well as the steps needed to incorporate those changes into the assessment platforms (e.g. stockassessment.org) ([Science Plan codes: 5.1 & 5.2](#)).
- d) Identify potential stock level case studies where evidence of important error exists in the determination of age, maturity or both, and where evaluation models with the potential capacity to incorporate this information can be developed ([Science Plan codes: 4.1, 4.3, 5.1 & 5.2](#)).
- e) Consider the future integration with TAF and feedback to TAFGOV on the workshop outcome ([Science Plan codes: 6.1](#)).

WKAMEMSA will report by 10 November 2021 for the attention of ACOM/SCICOM.

Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the use of ageing and maturity staging error information in stock assessment and the effect of this error in stock assessment uncertainty. Consequently, these activities are considered to have a very high priority.
Scientific justification	<p>Term of reference a)</p> <p>The problem of error in age determination and maturity staging, and their impact in stock assessment has been treated before in previous studies and the subject would benefit from a review of progress and an evaluation of the results obtained. Having this review would likely help to identify the directions that should be followed.</p> <p>Term of reference b)</p> <p>As part of the process to develop an approach to consider ageing and maturity staging error into stock assessment it is necessary to review the protocol for otolith and gonads selection in the exchange events available in Smartdots, as well as the statistical analysis conducted and the way the error matrices are calculated. This is a necessary step to ensure that the quality of the statistical information, and the structure of</p>

the report output is suitable and contains useful information for the relevant stock assessment models.

Term of reference c)

This ToR is intended to identify the models that have potential capacity to incorporate age and maturity error information. The work that will be needed to do it, and the steps required to integrate those model modifications in the assessment platforms will be defined. The output of this ToR, in combination with ToR b, will identify the necessary modifications needed in the WGBIOP protocol and the SmartDots data analysis to support the assessment model requirements.

Term of reference d)

After the protocols to collect and analyze the data, and the models that can incorporate this information have been identified, it is necessary to review the ICES stocks that could be considered as candidate case studies to continue developing the incorporation of age error information in stock assessment.

Term of reference e)

This ToRs is intended to integrate with the ICES transparency and quality frameworks. Although it is not expected that in the early steps this will be a crucial element, considering it from the early steps might be useful to accommodate adequately all modifications in the assessment models.

Resource requirements	The research programmes which provide the main input to this group are already underway. The additional resources required to undertake additional activities in the framework of this group is negligible. There are no additional resource requirements for the workshop beyond the secretariat support for group organisation.
Participants	The Group will be attended by approximately 12 participants.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	There are no obvious direct linkages with the advisory committees.
Linkages to other committees or groups	There is a very close working relationship with WGBIOP, WGSMA ^T and it is expected to be relevant for the WGs in charge of the assessment of the case study stocks. Depending on the progress, the interest of the output might be extensive to all the WGs that use the assessment models that end up incorporating the age error information.
Linkages to other organizations	No linkages to other organizations
