STECF
EXPERT WORKING GROUP EWG 19-16

on Stock Assessment:
Part 2 – European fisheries for demersal species in the Adriatic Sea

Date: 14-20 October 2019

Venue: Rome (Italy)

Chair: John Simmonds

DG MARE focal persons: Chato Osio (MARE D1)

GENERAL GUIDELINES: unless the data used and information provided comes from the official DCF data calls, the experts are requested to indicate the data source from where certain information has been taken (e.g. L-W relationships, prices) or if it is an experts' reasoned guess.

Data collected outside the DCF shall be used as well and merged with DCF data whenever necessary and following quality check. Due account shall also be given to data used and assessments carried out within the FAO regional projects co-funded by the European Commission and EU-Member States in particular when using data collected through the DCF/DCR and EU funded research projects, studies and other types of EU funding.

The raw data used to generate the input data, assessment scripts as well as input files should be made available to the JRC for reproducibility of the assessments and compilation of the STECF stock assessment database (https://stecf.jrc.ec.europa.eu/dd/medbs/ram)

STECF 17-07[1] defined methodological guidelines to ensure standardized practices for the preparation of stock assessment input data. EWG 17-15 should adhere to these recommendations referring to the need of:

i) coherence of all growth parameters used in the assessments;

ii) improvement in documenting and defining the growth models and age slicing;

iii) test where possible age slicing by sex;

iv) t_0 should be truncated to values between 0 and -0.2;

v) review the raw age length data, where necessary refitting growth models (section 2.2 in the EWG 17-07 report).

---

[1] https://stecf.jrc.ec.europa.eu/documents/43805/1691180/STECF+17-07+-
+Methods+for+stock+assessments+in+MED_JRCxxx.pdf

For the stocks given in Annex I, the EWG 19-16 is requested:

ToR 1.   Data preparation for the stock assessments:

1. To compile and provide the most updated information on stock identification and boundaries, length and age composition, growth, maturity, feeding, essential fish habitats and natural mortality.

2. To compile and provide complete sets of annual data on landings and discards for the longest time series available up to and including 2018. This should be presented by fishing gear as well as by size/age structure.

3. To compile and provide complete sets of annual data on fishing effort for the longest time series available up to and including 2018. This should be described in terms of amount of vessels, time (days at sea, soaking time, or other relevant parameter) and fishing power (gear size, boat size (linear and/or GT), engine power kW, etc.) <u>by Member State/Country and fishing gear</u>. Data shall be the most detailed possible to support the establishment of a fishing effort and/or capacity baseline.

4. To compile and provide indices of abundances and biomass by year and size/age structure for the longest time series available up to and including 2018 by GSA and Country.

ToR 2.   To assess trends in historic and recent stock parameters on fishing mortality, stock biomass, spawning stock biomass, and recruitment. Different assessment models should be applied as appropriate, including retrospective analyses. The selection of the most reliable assessment shall be explained. Assumptions and uncertainties shall be specified.

The EWG shall:

1. Give preference to models that allow estimation of uncertainty, in line with the recommendations of STECF EWG 17-07.

2. Attempt where age length keys (ALK) are considered viable, to convert numbers at length into numbers at age based on the ALKs.

3. Where possible, use fisheries and survey data, recovered and standardized in the context of the EU RECFISH project, to expand the time series in the stock assessments.

ToR 3.   To estimate candidate MSY point-value, MSY range values and conservation reference points (precautionary and limit) in terms of fishing mortality and stock biomass. The proposed values shall be related to long-term high yields and low risk of stock/fishery

collapse and ensure that the exploitation levels restore and maintain marine biological resources at least at levels which can produce the maximum sustainable yield.

ToR 4. To provide short and medium term forecasts of spawning stock biomass, stock biomass and catches. The forecasts shall include different management scenarios, *inter alia*: zero catch, the status quo fishing mortality, and target to F_{MSY} (including the ranges) or other appropriate **proxy by 2020**. In particular, on the basis of the average commercial catch rates, estimate the level of fishing mortality (partial F) and effort exerted by the different fleets which is commensurate with the short- and medium-term forecasts of the proposed scenarios.

ToR 5. To summarize and concisely describe all data quality deficiencies, including possible limitations with the surveys of relevance for stock assessments and fisheries. Such review and description are to be based on the data format of the official DCF data call for the Mediterranean Sea launched on the March 2019. Identify further research studies and data collection which would be required for improved fish stock assessments.

ToR 6. To ensure that all unresolved data transmission issues encountered prior to and during the EWG meeting are reported on line via the Data Transmission Monitoring Tool (DTMT) available at https://datacollection.jrc.ec.europa.eu/web/dcf/dtmt. Guidance on precisely what should be inserted in the DTMT, log-on credentials and access rights will be provided separately by the STECF Secretariat focal point for the EWG.

ToR 7. Using the report structure developed in 2018 (EWG 18-12), provide a synoptic overview of: (i) the fishery; (ii) the most recent state of the stock (spawning stock biomass, stock biomass, recruits and exploitation level by fishing gear); (iii) the source of data and methods and; (iv) the management advice, including F_{MSY} value, range of values, conservation reference points and effort levels.

ToR 8. To provide a synoptic overview of: (i) the fishery; (ii) the most recent state of the stock (spawning stock biomass, stock biomass, recruits, and exploitation level by fishing gear); (iii) the source of data and methods and; (iv) the management advice, including MSY value, range of values and conservation reference points.

Table I – List of suggested stocks to be assessed by the EWG 19-16.

Area	Common name	Scientific name
GSA 17-18	Hake*	*Merluccius merluccius*
GSA 17-18	Red mullet	*Mullus barbatus*
GSA 17-18	Norway lobster	*Nephrops norvegicus*
GSA 17-18-19	Deep-water rose shrimp	*Parapenaeus longirostris*
GSA 17-18	Common cuttlefish	*Sepia officinalis*
GSA 17	Sole	*Solea vulgaris*
GSA 17-18	Spottail mantis shrimp	*Squilla mantis*

* Updated assessment of the GFCM Hake benchmarked assessments (ss3 & a4a)

NOTE: The joint assessments have been proposed on the basis of STOCKMED and management needs. However, these suggestions can be modified according to experts' knowledge and to the most recent scientific information.