

Working Group on Recruitment Forecasting in a Variable Environment (WGRFE)

2013/MA2/SSGSUE01 The Study Group on Recruitment Forecasting (SGRF) will be renamed the **Working Group on Recruitment Forecasting in a Variable Environment (WGRFE)**, chaired by Samuel Subbey, Norway, and Elizabeth Brooks, USA, and work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2014	16–20 June	ICES, Copehagen, Denmark	Interim report by 1 August 2014 to SSGEPD	
Year 2015	22–26 June	Seattle, Washington (USA)	Interim report by 1 August 2015 to SSGEPD	
Year 2016	13–17 June	Ispra, Italy	Final report by 1 August to SCICOM	
Year 2017	12–16 June	Woods Hole, USA	Report by 1 August to SCICOM	Extension by 1 year

ToR descriptors

ToR	DESCRIPTION	BACKGROUND	SCIENCE PLAN TOPICS ADDRESSED	DURATION	EXPECTED DELIVERABLES
a	Review approaches (modelling and methodologies) where stock recruitment models incorporate external drivers, along with all caveats. Identify and collate datasets for use in ToR (b).	a) Science Requirements	141, 335, 336	Year 1	Review paper
b	Develop prototype, statistical recruitment tools for selected stocks, based on stage-structured models which include environmental drivers and multispecies considerations	a) Science Requirements b) Advisory Requirements	141, 335, 336	Year 2	Prototype models developed on a common platform (e.g. AD Model Builder)
c	Testing, validation and documentation of prototype models.	a) Science Requirements b) Advisory Requirements	141, 335, 336	Year 3	Tested and validated computer codes in R (ADMB) for stock recruitment forecasting. Documentation of methodologies and

					models
d	Report on conclusions and recommendations for future MSE studies that aim to incorporate environmental drivers to forecast recruitment	This review will highlight successes and failures of incorporating environmental drivers, and recommend best practice advice	1.4, 1.6	Year 4	Review paper
f	Report on feasibility of identifying stage-specific environmental drivers in stock recruit functions	This will highlight limitations to complex modeling when >1 driver impacts different recruitment stages	1.4, 1.6	Year 4	Peer review manuscript
g	Present results of ensemble forecasting	This will develop algorithms for blending forecasts from multiple models and build modules on existing software platforms, providing illustrations for implementation	1.4, 1.6	Year 4	Software module within A4A/FLR; best practice advice

Summary of the Work Plan

Year 1	Review state-of-the-art and caveats in developing recruitment forecasting models with environmental drivers
Year 2	Development of prototype, stage-structured models for recruitment forecasting for selected ices stocks
Year 3	Testing, validation and documentation of models and methodologies for peer review
Year 4	Work on ToRs d, f, g

Supporting information

Priority	The current activities of this Group will lead ICES into issues related to how the environment and changes in climate may impact recruitment in the future, and best practice for capturing these effects when making forecasts from assessment models. Conclusions will be based on simulation studies, and case study examples with real data. Consequently, these activities are considered to have a very high priority.
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 13-15 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are no obvious direct linkages.
Linkages to other committees or groups	There are no direct linkages at this time.
Linkages to other organizations	EC-Joint Research Centre, Marine Affairs Unit (Ispra, Italy)

