

WKLIFE XII: 2023/2/FRSG50: **The Workshop on the Development of Quantitative Assessment Methodologies based on Life-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks (WKLIFE XII)**

The **Workshop on the Development of Quantitative Assessment Methodologies based on Life-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks (WKLIFE XII)**, chaired by Carl O'Brien (UK), Tobias Mildenerger (Denmark) and Simon Fischer (UK) will meet in Lisbon, Portugal, 16–20 October 2023 (at the original timing of WKLIFE, with hybrid meeting access). The workshop should address the following Terms of Reference:

1. Support the rollout of the WKLIFE X category 2 and 3 methods in 2023 and beyond.
 - a. Review recommendations (e.g. from WKMSYSPICT1, WKMSYSPICT2) and requests for clarification made by ICES groups (e.g. Elasmobranch, Celtic Seas and Deep Seas advisory processes) on the application of the methods presented in WKLIFE X Annex 3 and provide clear and concise feedback on issues raised and incorporate into suggested updates to the ICES Guidance, as appropriate.
 - b. Conduct additional analyses if required.
 - c. Revisit the multiplier of the rb rule (Method 2.1) and consider alternative multipliers for specific life-history groups.
 - d. Consider situations needing zero-catch advice and how to leave zero-catch advice.
 - e. Check if the technical guidelines require updating based on recent developments.
 - f. Develop an R tool to facilitate and standardise the application of the rfb/rb/chr rule and link the tool to TAF.
2. WKLIFE XI drafted a 5-year roadmap of work required to improve the provision of ICES data-limited advice. Based on this roadmap, map topics to stocks in ICES categories 2-6, prioritise topics depending on ICES requirements and create a work plan for the next years.
3. Initiate a review of the ICES advice framework for categories 4, 5, and 6.
 - a. Summarise the ICES stocks in these categories and their advice methods.
 - b. Evaluate the current approaches in these categories with respect to risk equivalence and their ability to follow the ICES precautionary approach.
 - c. Start exploring alternative approaches for these stocks.
4. Further explore the use of empirical indicators
 - a. Explore spatial indicators to inform on stock abundance (e.g. bycatch species) to facilitate their use in harvest control rules.
 - b. Consider alternative empirical indicators that could be useful as part of harvest control rules.
5. Evaluate and improve the application of and management advice based on surplus production models, such as SPiCT.
 - a. Further develop guidelines for model fitting and validation and the use of priors.
 - b. Evaluate alternative definitions of biomass limit and threshold reference points for harvest control rules based on surplus production models.
 - c. Explore the implications of dynamic reference points.
 - d. Evaluate the incorporation of additional information (e.g. length data) into surplus production models.
6. Explore data-limited stock assessments, harvest control rules (e.g. dynamic harvest rate rules), and simulations approaches for specific life-history strategies

- a. Short-lived species, e.g. Celtic Sea sprat.
 - b. Elasmobranchs and other slow-growing species (e.g. thornback ray in Iberian waters, application of SPiCT, simulation of empirical harvest control rules).
 - c. Other life-history strategies, e.g. Nephrops, crabs, cephalopods.
7. Further explore and develop assessment and advice methods with focus on data- and/or resource-limited fisheries, together with exploring approaches of moving towards an ecosystem perspective, from both within and outside the ICES' community.
 8. Summarize recent work by the scientific community, including published papers and exploratory work on Empirical rules and production models; review and address these publications with respect to ICES advice;

WKLIFE XII will report to ACOM no later than **17 November** 2023.

Supporting Information

Priority:	High. ICES provides advice on more than 260 stocks on an annual basis and more than 60% of these stocks are in categories 2-6. The development and testing of operational advice rules for stocks in categories 4, 5 and 6 is urgently needed, both within the ICES area and throughout the world's oceans. WKLIFE is the premier venue for method development and discussion of stock assessments and advice approach for stocks in categories 2-6.
Scientific justification and relation to action plan:	ICES is working to provide catch advice for all stocks that is in line with the Precautionary approach. The methods developed and tested by WKLIFE are key to ICES advancements in this area.
Resource requirements:	-
Participants:	Stock assessment experts and modellers, with a special focus on MSE.
Secretariat facilities:	SharePoint site and report formatting
Financial:	-