

# WKLIFE VII TOR

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The Workshop on the Development of Quantitative Assessment Methodologies based on Life-history traits, exploitation characteristics, and other relevant parameters for stocks in categories 3-6 (WKLIFE VIII), will meet in Lisbon, Portugal, 8-12 October 2018, to further develop methods for stock assessment and catch advice for stocks in categories 3–6, focusing on the provision of sound advice rules that are within the ICES MSY framework.

## Terms of Reference

The workshop should address the following Terms of Reference:

- a) Develop, test, and review advice rules that are in line with the ICES MSY and precautionary approaches for category 1 stocks that apply to a wide variety of ICES stocks (e.g. demersal species) in categories 3 and 4
  - i) Develop assessment methods that utilize a stock production model (e.g. SPiCT) and advice rules based on a short-term forecast (Section 3.1 of WKMSYCat34 report)
  - ii) Develop assessment methods that utilize length-based approaches and advice rules of the form  $C_{y+1} = C_{current} rfb$  (Sections 3.2.1 and 3.2.3 of WKMSYCat34 report)
  - iii) Test the advice rules via Management Strategy Evaluation (MSE)
    - a. Establish whether performance of the advice rules is correlated with life-history characteristics
    - b. If such correlations exist, develop guidelines for use of the advice rules dependent on life-history characteristics
  - iv) Review all results via a formal ICES review process that provides ACOM with a product of proposed MSY and PA advice rules for category 3 and 4 stocks.
- b) Develop, test, and evaluate assessment methods and on the basis for an advice rule for category 3 to 6 stocks for short-lived species
  - i) Consider the need for specific advice rules for these stocks, and if needed, test these advice rules via MSE.

## Supporting Information

### Priority, Extremely high:

ICES provides advice on more than 260 stocks on an annual basis and more than 60% of these stocks are in categories 3-6. The development and testing of operational advice rules Further developments of the approaches used in providing advice on fishing opportunities for these stocks are is urgently needed. WKLFIE is the premier venue for method development and discussion of stock assessments and advice approach for stocks in categories 3-6.

### Scientific justification and relation to action plan:

There is an increasing number of fish stocks in Categories 3 and 4 for which assessment of status relative to MSY proxy reference points is available but for which short-term forecasts and MSY-based advice are not available. At this year's meeting of WKLFIE, ICES wishes to address this issue.

WKMSYCat34 identified a suite of potential MSY-consistent advice rules for category 3 and 4 stocks. The rules need to be tested by Management Strategy Evaluation (MSE) in order to check that they perform adequately in terms of meeting MSY objectives (i.e. maximising long-term yield) in a manner that is consistent with precautionary principles (i.e. having a low probability of falling outside biologically sustainable limits).

ToRs a)-c) address these rules and their evaluation using MSE. Assuming a successful outcome for these evaluations, ToR d) will propose advice rules for the setting of catches in 2019 based upon scientific advice in 2018.

For case-specific MSEs, i.e. focused on particular stocks, it is suggested that WKLFIE VII focuses on stocks in western waters, for which MSY proxy reference points already exist (as per advice provided by ICES in 2016).

For generic MSE testing, which consider overall general features instead of details of particular stocks, WKLFIE VII should further investigate the dataset with life-history parameters for 41 stocks considered by WKLFIE VI. ToR e) addresses the need for specific advice rules for stocks of short-lived species. The current advice rule for category 3-6 is targeted at stocks of medium- and long-lived species and has proven difficult to apply for stocks of short-lived species.

With this ToR WKLFIE VII is requested to review available information on advice rules for these stocks and, if needed, to propose a specific advice rule for stocks of short-lived species.