

Annex 2: Terms of Reference

WGDEEP – Working Group on the Biology and Assessment of Deep–Sea Fisheries Resources

2021/2/FRSGXX **Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources** (WGDEEP), chaired by Ivone Figueiredo, Portugal and Elvar Halldor Hallfredsson, Norway, will meet in Copenhagen, Denmark, 28 April–4 May 2022 to:

- a) Address generic ToRs for Regional and Species Working Groups.
- b) Complete the development of Stock Annexes for all the stocks assessed by WGDEEP, based on the most recent agreed assessment.
- c) Update the description of deep-water fisheries in both the NEAFC Regulatory Area and ICES area(s) by compiling data on catch/landings, fishing effort (inside versus outside the EEZs, in spawning areas, areas of local depletion, etc.), and discard statistics at the finest spatial resolution possible by ICES Subarea and Division and NEAFC Regulatory Area. In particular, describe and prepare a first advice draft of any new emerging deep-water fishery with the available data in the NEAFC Regulatory Area.
- d) Continue work on exploratory assessments for deep-water species.
- e) Evaluate the stock status of stocks in Icelandic waters for the provision of annual advice in 2022.
- f) Evaluate the stock status of stocks for the provision of biennial advice due in 2022.

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2021 ICES data call.

WGDEEP will report by 13 May 2022 for the attention of ACOM.

Generic ToRs for Regional and Species Working Groups

Approved in November 2021

2021/2/FRSG01 The following ToRs apply to: AFWG, HAWG, NWWG, NIPAG, WGWIDE, WGBAST, WGBFAS, WGNSSK, WGCSE, WGDEEP, WGBIE, WGEEL, WGEF, WGHANSA and WGNAS.

The working group should focus on:

- a) Consider and comment on Ecosystem and Fisheries overviews where available;
- b) For the aim of providing input for the Fisheries Overviews, consider and comment on the following for the fisheries relevant to the working group:
 - i) descriptions of ecosystem impacts on fisheries
 - ii) descriptions of developments and recent changes to the fisheries
 - iii) mixed fisheries considerations, and
 - iv) emerging issues of relevance for management of the fisheries;
- c) Conduct an assessment on the stock(s) to be addressed in 2022 using the method (assessment, forecast or trends indicators) as described in the stock annex; - complete and document an audit of the calculations and results; and produce a **brief** report of the work carried out regarding the stock, providing summaries of the following where relevant:
 - i) Input data and examination of data quality; in the event of missing or inconsistent survey or catch information refer to the ACOM document for dealing with COVID-19 pandemic disruption and the linked template that formulates how deviations from the stock annex are to be [reported](#).
 - ii) Where misreporting of catches is significant, provide qualitative and where possible quantitative information and describe the methods used to obtain the information;
 - iii) For relevant stocks (i.e., all stocks with catches in the NEAFC Regulatory Area), estimate the percentage of the total catch that has been taken in the NEAFC Regulatory Area in 2021.
 - iv) For category 3 and 4 stocks requiring new advice in 2022, implement the methods recommended by WKLIFE X (e.g. SPiCT, rfb, chr, rb rules) to replace the former 2 over 3 advice rule (2 over 5 for elasmobranchs). MSY reference points or proxies for the category 3 and 4 stocks
 - v) Evaluate spawning stock biomass, total stock biomass, fishing mortality, catches (projected landings and discards) using the method described in the stock annex;
 - 1) for category 1 and 2 stocks, in addition to the other relevant model diagnostics, the recommendations and decision tree formulated by WKFORBIAS (see Annex 2 of https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WKFORBIAS_2019.pdf) should be considered as guidance to determine whether an assessment remains sufficiently robust for providing advice.
 - 2) If the assessment is deemed no longer suitable as basis for advice, consider whether it is possible and feasible to resolve the issue

through an interbenchmark. If this is not possible, consider providing advice using an appropriate Category 2 to 5 approach.;

- vi) The state of the stocks against relevant reference points;

Consistent with ACOM's 2020 decision, the basis for Fpa should be Fp.05.

 - 1) 1. Where Fp.05 for the current set of reference points is reported in the relevant benchmark report, replace the value and basis of Fpa with the information relevant for Fp.05
 - 2) 2. Where Fp.05 for the current set of reference points is not reported in the relevant benchmark report, compute the Fp.05 that is consistent with the current set of reference points and use as Fpa. A review/audit of the computations will be organized.
 - 3) 3. Where Fp.05 for the current set of reference points is not reported and cannot be computed, retain the existing basis for Fpa.
- vii) Catch scenarios for the year(s) beyond the terminal year of the data for the stocks for which ICES has been requested to provide advice on fishing opportunities;
- viii) Historical and analytical performance of the assessment and catch options with a succinct description of associated quality issues. For the analytical performance of category 1 and 2 age-structured assessments, report the mean Mohn's rho (assessment retrospective bias analysis) values for time series of recruitment, spawning stock biomass, and fishing mortality rate. The WG report should include a plot of this retrospective analysis. The values should be calculated in accordance with the "Guidance for completing ToR viii) of the Generic ToRs for Regional and Species Working Groups - Retrospective bias in assessment" and reported using the ICES application for this purpose.
- d) Produce a first draft of the advice on the stocks under considerations according to ACOM guidelines.
 - i. In the section 'Basis for the assessment' under input data match the survey names with the relevant "SurveyCode" listed ICES [survey naming convention](#) (*restricted access*) and add the "SurveyCode" to the advice sheet.
- e) Review progress on benchmark issues and processes of relevance to the Expert Group.
 - i) update the benchmark issues lists for the individual stocks in SID;
 - ii) review progress on benchmark issues and identify potential benchmarks to be initiated in 2023 for conclusion in 2024;
 - iii) determine the prioritization score for benchmarks proposed for 2023–2024;
 - iv) as necessary, document generic issues to be addressed by the Benchmark Oversight Group (BOG)
- f) Prepare the data calls for the next year's update assessment and for planned data evaluation workshops;
- g) Identify research needs of relevance to the work of the Expert Group.
- h) Review and update information regarding operational issues and research priorities on the Fisheries Resources Steering Group SharePoint site.
- i) If not completed in 2020, complete the audit spread sheet 'Monitor and alert for changes in ecosystem/fisheries productivity' for the new assessments and data used for the stocks. Also note in the benchmark report how productivity, species interactions, habitat and

distributional changes, including those related to climate-change, could be considered in the advice.

Information of the stocks to be considered by each Expert Group is available [here](#).