

STECF
EXPERT WORKING GROUP (EWG) 22-03

Quality checking of MED & BS data and reference points

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online

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Background TOR 1 - Quality checking of MED & BS data

In recent years, STECF Expert Working Groups (EWG) on stock assessment have mainly focused on stocks in the Western Med, Adriatic and Ionian/Aegean Seas; for the remaining areas and stocks there is no information on the quality of the collected data. With regards to the Med & BS data call, the Regional Coordination Group (RCG) Med & BS¹ end user subgroup² considered that quality checks by EWGs on stock assessments only cover stocks to be assessed and not the whole set of data reported in the data call. This creates unbalanced reporting on data issues among MS and puts some MS in an unfavourable position³. In addition, not all stocks are assessed in the year following data collection, so some potential problems in data submitted in response to a data call during year N will be spotted by end-users in years N+2, N+3, N+4 etc. Such a situation is not ideal, if one takes into account that other end-users (projects etc.) may eventually use these data.

The RCG Med & BS end user subgroup discussed several possible ways to improve data quality before the operational deadline of data calls, including a specific ad-hoc EWG on data quality, accuracy and completeness with a focus to improve data quality before data use in the EWGs for stock assessments. The **EWG 21-02**⁴ served this purpose. This EWG was requested to check and assemble Length Frequency Distribution (LFD) data for the stocks identified as target for assessment activities in 2020. The EWG checked underlying data sets and defined the correct procedures to deal with missing data, raising procedures (specifically for survey data), wrong length measurements, and proposed standardized procedures to be followed from then on.

As a follow up to EWG 21-02, COM proposed an ad hoc EWG to quality check the Med & BS data not currently scrutinized in STECF stock assessments. This EWG should use the outcomes of the EWG 21-02 and apply them to, at least, the priority stocks for each

¹ <https://www.fisheries-rcg.eu/rcg-medbs/>

² Regional Coordination Group Med & Black Sea Subgroup on 'Meeting with End-users of Scientific Data' (12-14 March 2019, Rome). The report is available on the DCF website (<https://datacollection.jrc.ec.europa.eu/docs/rcg>).

³ Due to the fact that specific stocks are assessed, only the relevant Member States that collect data on these stocks receive data issues from STECF EWGs.

⁴ EWG 21-02: Methods for supporting stock assessment in the Mediterranean, 12 - 16 April 2021 ([Report](#))

country, as well as agree on other possible quality checks to describe the level of completeness of data submitted to the DG MARE Med & BS data call.

Following COM proposal, STECF⁵ considered that it could be beneficial to have a general overview of the quality of the data collected by the MS under the Mediterranean and Black Sea data call. Given the large number of species, GSA and country combinations, STECF considered that the number of data quality checks and number of species/GSA should be proportionate to the duration and workload of the EWG and therefore subject to some prioritization.

To this end, the RCG Med & BS held a joint meeting with all involved parties⁶ to identify the priority stocks/GSA to be tackled by this EWG. As an outcome of this meeting, the MS - using the CFP monitoring exercise as a basis - proposed a list of stocks not assessed by STECF⁷, based on landings and income/value, averaged over 3 years, including data availability as an additional factor (Annexes I and II).

TOR 1

The EWG is requested to check the coverage and quality of the data hosted in the JRC database for the stocks of Annex I. If time allows, the EWG is invited to repeat the same exercise for (as many of) the remaining stocks proposed by Member States, as listed in Annex II. For this purpose, the EWG is invited to use the outcomes of the EWG 21-02, as well as additional relevant tools that may be available from other sources, such as other STECF EWGs, GFCM, checks developed and used by JRC, work under projects and grants etc. The EWG may also develop new tools. The consolidated checks used under the EWG should be clearly listed and described, to allow their use by the Member States in the future.

The EWG may contact the National Correspondents of Member States to request clarifications on the data sets during the meeting, if needed. Relevant reports of working groups from STECF and GFCM may also be used as background documents.

One of the main outcomes will be to produce a report per MS, where the results of the data checks will be described. In addition, the EWG is requested to propose possible actions to improve the data sets, as well as improvements to the future data collection activities of the MS. The EWG should clearly highlight cases where the applied and available checks may not be adequate/ relevant for specific data sets and propose ways forward.

All unresolved data issues encountered during the EWG meeting should be reported on line via the Data Transmission Monitoring Tool (DTMT) available at <https://datacollection.jrc.ec.europa.eu/web/dcf/dtmt> (with restricted access). All output should clearly indicate that issues come from this specific EWG ('EWG 22-03'). Further 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.

Following the preliminary outcomes of this EWG⁸, and if time permits, the Member States will be requested to re-upload corrected historic data sets during the official data calls.

Background TOR 2- reference points

⁵ STECF Plenary 21-02: 5.1 EWG 21-02 Methods for supporting stock assessment in the Mediterranean ([Report](#)).

⁶ Joint meeting of the RCG Med & BS, DG MARE, JRC & STECF on data quality and availability, 16 December 2021, online.

⁷ previous STECF EWGs.

⁸ before the outcomes are discussed at STECF Plenary.

These ToRs deal with the methodology and estimation of conservation reference points for demersal stocks in the Western Mediterranean.

The Western Mediterranean multiannual management plan (West Med MAP) was adopted in 2019. It encompasses a fishing effort regime and various technical and conservation measures to address the overexploitation of demersal stocks, in particular of six main target species listed in Article 1(2).

The main objective and legal obligation (Article 7(3)b) of the West Med MAP is to achieve fishing mortality securing Maximum Sustainable Yield (Fmsy) for all demersal stocks by 1 January 2025 at the latest.

Article 5 of the West Med MAP specifies which Conservation reference points are to be used for the management decisions:

“the following conservation reference points shall be requested, in particular from STECF, or a similar independent scientific body recognised at Union or international level, on the basis of the plan:

(a) precautionary reference points, expressed as spawning stock biomass (BPA); and

(b) limit reference points, expressed as spawning stock biomass (BLIM).”

And Article 2 of the West Med MAP provides the following legal definitions:

(5) ‘FMSY point value’ means the value of the estimated fishing mortality that, with a given fishing pattern and under current average environmental conditions, gives the long-term maximum yield;

(10) ‘BLIM’ means the limit reference point, expressed as spawning stock biomass and provided for in the best available scientific advice, in particular by STECF, or a similar independent scientific body recognised at Union or international level, below which there may be reduced reproductive capacity;

(11) ‘BPA’ means the precautionary reference point, expressed as spawning stock biomass and provided for in the best available scientific advice, in particular by STECF, or a similar independent scientific body recognised at Union or international level, which ensures that the spawning stock biomass has less than 5 % probability of being below BLIM;

The safeguard mechanisms under the West Mediterranean EU MAP7 demersal plan can thus be triggered by levels of SSB falling below given thresholds. For stocks for which targets relating to MSY are available, and for the purpose of the application of safeguards, it is necessary to establish conservation reference points, expressed as precautionary reference points (Bpa) and limit reference points (Blim).

Appropriate safeguards should be provided for in order to ensure that the targets are met and to trigger, where needed, remedial measures, inter alia, where stocks fall below the conservation reference points.

TOR 2

In preparation for the Expert Working Group on stock assessments in the western Mediterranean Sea (EWG 22-09) and the Expert Working Group on fishing effort regime for demersal fisheries in the western Mediterranean (EWG 22-11), EWG 22-02 is requested to estimate preliminary Blim and Bpa biological reference points, as well as other reference points that could be estimated (e.g. Bmsy), for the 6 main target species under the West

Med MAP. The preliminary values and the approach should be presented to STECF summer plenary with the aim of giving final values in EWG 22-11.

Using existing stock assessments, EWG 22-02 is requested to define an appropriate practical framework for deriving the conservation reference points (i.e. Bpa and Blim) for the demersal stocks in the West Mediterranean listed in Annex III. 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. The supplied approach should draw on the experience with other approaches (e.g. ICES and GFCM) where applicable. Where other approaches are needed specifically for species with short time series, alternatives should be proposed.

ANNEX I

List of stocks for TOR 1

Member State	Area (GSA)	Scientific name
Spain	GSA 1	<i>Sardina pilchardus</i>
Spain	GSA 5	<i>Engraulis encrasicolus</i>
Spain	GSA 6	<i>Engraulis encrasicolus</i>
France	GSA 7	<i>Sparus aurata</i>
France	GSA 8	<i>Sparus aurata</i>
Malta	GSA 15	<i>Scomber colias</i>
Malta	GSA 15	<i>Boops boops</i>
Italy	GSA 16	<i>Engraulis encrasicolus</i>
Italy	GSA 19	<i>Engraulis encrasicolus</i>
Slovenia	GSA 17	<i>Merlangius merlangus</i>
Slovenia	GSA 17	<i>Eledone moschata</i>
Croatia	GSA 17	<i>Sardina pilchardus</i>
Croatia	GSA 17	<i>Engraulis encrasicolus</i>
Greece	GSA 20	<i>Sepia officinalis</i>

Greece	GSA 22	<i>Sepia officinalis</i>
Greece	GSA 23	<i>Sepia officinalis</i>
Cyprus	GSA 25	<i>Boops boops</i>
Cyprus	GSA 25	<i>Spicara smaris</i>
Bulgaria	GSA 29	<i>Engraulis encrasicolus</i>
Bulgaria	GSA 29	<i>Merlangius merlangus</i>
Romania	GSA 29	<i>Engraulis encrasicolus</i>
Romania	GSA 29	<i>Merlangius merlangus</i>

ANNEX II

List of additional stocks for TOR 1

Member State	Area (GSA)	Scientific name
Spain	GSA 1	Engraulis encrasicolus
Spain	GSA 1	Sardinella aurita
Spain	GSA 1	Trachurus mediterraneus
Spain	GSA 1	Trachurus trachurus
Spain	GSA 1	Octopus vulgaris
Spain	GSA 1	Lophius budegassa
Spain	GSA 1	Micromesistius poutassou
Spain	GSA 1	Scyliorhinus canicula
Spain	GSA 5	Octopus vulgaris
Spain	GSA 5	Sardina pilchardus
Spain	GSA 5	Raja clavata
Spain	GSA 5	Trachurus mediterraneus

Spain	GSA 5	<i>Loligo vulgaris</i>
Spain	GSA 5	<i>Lophius budegassa</i>
Spain	GSA 5	<i>Sepia officinalis</i>
Spain	GSA 6	<i>Sardina pilchardus</i>
Spain	GSA 6	<i>Sardinella aurita</i>
Spain	GSA 6	<i>Trachurus mediterraneus</i>
Spain	GSA 6	<i>Trachurus trachurus</i>
Spain	GSA 6	<i>Octopus vulgaris</i>
Spain	GSA 6	<i>Lophius budegassa</i>
Spain	GSA 6	<i>Eledone cirrhosa</i>
Spain	GSA 6	<i>Sepia officinalis</i>
Spain	GSA 6	<i>Micromesistius poutassou</i>
France	GSA 7,8	<i>Octopus vulgaris</i>
France	GSA 7,8	<i>Scomber scombrus</i>
France	GSA 7,8	<i>Eledone cirrhosa</i>
France	GSA 7,8	<i>Lophius budegassa</i>
France	GSA 7,8	<i>Trachurus mediterraneus</i>
Malta	GSA 15	<i>Mullus surmuletus</i>
Italy	GSA 16, 19	<i>Aristeus antennatus</i>
Italy	GSA 16, 19	<i>Aristaeomorpha foliacea</i>
Italy	GSA 16	<i>Parapenaeus longirostris</i>
Italy	GSA 16	<i>Merluccius merluccius</i>
Italy	GSA 16, 19	<i>Mullus surmuletus</i>
Italy	GSA 16, 19	<i>Mullus barbatus</i>
Italy	GSA 16, 19	<i>Sardina pilchardus</i>

Slovenia	GSA 17	Sparus aurata
Slovenia	GSA 17	Solea solea
Slovenia	GSA 17	Loligo vulgaris
Slovenia	GSA 17	Mullus barbatus
Slovenia	GSA 17	Pagellus erythrinus
Slovenia	GSA 17	Dicentrarchus labrax
Slovenia	GSA 17	Mugilidae
Slovenia	GSA 17	Sardina pilchardus
Croatia	GSA 17	Scomber colias
Croatia	GSA 17	Trachurus mediterraneus
Croatia	GSA 17	Trachurus trachurus
Croatia	GSA 17	Eledone moschata
Croatia	GSA 17	Octopus vulgaris
Greece	GSA 20, 22, 23	Boops boops
Greece	GSA 20, 22, 23	Mullus surmuletus
Greece	GSA 20, 22, 23	Pagellus erythrinus
Greece	GSA 20, 22, 23	Panaeus kerathurus
Greece	GSA 20, 22, 23	Spicara smaris
Greece	GSA 20, 22, 23	Scomber japonicus
Cyprus	GSA 25	Mullus surmuletus
Cyprus	GSA 25	Mullus barbatus
Cyprus	GSA 25	Siganus rivulatus
Cyprus	GSA 25	Siganus luridus
Cyprus	GSA 25	Diplodus sargus
Bulgaria	GSA 29	Mullus barbatus

Bulgaria	GSA 29	Rapana venosa
Bulgaria	GSA 29	Scophthalmus maximus
Bulgaria	GSA 29	Sprattus sprattus
Bulgaria	GSA 29	Squalus acanthias
Bulgaria	GSA 29	Trachurus mediterraneus
Romania	GSA 29	Mullus barbatus
Romania	GSA 29	Rapana venosa
Romania	GSA 29	Scophthalmus maximus
Romania	GSA 29	Sprattus sprattus
Romania	GSA 29	Squalus acanthias
Romania	GSA 29	Trachurus mediterraneus

ANNEX III

List of stocks for TOR 2

Area	Common name	Scientific name
GSA 1-5-6-7	Hake	<i>Merluccius merluccius</i>
GSA 1-5-6-7	Deep-water rose shrimp	<i>Parapenaeus longirostris</i>
GSA 1	Red mullet	<i>Mullus barbatus</i>
GSA 5	Striped red mullet	<i>Mullus surmuletus</i> (*)
GSA 6	Red mullet	<i>Mullus barbatus</i> (*)
GSA 7	Red mullet	<i>Mullus barbatus</i> (*)
GSA 5	Norway lobster	<i>Nephrops norvegicus</i>
GSA 6	Norway lobster	<i>Nephrops norvegicus</i>
GSA 8-9-10-11	Hake	<i>Merluccius merluccius</i>
GSA 9-10-11	Deep-water rose shrimp	<i>Parapenaeus longirostris</i>
GSA 9	Red mullet	<i>Mullus barbatus</i>
GSA 10	Red mullet	<i>Mullus barbatus</i>
GSA 9	Norway lobster	<i>Nephrops norvegicus</i>
GSA 11	Norway lobster	<i>Nephrops norvegicus</i>
GSA 1-2	Blue and red shrimp	<i>Aristeus antennatus</i>
GSA 5	Blue and red shrimp	<i>Aristeus antennatus</i> (*)
GSA 6-7	Blue and red shrimp	<i>Aristeus antennatus</i> (*)
GSA 8-9-10-11	Giant red shrimp	<i>Aristaeomorpha foliacea</i>
GSA 8-9-10-11	Blue and red shrimp	<i>Aristeus antennatus</i>

(*) if feasible, explore the possibility to merge red mullet in GSAs 5-6-7 and blue and red shrimp in GSAs 5-6-7.

(2 or 8) to be discussed by experts whether data of GSA 2 and 8 can be added to the assessment.