

The **Workshop on the Review and Future of State Space Stock Assessment Models in ICES** (WKRFSAM), chaired by Noel Cadigan (Canada) will meet 21-23 January 2020 in ICES HQ, Copenhagen, Denmark, to address the objectives in the table below:

Explore future directions of state-space assessment models for ICES stocks, utilising recent advances in fisheries modelling research to help define best practises. More specifically, provide advice on the advantages and disadvantages of methods/tools relating to:

- 1) model formulation and selection for example,
 - a. the F and the M process models
 - b. observation error models
 - c. other components of variation
- 2) model estimation efficiency and robustness (including treatment of survey indices and fishery catch statistics), for example do certain formulations affect model robustness or result in models with impractical optimisation times.
- 3) model validation, including:
 - a. do different models provide a practical difference?
 - b. are there reliable ways to conduct model selection between alternatives?
- 4) specific issues to consider
 - a. Random effects on survival
 - b. Random walks on fishing mortality in log scale
 - c. Modelling catches on the log scale

WKRFSAM will report by 7 February 2020 for the attention of the Advisory Committee.

Supporting Information

Priority:	Very high
Scientific justification and relation to action plan:	<p>This workshop relates to item 5.1 in the action plan: <i>Improve methods of single-species and multi-species stock assessment, including data-limited methods. Develop and conduct management strategy evaluations, address uncertainty, and improve the transparency, robustness, efficiency and repeatability of stock assessment.</i></p> <p>State space stock assessment models make up a large proportion of the stock assessments for category 1 stocks in ICES. It is important that stock assessors and reviewers of ICES stock assessments understand advantages, disadvantages and limitations of the underlying formulations of state space models. This is important from the view point of extending models to include new dynamics and new data sets but also to review current model formulations with respect to new developments in fisheries science.</p>
Resource requirements:	Meeting room
Participants:	Stock assessment model experts, statistical modelling experts.
Secretariat facilities:	None.
Financial:	

Linkages to advisory committee: ACOM

Linkages to other committees or groups: Stock assessment EGs, ADGs, FRSG, SCICOM

Linkages to other organizations:
