

**Final Report of the  
Regional Co-ordination Group Meeting for the  
Mediterranean and Black Sea 2018**

**17/09/2018 - 21/09/2018**

**Kavala, Greece**

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## Executive summary

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The RCG Mediterranean and Black Sea (RCG MED & BS) was held in Kavala (Greece) from 17 to 21 September 2018. RCG MED&BS appreciated the facilities offered by the Fisheries Research Institute (FRI), Greece. The availability of SharePoint offered by ICES proved to be very efficient in organizing the work before, during and after the meeting.

The 2<sup>nd</sup> RCG MED & BS was attended by the National Correspondents and/or their delegates from the countries of the competent area as follows: Bulgaria, Croatia, Cyprus, Greece, France, Italy, Malta, Romania, Slovenia and Spain. During some points of the agenda also France and Spain national Correspondents participated via teleconference. The meeting was also attended by the representatives of the EU-DG Mare, the FAO-GFCM Secretariat, the chairs of MEDITS and MEDIAS steering committees and the STREAM project coordinator.

In 2018 an official data call was launched by the chair of the RCG MED & BS, requesting data on landings, effort, value and biological data for the period 2015-2017, for addressing the following:

- Review and update the landing template for the Mediterranean and for the Black Sea;
- Ranking system for the Mediterranean and Black Sea based on the list of métier agreed at regional level (RCM Med & BS 2009 and 2010).

The relevant Data Call was announced in July to all National Correspondents, with a deadline on the 5<sup>th</sup> of September, 2018. The data was required to be submitted in two different data files similar with previous Data Calls.

Data were submitted by all Member States in the Mediterranean Sea and the Black Sea. The available data were reviewed by the chairs of RCG MED & BS and PG MED, and clarifications on data values and coding were received whenever requested. The update of the landing template and the results from the ranking system of the métiers were provided to the Group.

RCG MED & BS 2018 summarized its work in 4 recommendations:

- Amendment of Rules of Procedures (RoPs) for the RCG MED & BS
- Establishment of Inter-sessional sub groups for the RCG MED & BS
- Setting up of a Regional Database (RDB) for MED & BS (MED & BS-RDB)
- Mesozooplankton sampling in MEDIAS survey (recall of 2016 recommendation)

*Other main issues discussed:*

- MS expressed their concern about the possibility of realizing the annual meeting of the RCG MED & BS 2019 in the proposed dates by the LMs (May-June 2019) because at that time the surveys of MEDITS and Medias are in process while several data calls are ongoing. Therefore RCG MED & BS suggest to keep the dates of the annual meeting of the RCG MED & BS in September, as has been the case for the previous years. The proposed dates are from the 16th to 20th of September. It was further agreed on the possibility to perform additional shorter meetings in advance of the annual one, for discussing specific issues (e.g. a meeting in June for discussing the revision of EU MAP).

- The RCG MED & BS would like to indicate that the Mediterranean experts are willing and have the intention to have more prominent participation in European Working Groups concerning all aspects that are related to data collection.
- The RCG MED & BS would like to indicate their intention to participate in ICES expert Working Groups.
- Concerning Table 6.A (Data availability) of the AR the RCG MED&BS suggests that the dates where data can be available should be after the conclusion of the pilot studies.

Two Parallel Sessions convened at FRI's premises at the same time of the RCG MED & BS.

Parallel Session 1- Training Workshop on sampling optimization - use of the SD tool developed by MARE/2016/22 project.

*“Strengthening REgional cooperation in the Area of fisheries biological data collection in the Mediterranean and Black Sea (STREAM)”*

The workshop took place next to the main RCG MED&BS venue. Maria Teresa Facchini directed the workshop and Charis Charilaou had the role of the co-chair. The workshop was attended by 13 participants from five countries (Cyprus, Greece, Italy, , Bulgaria, and Romania) between the 18<sup>th</sup> and 21<sup>st</sup> of September.

Parallel Session 2- Diadromous species - Eel meeting

The parallel session on the diadromous species – Eel meeting was attended by 12 experts on Eel, representing 10 countries, from the Baltic (6), Atlantic (5), North Sea (6) and Mediterranean (3) regions (some countries span 2-3 regions). The meeting was chaired by Alan Walker and took place between the 18<sup>th</sup> and 21<sup>st</sup> of September.

The Agenda with ToRs and the participants are in Annex I and Annex II respectively. Recommendations are listed in Annex III and they summarize the work, discussions and decisions of the RCG MED & BS 2018. The final version of the amended RoPs can be found in Annex IV and the official data call for 2018 in Annex V.

The 2019 meeting of the RCG MED & BS will be in Malta, from the 16th to 20th of September. A shorter meeting in June is also planned (no exact dates and venue decided) for discussing the revision of EU MAP. For 2019 the meetings of the RCG Med&BS will be chaired by Mr Apostolos Karagiannakos NC of Greece and co-chaired by Ms Simona Nicheva NC of Bulgaria.

## Draft Report of the Regional Co-ordination Group meeting for the Mediterranean and Black Sea 2018

### 1. Review progress since 2017 RCG's and 2017 Liaison meeting (14<sup>th</sup> report) (TOR 1).

RCG MED & BS 2018 reviewed the recommendations from the RCM MED & BS-LP 2017 that were addressed to the 14<sup>th</sup> LM, the COM, and other bodies and their timeframe for the fulfilment was until the end of 2018.

| <b>Rules of procedure for the RCG MED &amp; BS</b> |                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCM MED &amp; BS 2017 Recommendation 1</b>      | RCG MED & BS recommend the follow up of the draft text of Rules of Procedure as attached to this report which was reviewed and discussed during the plenary. It was also agreed that all MS may need more time to commit with the text produced, acknowledging at the same time that further delays on this issue could jeopardize the functioning and the work carried out in the RCG. |
| <b>Justification</b>                               | Article 9(5) of EU Regulation 2017/1004 of the EP and of the Council, <i>on the establishment of a Union framework for the collection, management, and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) 199/2008</i> (recast).                                                         |
| <b>Follow-up actions needed</b>                    | Draft text attached to this draft report to be discussed at the LM and exchange point of view with RoPs from other regions. After LM, draft text with comments from LM to be circulated to NC with a deadline to send additional comments (20 November 2017). This should lead to the final adoption by written procedure of the ROPS for MED&BS by the end of 2017.                    |
| <b>Responsible persons for follow-up actions</b>   | Chair of RCG MED&BS 2017 to present the final draft to LM. Chair of RCG MED & BS 2018 to circulate the draft by RoPs to all NC.<br><br>NC to review the draft, send comments if necessary and to finally adopt by the end of 2017.                                                                                                                                                      |
| <b>Time frame (Deadline)</b>                       | LM, end of 2017. NC                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Comments and Follow up in 2018</b>              | Draft Rules of Procedure for RCG Med & BS were circulated between the MS for comments and a final draft version of RoPs was produced by the end of 2017. However, since for some points of RoPs, it was difficult to get consensus the issue will be discussed again in RCG MED & BS 2018 meeting.                                                                                      |

| <b>Proposed Changes to FDI data call and new data calls</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>RCM MED &amp; BS 2017</b><br><b>Recommendation 2</b>     | <p>The RCG recommends that:</p> <ul style="list-style-type: none"> <li>- The data call for Fisheries Dependent Information (FDI) should be drafted according to the biological sampling plans implemented in the Mediterranean and Black Sea Region on the basis of WP and RCM recommendations;</li> <li>- To compile relevant tables only with information on volume and value of landings per species and according to the defined level of aggregation.</li> <li>- To clearly state in the official data call that some tables which request data that are not compulsory under the DCF are optional (e.g. provision of data at the GFCM square grid is not compulsory under the DCF).</li> <li>- To allow the use of aggregated codes (e.g. "Appendix 7 Domain definitions" of the field "ALL_GSA" for the Subregion codes, to adjust the data call format to large pelagics sampling protocol), to adjust the data call format to different sampling protocols.</li> <li>- The draft of the new data calls (requirements and format) should be circulated among National Correspondents and RCG chairs before its finalization;</li> <li>- The new data call should be launched at least two months before the deadline for submission of data;</li> <li>- The new data call should be launched in the second semester of the year</li> <li>- The Data calls should consider the timing for data availability agreed at regional level and listed in Table 6A of the MS WP.</li> </ul>                                                                                                                                            |
| <b>Justification</b>                                        | <p>Even if there is a clear need to streamline STECF data calls, this imply a greater effort for answering the additional data call.</p> <p>The FDI data call is not completely clear in terms of requirements and codification.</p> <p>For new data calls it would be useful to circulate a draft among MSs to assure that it can be answered according to the provisions of WP for data collection.</p> <p>The data call cannot be launched in the first semester because in this period MSs have to answer to a lot of other data calls (GFCM, ICCAT, STECF fleet economic, STECF med biological data, RCM MED &amp; BS-LP data call).</p> <p>RCG MED&amp;BS 2017 considered that several issues have been already discussed and agreed at regional levels in terms of: identification of métiers, standard coding for geographical areas, variables, etc. These can be found in RCM MED &amp; BS-LP, RCG MED &amp; BS 2017 and PGMED reports. In addition, a specific deliverable of MARE/2014/19 Med &amp; BS project provides a complete proposal for data format and codification (deliverable 2.4, 2.2-2.7).</p> <p>Position letter with explanations and requests regarding the FDI data call was agreed and send to the COM by the NC present on the RCG MED &amp; BS 2017.</p> <p>For the purpose of future planning of the database adaptations at national level, it is necessary to plan data-call format designs well in advance of the announcement of the data-call, in order to allow Member States the time needed to ensure the necessary resources and successfully manage adaptations of national databases.</p> |
| <b>Follow-up actions needed</b>                             | Circulation of new and FDI data call among NCs and RCG chairs. Deadlines to be set according to RCG recommendations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Responsible persons for follow-up actions</b>            | DG MARE, JRC, Member States                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Time frame (Deadline)</b>                                | Before the official lunch of any new data call and FDI data call in 2018.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Comments and Follow up in 2018</b>                       | No progress was made during 2018.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| <b>Implementation of the MEDIT and other research surveys at sea</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>RCG MED &amp; BS 2017 Recommendation 3</b>                        | <p>RCG recommends Mediterranean MS to carry out the MEDIT survey according to EUMAP provisions. In case of delays due to the MS administrative and bureaucratic procedures implementation, RCG recommends MS to take any actions to perform the MEDIT survey even with a delay with respect to EUMAP provisions.</p> <p>RCG recommends that this also applies to other research surveys at sea.</p> <p>RCG consider that from the scientific point of view it is better to perform the delayed surveys rather to not perform it at all, even if this involves a delay.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Justification</b>                                                 | <p>According to EUMAP the period for MEDIT survey is spring-summer (2<sup>nd</sup> and 3<sup>rd</sup> quarter). However, some MSs, namely Italy and Greece, wanted to start the 2017 survey later than September due to administrative delays under the EMFF procedures. The MEDIT will therefore be finalized with some delays with respect to the prescribed timing.</p> <ul style="list-style-type: none"> <li>- RCG MED&amp;BS agreed on the need to perform the survey, even if with some delays, because:</li> <li>- In the Mediterranean only one survey is covering the demersal species and if no survey is carried out no fisheries independent information will be available</li> <li>- Survey is aimed at collecting biological parameters as well as additional ecosystem indicators that are essential in the assessment of the impact of fisheries on the stocks and ecosystems (the latter also in line with the Marine Strategy Directive Framework)</li> <li>- Surveys data are essential to perform stock assessment and this data can be used even in the case of timing splitting provided that end users are aware of this issue and apply appropriate methodologies for the standardization of the population indices.</li> </ul> |
| <b>Follow-up actions needed</b>                                      | <p>MS to perform the MEDIT and other research surveys at sea within a delay with respect to EUMAP provisions.</p> <p>End users to apply appropriate scientific approaches to mitigate the impact on the reliability and consistency of the data.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Responsible persons for follow-up actions</b>                     | MS, COM, LM, STECF, End users                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Time frame (Deadline)</b>                                         | Every year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Comments and Follow up in 2018</b>                                | During 2017 Greece didn't implement the MEDIT survey and only Italy has performed a late survey, while during 2018 all surveys were conducted in due time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| <b>Merging of length classes</b>                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>RCG MED &amp; BS 2017 Recommendation 4</b>    | The Mediterranean and Black Sea data call issued by the JRC should allow MS to merge the length classes for different métier and should allow the upload of data with merged length classes. For example, for the small-scale fisheries the vessel length classes VL0006 and VL0612 should be accepted to be aggregated into a single vessel length class (VL0012), vessel length classes for trawlers or other fleet segments should be accepted to be recorded as below 24 m and above 24 m, and the code “-1” should be also accepted for allowing MS to submit data aggregated in other ways, in accordance with their national biological sampling designs.                                                                                                                                                          |
| <b>Justification</b>                             | <p>The RCG MED &amp; BS 2017 group recalled the EU Commission Decision 2016/1251 Chapter III paragraph 2(a) that requests commercial fisheries data to be reported at the aggregation level 6 (corresponding to mesh size).</p> <p>The RCG MED &amp; BS 2017 group, in order to fulfil the requirement of Chapter II (Data Collection Methods) of the EU Decision 2016/1251, reiterated that sampling for the collection of biological data should be statistically planned and designed, so as to avoid problems of under-sampled and non-sampled strata or domains requiring imputation of missing data.</p> <p>The RCG MED &amp; BS 2017 group also took into consideration the requests made by STECF and by the GFCM DCRF in order to merge the different vessel length classes of the LOA for sampling purpose.</p> |
| <b>Follow-up actions needed</b>                  | <p>MS to merge vessel length classes.</p> <p>JRC to adapt data call in order to accept merged vessel length classes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Responsible persons for follow-up actions</b> | LM, JRC, DG Mare, MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Time frame (Deadline)</b>                     | Before data calls in 2018.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Comments and Follow up in 2018</b>            | Provisions of the Mediterranean and Black Sea data call have not been changed according to this recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| <b><i>Pilot studies on incidental catch of vulnerable species</i></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>RCG MED &amp; BS 2017 Recommendation 5</b>                         | <p>Following the 2016 Recommendation of the RCM MED &amp; BS-LP on pilot studies for the assessment of incidental catches of birds, mammals, reptiles and fish, the RCG MED &amp; BS recommends MS to follow the planned monitoring programme of the GFCM on the incidental catch of vulnerable species, and carry out the following pilot studies:</p> <p>2018: Pilot study for assessing incidental catches of vulnerable species from bottom trawlers</p> <p>2019: Pilot study for assessing incidental catches of vulnerable species from longlines</p> <p>2020: Pilot study for assessing incidental catches of vulnerable species from set nets (gillnets).</p> <p>The guidelines for monitoring incidental catch of vulnerable species and processing the collected data, will be based both on the outputs of the EU MARE/2014/19 project for the Med &amp; BS, and the GFCM guidelines on incidental catch (under preparation). Data to be collected will include: identification of species, number and weight (when</p> |
| <b>Justification</b>                                                  | It is very important that the implementation of pilot studies on incidental catch is coordinated, in terms of methodology and timing, among Med & BS MS and also the third countries in the region that will perform pilot studies based on the GFCM incidental catch programme.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Follow-up actions needed</b>                                       | <p>LM is expected to provide advice on possible need to update WPs for including information on the implementation of the pilot studies.</p> <p>COM should provide clear guidance on necessity of resubmission of the WPs.</p> <p>COM should inform MS on the LM opinion in due time and in advance of the deadline for resubmitting WPs.</p> <p>Accordingly, MS may have to resubmit their WPs.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Responsible persons for follow-up actions</b>                      | LM, RCG MED & BS chair, DGMARE, MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Time frame (Deadline)</b>                                          | After the LM 2017 and before the 31 October 2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Comments and Follow up in 2018</b>                                 | Some MS resubmitted their WPs for 2018-2019 including information on the implementation of the pilot studies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| <b><i>Data transmission (DT) failures and involvement of the MS/RCG in the process</i></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>RCG MED &amp; BS 2017<br/>Recommendation 6</b>                                          | <p>RCG MED &amp; BS recommends all end users (STECF, JRC and other end-users) that before reporting the DT failures to the COM, to contact the concerned MS to try to clarify the issues and avoid DT failures.</p> <p>RCG recommends to include the analysis and discussion of DT failures in RCG Terms of Reference.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Justification</b>                                                                       | <p>STECF-17-10, evaluation of DCF 2016 Annual Reports &amp; Data Transmission to end users in 2016, considered that the number of data transmission issues for the Mediterranean data call is very high and considered that the overall process to detect and evaluate DT failures should be streamlined. The dialogue between MS and end users should be improved.</p> <p>STECF suggested to establish an ad-hoc working group within the Mediterranean &amp; BS RCG to deal with data transmission issues.</p> <p>However, RCG considered that the procedure to identify and to assess DT failures should follow a step by step process to ensure consistency among end-users and to guarantee a systematic consultation among end users and MSs'. RCG considers that it is up to the end user to communicate to MS the issues raised during the use of data and to build a dialogue to detect actual data collection failures excluding all data collection issues that relate to file consistency and/or format/coding requirements.</p> <p>RCGs consider useful to analyse the DT failures in order to identify drawbacks in data collection activities at regional level.</p> |
| <b>Follow-up actions needed</b>                                                            | <p>STECF, JRC and other end-users to communicate DT issues to MS before their submission to the COM and possibly soon after the data validity check.</p> <p>MS should cooperate with end-users to clarify the issues and to give adequate justifications to avoid DT failures.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Responsible persons for follow-up actions</b>                                           | STECF, JRC, other end-users, MS, RCG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Time frame (Deadline)</b>                                                               | Soon after the data validity check by an end-user.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Comments and Follow up in 2018</b>                                                      | No progress was made during 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| <b>Data availability and official data calls.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>RCG MED&amp;BS 2017 Recommendation 7</b>       | <p>RCG MED &amp; BS 2017 on the basis of the STECF (2016 evaluation of the WPs) comments, modified and agreed on changed dates in Table 6A. RCG MED &amp; BS 2017 agreed on common dates after which the data sets will be made available to the end users, and requests the relevant MS to refer to these when completing Table 6A – Data availability in their Work Plans. MS and end users are recommended to respect the relevant dates of availability, especially when official data calls are issued by DGMARE and deadlines are set.</p> <p>The agreed and modified Table 6A following the request by the STECF (2016 evaluation of the WPs) on data availability is part of the RCG MED &amp; BS 2017 report.</p> <p>RCG MED &amp; BS 2017 requested many times the JRC/DGMARE on maintaining the stable format of the official data calls, and requests that regional agreements on codes are respected.</p> <p>With regards to the JRC/DGMARE proposal on setting the deadlines of official data calls for the Mediterranean and Black Sea at earlier dates than the current ones, for allowing the associated STECF EWG meetings to convene earlier in the year, the group expressed its concern on the ability of the MS to respect more strict deadlines and on the implications this would have to the quality of the data provided. As an alternative solution, RCG MED &amp; BS recommends DGMARE to shorten the data-handling procedure after the legal deadline of the data calls, for allowing the STECF EWG meetings associated with the data calls to convene no later than one calendar month after the deadline. Specifically, and in line with the data-handling procedure for STECF Expert Working Groups circulated by DGMARE, a two weeks period after the deadline (instead of two months in some cases) should be spent for data checks by JRC, followed by two weeks of operational deadline.</p> |
| <b>Justification</b>                              | <p>The regionally agreed availability dates of the different data-sets are based:</p> <ul style="list-style-type: none"> <li>i) on the time required for finalizing other related data (e.g. fishing activity data required for finalizing biological data),</li> <li>ii) the available resources (limited for some MS) for data handling, considering also the timing of DCF reporting obligations,</li> <li>iii) the required work for processing the data and ensuring their quality for their scientific use.</li> </ul> <p>Fixed deadlines of the various official DGMARE data calls should be specified according to the agreed availability dates, for allowing MS to plan in advance the work required for meeting their obligations.</p> <p>The existence of different formats and codes for reporting DCF data through various Data Calls increases the workload of Member States to prepare and provide data according to each data requirement. It increases the risk of not complying with each requested coding and threatens the quality of information provided. Formats and valid codes of a data call may differ from year to year, obliging MS to resubmit the same data provided in previous years in accordance with the updated format and code requirements.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Follow-up actions needed</b>                   | <p>Follow agreed availability dates by MS and end users.</p> <p>Respect recommendations on the format of data calls</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|--------------------------------------------------|--------------------------------------------------------------------|
| <b>Responsible persons for follow-up actions</b> | MS, JRC/DGMARE, end users                                          |
| <b>Time frame (Deadline)</b>                     | Before launch of 2018 data calls.                                  |
| <b>Comments and Follow up in 2018</b>            | There was agreement on table 6A and MS have to harmonize their NWP |

| <b>Shorten the data-handling procedures</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCG MED &amp; BS - 2017 Recommendation 8</b>  | <p>RCG MED &amp; BS 2017 decided to repeat last year recommendation regarding the maintenance of the stable format of the official data calls, and requests that regional agreements on codes are respected.</p> <p>With regards to the JRC/DGMARE proposal on setting the deadlines of official data calls for the Mediterranean and Black Sea at earlier dates than the current ones, for allowing the associated STECF EWG meetings to convene earlier in the year, the group expressed its concern on the ability of the MS to respect more strict deadlines and on the implications this would have to the quality of the data provided. As an alternative solution, RCG Med &amp; BS recommends DGMARE to shorten the data-handling procedure after the legal deadline of the data calls, for allowing the STECF EWG meetings associated with the data calls to convene no later than one calendar month after the deadline. Specifically, and in line with the data-handling procedure for STECF Expert Working Groups circulated by DGMARE, a two weeks period after the deadline (instead of two months in some cases) should be spent for data checks by JRC, followed by two weeks of operational deadline.</p> |
| <b>Justification</b>                             | <p>The existence of different formats and codes for reporting DCF data through various Data Calls increases the workload of Member States to prepare and provide data according to each data requirement. It increases the risk of not complying with each requested coding and threatens the quality of information provided. Formats and valid codes of a data call may differ from year to year, obliging MS to resubmit the same data provided in previous years in accordance with the updated format and code requirements.</p> <p>By shortening the data-handling procedure after the legal deadline of official DGMARE data calls, STECF EWG meetings associated with the data calls may convene earlier in the year than they currently do, for providing management advice on due time, without setting the deadlines of official data calls for the Mediterranean and Black Sea at earlier dates.</p>                                                                                                                                                                                                                                                                                                           |
| <b>Follow-up actions needed</b>                  | Respect recommendations on the format of data calls and regarding the shorten data – handling procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Responsible persons for follow-up actions</b> | JRC/DGMARE, end users                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Time frame (Deadline)</b>                     | Before launch of 2018 data calls, especially Mediterranean and Black Sea data call.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Comments and Follow up in 2018</b>            | No progress was made during 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| <b><i>Procedures for cost sharing under the EMFF</i></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCG MED &amp; BS 2017 Recommendation 9</b>            | RCG MED & BS 2017 recommends to introduce cost and task sharing opportunities or/and exploring other ways of co-funding the activities of the data collection under the EMFF OPs 2014-2020.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Justification</b>                                     | <p>Under the EMFF an envelope for funding the data collection activities was assigned to the data collection measure under the respective MS's EMFF OPs 2014-2020. On the other hand the scope of data collection has expanded in the recent period and the group discussed that funding possibilities in many Member States are not sufficient in order to cover all the data collection requirements from the allocated EMFF funds.</p> <p>On the other hand also the administrative burden for small administrations in handling all the data collection and EMFF requirements is very heavy and represent an important financial, people and time consuming obligation.</p> <p>In addition, demanding administrative procedures necessary for the implementation of the EMFF measures hamper the implementation of data collection, particularly where small administrations are concerned.</p> <p>These circumstances may be alleviated by introducing cost and task sharing opportunities or/and exploring other ways of co-funding.</p> |
| <b>Follow-up actions needed</b>                          | <p>Explore different possibilities and develop cost and task sharing procedures and possibilities of joint financing.</p> <p>Intersessional work for identifying the need and work on possible solutions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Responsible persons for follow-up actions</b>         | RCG MED & BS 2018, COM, MS, NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Time frame (Deadline)</b>                             | September 2018.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Comments and Follow up in 2018</b>                    | No progress was made during 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| <b>Introduction of new research surveys at sea in the Mediterranean and Black Sea area</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCM MED &amp; BS 2017<br/>Recommendation 10</b>                                         | <p>RCG MED &amp; BS recommend to introduce new surveys at sea in EU MAP Table 10 Research surveys at sea.</p> <p>Proposed new surveys are:</p> <p>SOLEMON survey for the GSA 17 and extension of the MEDIAS survey in GSA 11 and 19</p> <p>Proposed surveys should not affect in any way the implementation of the existing surveys in terms of available resources for surveys at sea (MEDITS and MEDIAS). STECF EWG 17-14 should take in the consideration this recommendation.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Justification</b>                                                                       | <p>SOLEMON research survey is filling the gap left behind other surveys. Beam trawl used as sampling gear enable appropriate sampling of benthic fish, crustaceans and cephalopods. SOLEMON research survey is the only fishery independent data source for stock assessment of <i>Solea solea</i> and other benthic species in Adriatic Sea. The SOLEMON data are used for stock assessment purposes.</p> <p>Acoustic survey for the evaluation of the biomass and spatial distribution of small pelagic fish in the Mediterranean Sea started since the '70s and several research projects of this kind were undertaken at national level. Since 2009 the acoustic surveys of the UE area in the Mediterranean are coordinated by means of a common protocol under the umbrella of pan-Mediterranean Acoustic Surveys (MEDIAS). Recently, GFCM has approved and started the Mid Term Strategy aimed at improving already existent surveys in non EU countries or develop new ones where they does not yet exist, possibly with the support of MEDIAS group for what concerns acoustic surveys. The general aim is to expand research surveys at sea in the Mediterranean as much as possible in order to gather the most complete picture that is possible. Anyway, even at UE countries level some gaps in GSAs coverage exist by now. With the aim to try to strengthen coverage in UE area, scientists of CNR-ISMAR of Ancona and scientists from CNR-IAMC of Capo Granitola decided to give their availability to cover by acoustic survey respectively GSA 19 (western Ionian Sea) and GSA 11 (Sardinia), given an adequate financial support, possibly to be added to DCRF in the MEDIAS framework in the future.</p> |
| <b>Follow-up actions needed</b>                                                            | Amendment of the Commission Implementing Decision (EU) 2016/1251, of 12 July 2016, adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019, (notified under document C(2016) 4329).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Responsible persons for follow-up actions</b>                                           | COM, MS, LM, STECF EWG 17-14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Time frame (Deadline)</b>                                                               | Report of the STECF EWG 17-14 (1 <sup>st</sup> trimester of the 2018)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Comments and Follow up in 2018</b>                                                      | The recommended new surveys were inserted in the list of surveys proposed for inclusion in the future Table 10 of the EU MAP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| <b>Biological parameters – ageing protocols</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCM MED&amp;BS 2017 Recommendation 11</b>     | RCG MED & BS 2017 recommends to follow the agreed protocols of European workshops for age reading                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Justification</b>                             | <p>Considering the fact that different scientists/experts use different age-reading protocols for the same species within the same stock unit and at a regional level that may result in different age estimates, with aim to minimize uncertainties in age data, it is recommended to harmonize age readings among experts by developing and adopting common age reading protocols for target species that belong to the same stock unit* and also same species at regional level.</p> <p>Different biological parameters are calculated from age data, and most of stock assessment models used are age-structured. Uncertainties in input data (i.e. age data) may consequently result in uncertainties of stock assessment outcomes.</p> <p>*for stock units in the Med see Report of STECF EWG-17-02; (During the meeting RCG Med&amp;BS did not agree on this definition of stock units).</p> |
| <b>Follow-up actions needed</b>                  | <p>To follow agreed ageing protocols and adopted recommendations on age reading (available in Data Quality Assurance Repository (<a href="http://ices.dk/community/Pages/PGCCDBS-doc-repository.aspx">http://ices.dk/community/Pages/PGCCDBS-doc-repository.aspx</a>)).</p> <p>To harmonize and adopt common age reading protocols (specific for species/stock unit) - since the same issue has been included in GFCM SAC work plan for 2017-2019** (** in SAC work plan 2017-2019 (SAC, Ljubljana 2017): Define an approach for the harmonization of otolith reading for selected priority species (anchovy, sardine, European hake, red mullet) between national institutions.), a synergy of efforts from PGMED, SAC, ICES would be welcomed (i.e. joint meetings on age reading harmonisations).</p>                                                                                            |
| <b>Responsible persons for follow-up actions</b> | RCG, PGMED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Time frame (Deadline)</b>                     | 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Comments and Follow up in 2018</b>            | No progress was made during 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

RCG MED & BS noted that the recommendations need follow up but very little progress has been made on this. In order to speed up this process intersessionally, it was suggested to have a secretary and a dedicated Share Point for this issue, following the example of RCG NA. The issue is under consideration.

### ***1.1. Feed-back from Liaison meeting and broad summary of RCG related activities during 2017, including subgroups established.***

Dr. Apostolos Karagiannakos provided feedback from LM 2017 and presented the main pertinent point related to regional cooperation in MED&BS from the following expert groups: (Annex IX)

- Planning Group on Economic issues (PGECON)
- Planning Group on Data Needs for Assessments and Advice (PGDATA)
- Working Group On Commercial Catches (WGCATCH)
- Working Group on Biological Parameters (WGBIOP)
- Main outcomes from the STECF EWG and STECF plenary

### ***Relevant DCF-related STECF work since the last RCG***

The EWG-17-13 on the Evaluation of Member States' amendments of Work Plans for 2018-2019 took place in Hamburg (13-17 November 2017). Additionally, the outcomes from the STECF EWG 17-04 meeting in Copenhagen on quality aspects of evaluation of MS reporting, including the WPs and the new Annual Report template was elaborated.

The WPs of 19 MSs were evaluated. For 6 MS the amendments were found satisfactory by the EWG. The remaining 13 MS were contacted by the Commission during the EWG with the aim to solve the issues before the end of the EWG. For 8 of these, the issues could be solved. For the remaining 5 there were still outstanding issues at the end of the EWG. In general, most shortcomings identified in the evaluation process were more of a formal nature, i.e. incomplete descriptions, inconsistencies between tables etc.

The EWG 17-13 revised the new proposed Excel tables, report text templates and guidelines from EWG 17-17 and made a number of comments/proposals in order to make the AR templates and guidelines more user-friendly and more appropriate to assess the compliance of MS with the WP and the EU-MAP. The more relevant changes were proposed for Table 1D (Recreational fisheries), Tables 1F/1Fa (Incidental by-catch of birds, mammals, reptiles and fish) and tables 3A–3C (Economics - fleet, aquaculture, processing). For the “economic” tables, the EWG suggested including a column containing the coefficient of variation (CV) but STECF considers that this was not duly justified and not in line with the conclusions of STECF-17-11 (EWG 17-04 on Quality assurance for DCF data).

The EWG 17-13 also reviewed the proposed evaluation procedures for DT and AR, and develop an evaluation procedure for WPs.

EWG 17-03 considered that: a) the legal deadline for submission of AR should be the 31<sup>st</sup> of May; b) in order to allow for sufficient time between AR submission, EWG evaluation and endorsement by STECF (avoiding written procedure), no resubmission of AR (text or table) should be allowed to respond to pre-screeners' comments.

EWG 18-10 on the Evaluation of 2017 AR reports took place in Brussels on 25-29 June 2018. The EWG identified a variety of issues with the questions of the new evaluation template, mainly related to: repetition, unclear formulations, aspects not relevant for the evaluation, and generally the need to reduce the number of questions to focus on the most pertinent issues.

EWG 18-10 felt additional guidelines are required to ensure a more consistent and less subjective approach to evaluating Annual Reports and data transmission issues. To this end the EWG 18-10 proposed a first set of rules/assessment criteria to guide the evaluators.

#### *IT Tool for automatic evaluation of AR*

Following recommendations from EWG 17-17 a Screening Support Tool (SST) was developed to serve as an automatic pre-screening tool. The tool is meant to facilitate structure and codification checks on the Work Plan (WP) or AR individually at the stage of submission at the MS. However the tool was not fully operational prior to and during the EWG 18-10 due to a variety of codification issues. EWG 18-10 considers that the developed tool has potential to support a more efficient evaluation process in the short term, the EWG considers that regional databases together with a web-based application to support the preparation, management and assessment of the AR is the optimum solution to ensure efficiency and transparency in the overall DCF AR and data transmission evaluation process.

#### *Data transmission issues*

The online tool, <https://datacollection.jrc.ec.europa.eu/web/dcf/compliance>, introduced as a pilot in 2015 by the JRC to assist with reporting and evaluation of data transmission (DT) issues was used interactively by Member States, pre-screeners and the EWG 18-10.

In total, 292 issues raised by end users in relation to data calls issued in 2017 were entered on the on-line tool. A higher number of data transmission issues were flagged in 2018 compared to 2017 due to the call for data on fish processing industry, which takes place every other year and was thus not evaluated in 2017. More emphasis should be placed on assessing MSs' data transmission and data quality issues raised by end users, and in a timelier manner (starting with EWG 18-18 this year). In parallel the data submitted should be compared with the data as reported in the ARs and the intentions as laid out in the NWP.

A total of 64 'unsatisfactory' data transmission issues remained at the end of EWG 18-10. These issues were raised by ICES (9) STECF (51), RCG North Atlantic (2), RCG North Sea and East Atlantic (1), and IOTC (1) as end users. The unsatisfactory issues from STECF data calls were mainly related to the Mediterranean and Black Sea (25), Processing (21) and Fleet Economic (5) data calls.

A high number of data issues were once again flagged for the Mediterranean and Black Sea data call. The majority of these issues were assessed by EWG 18-10 as "satisfactory", meaning that MSs' replies on each individual issue have been considered appropriate and the data issues do not refer to actual data collection failures. The introduction of an additional feedback loop to increase communication between MSs and end users after completion of the EWG and before the reporting of DT failures is suggested. A short discussion meeting could be organised by DG Mare to address this specifically.

In general the assessment of data transmission issues is at present still too subjective, and numerous questionable issues remain. To attempt to review each issue in turn and if necessary amend the EWG 18-10 comments and assessments would not necessarily prove useful since they would be equally subjective. Therefore, the comments and assessments that remain on the DT on-line tool in the columns headed 'STECF comments' and 'STECF assessment' are exactly as drafted by the EWG 18-10.

**For the subgroups established**

During RCG Med & BS 2017 the establishment of 2 subgroups for the RCG Med & BS was decided; First subgroup would take over the tasks and ToRs of the PGMED and the second group the task for preparing the draft regional WP. Proposed names for the groups are SGPGMED and SGWP.

However, no progress was made on the two sub groups since last year. Therefore it was suggested to start by thinking of 1 or 2 priorities and give a mandate to the subgroups on those tasks. Also to liaise with the regional grants and work in parallel. The issue will be discussed in the next RCG Med & BS.

## **2. Governance model for the regional coordination group (TOR 2).**

### ***2.1. Discuss the role(s) of RCGs in the DCF environment (EU MAP 'regional approach based on end user needs') and their relations with other 'DCF groups' (for e.g. STECF, PGECON)(there was a similar point in the TORs last year under 'data quality' section)***

RCG MED & BS noted that as RCGs now have the main role of coordinating the programs of the region and are tasked to take specific decisions on data requirements and end user needs, a better coordination is needed along with a certain mandate and rigid TORs. A good opportunity is provided through the regional grants that are running with a set duration and are meant to serve the RCGs in order to feed in their work and progress.

RCG MED & BS noted that representative from end users (JRC, STECF etc.) should attend the RCGs' annual meeting. This was mentioned from a previous recommendation and should be scheduled for next year. Although there is an inherent difficulty on this due to various parallel sessions, they should try to participate at least for one day. The need of a better communication between Atlantic and Mediterranean RCGs was also discussed as well as the participation of scientists in relevant WGs. Therefore it would be useful if a yearly calendar of all WGs was made available to the RCGs in order to better plan, prepare and attend them.

### ***2.2. Present the outcomes of different EU projects (MARE/2016/22 grants Fish Hub) - Based on outcome from FishPi2 and STREAM regarding intersessional groups, how to proceed? Which ones to stay? Pan regional vs regional? ToRs?***

A general overview of the STREAM project and its progress of until that time was given by the project' coordinator Dr. Alessandro Ligas. The presentation is available in Annex IX.

The STREAM project "Strengthening Regional cooperation in the area of fisheries biological data collection in the Mediterranean and Black Sea" is one of the grants funded under the Call for Proposals MARE/2016/22 "Strengthening regional cooperation in the area of fisheries data collection". The STREAM project aims to provide support to the European Commission and MSs to build up experience in new areas of regional cooperation in the Mediterranean and Black Sea for the realization of the Regional Sampling Plans (RSP) and intends to provide elements, tools and expertise that will promote and support the design of Multiannual Regional Work Programmes (MRWP) in the Mediterranean and Black Sea relying on a common and harmonized design, and taking into account the contribution of end-users, MSs and stakeholders.

To achieve its objectives, the STREAM project is structured into nine interconnected Work Packages (WPs). The WPO is the one in charge of the project coordination and management.

The **WP1** "Set of prerequisites for the functioning of the Regional Coordination Groups (RCGs)" has carried out a consultation process by written procedure through an ad hoc questionnaire to get MS view on 1) the Role of RCG, 2) the Role of the end users and on 3) the Use of the data. The analysis of the received answers permitted to complement the existing RoPs and propose a work plan for the RCG MED & BS, including the establishment of ad-hoc working groups. The final results and proposed RoPs, ad-hoc working groups and the draft work-plan was presented by Paolo Carpentieri to the RCG MED & BS 2018 in order to be assessed by the group and considered for their possible future development and implementation.

The **WP2** “Identification of candidate stocks/fisheries/métiers presenting a wide scope for regional sampling and for which Member States could share sampling tasks” was aimed at identifying the most commercially important stocks and fisheries (métiers), beneficial for regional sampling, for which Member States could share sampling tasks using agreed methodologies, ensuring coherent regional data sets with sufficient quality for the end user’s needs. The objectives of WP2 have been accomplished with the production of the Deliverable D2.1 “Identification of the most important stocks at regional level and relative fleets (métiers)”.

The **WP3** “A regional sampling plan for 2019 covering commercial fisheries/ stocks/métiers”, presented by Maria Teresa Facchini at the RCG meeting, aims to design a regional sampling plan (RSP) for covering commercial fisheries/stocks/métiers (RSP-CF). This RSP will be part of the regional Work Plan and may replace the relevant parts of the Member States' national Work Plans in the region where appropriate. The RSP will apply to all concerned Member States in the region involved in the fisheries for the selected stock/species (even if they are not part of the consortium).

The **WP4** “Regional Sampling Program for the collection of data on fisheries impacts on the ecosystem” aims to provide support to the design of a Regional Sampling Program covering the collection of data on fisheries impacts on the ecosystem (RSP-IE). The sampling plan will include: a) fish stomach content analysis; b) co-occurrence and relative abundance of species/stocks; c) incidental catch and by-catch of vulnerable species.

The **WP5** “Small-scale fisheries and recreational fisheries” will identify and propose areas of regional cooperation for small-scale fisheries (SSF) and recreational fisheries (RF), and evaluate the need for a regional sampling plan, including resource implications.

The **WP6** “Procedures to assess the quality of biological data stored at regional level” aims to identify and propose procedures for improving and enhancing data quality. The overall target is to develop a practical framework for detecting and flagging potential sources of bias in biological data at regional level.

The **WP7** “Training of Member State experts” has the objective to ensure that the main findings and outcomes of the other WPs are communicated and disseminated among MS experts by means of the organization of workshops. The first Training Workshop on sampling optimization and use of the SD tool developed by STREAM was run in parallel with the RCG meeting.

Finally, the **WP8** “Inputs from a regional consultation” aims to establish consultations with all MSs regarding the outcomes of the project. Consultations will be established with NCs, and progress of the project (deliverables, workshops, relevant milestones) will be communicated through the sharepoint (<https://streamstakeholder.coispa.eu/WebInterface/login.html>).

After the STREAM presentation came the presentation of the results of the WP1 that was absolutely relevant to the topic and helped the development of the discussion. The outcomes of WP1 were presented by Mr. Paolo Carpentieri the leader of WP1.

He mentioned that In order to facilitate a structured consultation process, the activity was carried out by written procedure through an ad hoc questionnaire and through a consultation process. The purpose of the questionnaire was to get countries views on the following: 1) Role of Regional Coordination Group for the Med & BS, the 2) Role of the end users and on the 3) Use of the data. To this end, the questionnaire included specific questions on the major needs

of regional coordination activities, regional sampling plans, on the way to improve the quality of data required by end users, the existing methodological protocols (i.e. surveys, bycatch and discards monitoring, etc.), improvements in data availability and data submission, etc. The questionnaire was sent to all National Correspondents (NC) for data collection in Mediterranean and Black Sea Member States, to different experts which have participated during the last years, to the main Regional Coordination Groups (e.g. RCM MED & BS and PG Med), and to the experts of Surveys Steering Committee Meetings (e.g. MEDIAS, MEDITS and SOLEMON). Another questionnaire was sent to JRC, GFCM and ICCAT, as they could give important inputs for the development of the RCG. The work was also based on the evaluation and review of the activities carried out by the different RCGs and coordination groups (e.g. liaison meeting), analysing the agreements and procedures of the different end users (e.g. GFCM, STECF/JRC, ICCAT), and the EU Regulations and Decisions.

The overall response rate to the questionnaire was around 70%. All Mediterranean and Black Sea countries involved in the European data collection framework (Reg. 2017/1004) were represented. The analysis of the received answers and feedback permit to complement the existing rules of procedures and propose a work plan for the RCG MED & BS. Overall, there was a high level of agreement in views expressed by both NCs and experts: there is an urgent need to progress towards common regional methodological approaches (especially for what concern biological data collection, recreational fisheries, vulnerable species, marine ecosystem data, etc.); the importance to move towards the development of a regional database was stressed; to better develop statistical aspects related to the collection of biological data; there is the need to strengthen and reinforce the cooperation between MS sharing the same marine resources in the region. Further, a more pro-active participation of the main end-user (e.g. GFCM, STECF/JRC, ICCAT) is requested because through the current system it seems that not all the collected data serve the end-user needs properly.

There was also a general agreement among MSs in the establishment of ad-hoc working groups (e.g. sampling scheme, design and intensity; data quality and check; commercial fisheries with emphasis to small scale fisheries; etc.), and there is an urgent need to share information addressing regional sampling plan aspects including methodology, objectives, strategies, measures and indicators, on some issues like monitoring vulnerable species, recreational fishery and marine ecosystem data (e.g. stomach contents, macrobenthos, marine litter, etc.).

Building on this work, WP1 has also analysed the rules of procedures already developed during the last RCG meeting, identifying gaps and suggesting further actions. The final results and proposals on the rules of procedures, ad-hoc working groups and the draft work-plan were presented in the RCG MED & BS 2018 plenary, assessed by the group and considered for their possible future development and implementation.

Based on the outcomes of STREAM regarding the intersessional groups, RCG MED & BS decided upon the establishment of a SubGroup on Data requirements and data transmission issues, Network of experts on sampling stratification and optimization of biological data, and a Workshop on recreational fisheries. The justification, the draft terms of reference, the date and venue and the chairman for each group are presented below in details. Also, the Conclusions on other proposals for subgroups are presented.

#### Ad-hoc Workshop on recreational fisheries

RCG MED & BS considers that a subgroup on recreational fisheries already exists under the ICES umbrella (WGRFS). This WG covers tasks such as the harmonization of existing guidelines/methodologies; identification of data needs; sharing of knowledge and experience in the data collection.

RCG recalls the work under implementation by GFCM on recreational fisheries and the handbook on data collection methodologies that will be finalized next year.

However, RCG MED&BS considers that, according to EUMAP, Member States shall provide catch estimates from existing recreational fishery surveys, including those carried out under the data collection framework or from an additional pilot study, by the end of 2018. These surveys shall allow assessment of the share of catches from recreational fisheries in relation to commercial catches for all species in a marine region for which recreational catch estimates are required under this multiannual Union programme.

EUMAP also requires that the subsequent design and extent of national surveys of recreational fisheries, including any thresholds for data collection, shall be coordinated at marine region level and shall be based on end-user needs.

Therefore, RCG MED & BS recommends to organize the following ad-hoc workshop on recreational fisheries.

| <b>Ad-hoc <u>workshop</u> on recreational fisheries</b> |             |                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
|---------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Draft<br>Reference                                      | Terms<br>of | Review of pilot studies implemented in EU MED&BS MS<br><br>Presentation of the outcomes of the STREAM project<br><br>Assessment of the share of catches from recreational fisheries in relation to commercial catches for all species in the Mediterranean and in Black Sea<br><br>Design of national surveys of recreational fisheries, including list of species and thresholds for data collection for the future EUMAP (2020 and onwards) |  |
| Date and venue                                          |             | second week of April 2019, Italy                                                                                                                                                                                                                                                                                                                                                                                                              |  |
| Chairman                                                |             | <i>Fabio Grati – CNR ISMAR</i>                                                                                                                                                                                                                                                                                                                                                                                                                |  |

RCG recommends to consider the work that is under implementation in the STREAM project (P5 – Small-scale fisheries and recreational fisheries) which will produce best practice methodologies for sampling, processing, analysing and managing biological and spatial data of RF (month 14, January 2019).

#### Sub Group on Data requirements and data transmission issues

RCG MED & BS considers the need to establish a permanent subgroup on data requirements and data related regional specificities and issues by end users.

The aim of this subgroup is to try to streamline and simplify the process of data transmissions to end-users in order to avoid duplication of reporting of the same type of data.

In addition, the sub group should assess DT failures before submission to MS.

| <b>Subgroup on Data transmissions issues</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Draft Terms of Reference                     | <p>Open a communication channel towards main end-users.</p> <p>Organize a meeting with main end users to identify end-user needs and deadlines of data calls. The output of this meeting should be a yearly calendar of data requirements from main end-users.</p> <p>Create technical documents on regional data specificities to facilitate and enable better understanding of regional data specificities and aim to prevent data transmission failures reported by end-users.</p> <p>Assessing the data failures identified by main end users in the Region</p> |
| Date                                         | January 2019 and continuous work during the year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Moderator                                    | Ivana Vukov                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

The first meeting of the subgroup will be convened in January 2019. RCG considers that, apart from experts nominated by each MS, main end users (STECF/JRC, GFCM) and Commission should participate.

#### Network of experts on sampling stratification and optimization of biological data

RCG agrees on the need to set up a network of expert to be trained on statistical tools and R packages on sampling stratification and optimization of biological data.

Several interesting tools are being implemented under the STREAM project and two training workshops have been organized by the STREAM project on the use of the tools.

The network should enable the use of the tool at regional level and each MS should nominate experts to be part of the network.

| <b>Network of experts on sampling stratification and optimization of biological data</b> |                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective                                                                                | Revision by country of the sampling stratification and proposing sampling optimisation using the sampling design tool and data                                                                                                                                                                                                                |
| Draft Terms of Reference                                                                 | <p>Training on the Sampling Design tool (methodological framework for sampling optimization, accounting for cost and precision trade-off) developed by MARE/2016/22 project</p> <p>Run the optimization scripts at least for the shared stocks in order to find the “optimal” sampling size range analysing the precision of the sampling</p> |

|            |                                                                                                                                                                                    |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Run different scenarios resampling historical data following different hypotheses, and assess the performance of the scenarios compared to the past sampling (“baseline” scenario) |
| Time Table | The network should work in the following months in order to provide final results for presentation and discussion in the next RCG MED&BS (September 2019)                          |
| Moderator  | Charis Charilaou (pending acceptance)                                                                                                                                              |

### ***Conclusions on other proposals for subgroups***

Starting from the results of WP1 of the STREAM project, RCG discussed the need to eventually establish other subgroups and concluded what follows:

*Marine ecosystem data & Incidental catch of seabirds, marine mammals, sea turtles, sharks and rays*

A general need exists for discussion at the regional level for the following issues:

- ✓ Addressing regional needs for the collection of stomach contents, benthos and marine litter; identification of data needs; share knowledge and experience in the data collection.
- ✓ Harmonization of common protocol on data collection; issues related to data sharing; analysis on data quality.

RCG considers that there is no need of a specific subgroup under RCG for the time being because these points are covered by the STREAM project that is expected to produce the final results by next spring. In addition, GFCM is implementing a handbook on data collection methodologies for by catch and vulnerable species.

RCG recommends that the final results of the STREAM project should be presented at the next year RCG meeting.

RCG also considers that MED&BS Member States are delivering data to the ICES WGBYC for which a data call is issued annually. RCG therefore considers that MED&BS experts should take part to the WGBYC meeting.

### ***Regional/sub-regional sampling plans***

WP3 of the STREAM project will build upon the experience of the previous grants (FishPi and MARE/2014/19 Med & BS) and aims to provide support to the design of a regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers (RSP-CF).

RCG suggests that conclusions will be presented in the next year meeting. A specific subgroup could then be established to actually draft a regional sampling plan for some stocks/sub regions (to be proposed for implementation in 2021).

## ***2.3 . Feedback on Rules and Procedures for RCGs and proposed timing for adoption***

In the frames of WP1 of STREAM project the rules of procedures already developed during the RCG MED & BS 2017 were analysed identifying gaps and suggesting further actions. The final

results and proposals on the rules of procedures, were presented to the RCG MED & BS 2018 in order to be assessed by the group and considered for their possible future development and implementation.

RCG revised the proposed modification and comments identified by the WP1, point by point in the plenary and thereafter were drafted by a subgroup within the RCG MED&BS. A consensus on the updated draft was nearly reached in the plenary. However, some issues (Point 3.10) did not have the unanimous acceptance of all MSs and it was decided that this will be finalized in written procedure, introduced by the chair of RCG MED & BS, till the end of the year. The written procedure was completed at the beginning of December 2018 and the final text is provided in Annex IV.

It was also discussed that although the RoPs are published in the final RCG report, they should be made more visible and easier to find. A proposal was made for them to be placed in the DCF website.

#### ***2.4 Information on DCF legal framework and related legal acts: adoption of AR template; upcoming work on EU-MAP after 2020 preparation.***

Dr. Venetia Kostopoulou from DG MARE provided information to the plenary about the new AR template and the EU MAP revision (Annex IX). It was mentioned that the new DCF requires the AR Template to be adopted through a COM Implementing Act. Therefore a new AR Template was developed by EWG 17-17, presented to NCs meeting on February 2018 and adopted at the end of August. Meanwhile the AR template and Guidance were sent to MS (March 2018) for submission of 2017 ARs.

Regarding the EU MAP revision, it was stated that the current EU map is in force until the end of 2019. So the next steps should be decided at this time, since there are heavy legal and administrative procedures involved in the revision. The revision is an opportunity to further refine EU-MAP content and align it with the new EMFF.

A two-step process will be followed a) the extension and b) the revision of the current EU MAP. Regarding the extension of EUMAP, no change of substance will occur in relation to the current EU-MAP and there will be no consultations. The EU-MAP text will be split into a COM delegated Act (EP and Council scrutiny on biological, environmental and socio-economic data) and a COM Implementing Act (thresholds for data collection and list of surveys) and the aim is to be adopted during 2019.

For the revision of EU MAP the aim is to preserve the core elements and make adjustments on a case to case basis, to incorporate the work done in the pilot studies and to convert them into data collection.

The Work Plan template will follow soon after the EU-MAP contents have been stabilized.

MSs should cooperate and participate in the process of extension and revision of EU MAP by giving input to the process. Specifically they should:

- Discuss and come to a final proposal on the data needs at regional level which will need to be included in the future EU-MAP.
- Reply in the consultation document that will be received in the beginning of 2019 and finalise it during the next meeting in June 2019.

- Organise and produce clear, concise, well-argued documents to facilitate the EU-MAP revision.
- 

### ***2.5 Next steps and actions***

They are already presented above for each issue separately.

### **3. End-user interactions and identification of end-user needs (TOR 3).**

#### ***3.1 Feedback of end-user needs from ICES/GFCM, JRC, STECF, other end users to the RCGs. Mapping of end user needs and information on end user meeting on the margins of the next Liaison meeting (1/10).***

The representative of the GFCM secretariat Mr Federico de Rossi informed the group about the current fisheries data needs of the GFCM as identified by existing GFCM recommendations and listed in the data submissions calendar on the GFCM website (Annex IX). He referred to the progress made in recent years with the adoption of the GFCM Data Collection Reference Framework (DCRF), an instrument supporting the implementation of the mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries through the identification and collection of fisheries-related data necessary to improve the formulation of sound scientific advice by relevant GFCM subsidiary bodies. Within this context, an important step at Mediterranean and Black Sea level was transposed in the new recommendation GFCM/41/2017/6 on the submission of data on fishing activities in the GFCM area. The recommendation, foreseeing the submission of information needed to assess the status of those stocks considered priority by the GFCM Commission, is to be applied by Contracting Parties and Cooperating non-contracting Parties of the GFCM (CPCs). Finally, the LM was informed about the ongoing GFCM pilot phase on the application of quality indicators (timeliness, completeness, conformity, stability and consistency) to fisheries data as transmitted by all CPCs through the DCRF online platform. The next steps of the pilot study would be the definition of communication procedures by the GFCM Secretariat with relevant CPCs in order to try to overcome potential issues in data quality. The final results of the pilot phase will be reported to the 2019 sessions of the Scientific Advisory Committee on Fisheries (SAC) and the Compliance Committee (CoC) to be then possibly submitted to the 43rd session of the GFCM Commission for a final decision about the use of fisheries data quality indicators at GFCM level. This important exercise would be of particular importance towards the improvement of data transmissions by CPCs as well as of the compliance assessment by GFCM for which the feedback of GFCM, as data end user, to EC will benefit.

The presentation was followed by a discussion in the plenary where it was pointed out that for the data quality assessment is still in a trial period and a comprehensive text about the procedure to be followed will be distributed. Modus operandi will be the same. Upon assessment of the data transmitted a letter will be sent to the countries about what was accepted; the first step is the implementation on the national level as this is a completely new procedure. The way of data transmission and confidentiality issues were also discussed as well as data availability among the countries. Some technical questions were also made (e.g. can data be changed after they are uploaded, will each country upload their own data, what will happen with the calculations of data) The GFCM representative assured that all the issues will be clarified by emails to be sent, and that upon provisional justification changes can be made. He noted that this is a big step and a work in progress and he will check if there is a possibility for a meeting in SAC for a participatory approach. He expressed his hopefulness that once it will be up and running the procedure will be facilitated and future work will be less while data quality will be better.

The GFCM Secretariat also presented the four manuals to be used as guidelines for relevant mid-term strategy data collection activities, namely the monitoring of discards and incidental catches of vulnerable species, the implementation of scientific surveys-at-sea and the collection of recreational fisheries data (Annex IX). The objective of each manual was a harmonized methodological framework for data collection that would be applicable to the realities of different countries and would enable the comparison of data at a regional level. These manuals would be used on a voluntary basis, as reference instruments in the execution of mid-term strategy activities. The manuals will be finalized and be available by the end of 2018. Regarding the manual on surveys, GFCM Secretariat clarified that the manual has no contradiction to what is already being done in MEDIAS and MEDITS and that the manuals will also be applied to non EU countries. Regarding recreational fisheries he informed the group that the WG on this issue will be repeated and information can be found in the GFCM Website.

### ***3.2 Produce an overview from the RDB on regional fisheries***

This point does not apply to the Mediterranean and Black Sea.

### ***3.3 Review issue list for the 2019/2020 benchmark stocks (by region) and produce an overview of sampling and quality on the stocks to be benchmarked in 2019***

The plenary expressed the concern that through EUMAP biological data are collected for many stocks. Specifically, the present EUMAP obliges the collection of length frequency of all catch fractions for all stocks in tables 1A, 1B, 1C, only the temporal resolution can be coordinated at marine region level. Also, much information is requested by data calls, therefore there should be a justification on this issue or reduce a priori the list of species where biological data is collected, in order to use our resources more wisely. The commission delegate noted that in the revised EU MAP the RCGs can decide which stocks should be selected for biological sampling; there will be a request to MSs about the EU MAP and the above points can be included. There was a proposal to follow the GFCM recommendation in order to select which stocks to monitor as the DCRF Group 1 contains the main species of the region. It was also discussed that stock assessment analysis is performed for a limited number of stocks, the most important that are also the ones targeted. Finally, the need to move forward in terms of data poor stocks was expressed, in order to be able to provide scientific advice for stocks with less data.

### ***3.4 Review of 2018 (2019) data calls and feedback from the RCGs to ICES/JRC/GFCM***

For 2018 the MS were asked to provide data through data calls made from the end users, namely JRC (on Aquaculture, Fisheries Dependent Information, Fleet economic, Med & BS (biological data), and Processing Industry), GFCM and ICCAT.

At the meeting, the participants expressed their concern about the fact that two high-demand data calls coincided in time and required similar data but in a different format, and this apart

from creating a large workload to countries it also increases the risks of mistakes, and inconsistencies.

Therefore RCG MED & BS repeated its proposal for merging FDI and MED & BS data calls starting from 2019

RCG MED & BS also noted that in WP3 of the STREAM project, one of the task has as objective the development of routines to compile some of the tables (Tables C, D, E, F) required by the FDI Data Call using the Med & BS tables as input, in order to use the same raised length distribution for all the Data Calls and avoid inconsistencies among the delivered tables. The project is expected to be finalised in 2019, and would thus contribute to facilitating the processes involved in the multiple data calls and improving their consistency.

The Data transmission failures were also discussed extensively because a significant number of unsatisfactory data transmission issues nearly every year is related to the Mediterranean and Black Sea. RCG Med & BS considers that the overall process to detect and evaluate DT failures should be streamlined and dialogue between MS and end users should be improved. Therefore, the establishment of a permanent subgroup on Data requirements and data transmission issues was decided. All the information for this subgroup are in TOR 2 point. 2.2

### ***3.5 Next steps and actions***

They are already presented above for each issue separately.

## 4. Regional plans (TOR 4).

### ***4.1 Feedback from EU projects (FishPi2 WP1, STREAM); Clarification regional plan vs regional sampling plan. What has already been established and can be used in setting up regional plans?***

Regarding the STREAM project, the outcomes from certain work packages that have finished or are in progress were presented by the WP leaders. The presentations are available in Annex X.

Ms M.T. Facchini presented the outcomes of WP 3 (Annex IX) that aims at designing and proposing a regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers (RSP-CF), taking advantage of the experience of the previous grants (i.e. MARE/2014/19 Med & BS and FishPi).

The main tasks of WP3 were :

- 3.1. Data Sharing among all Member States of the regions (Med and BS)
- 3.2. Apply and refine reference (or code) lists to be used by Member States in the region and identify possible solution for data storage system, processing and analysis of the data at regional level
- 3.3. Carry out simulations to propose a RSP-CF for 2019
- 3.4. Develop rules on how to allocate tasks and costs between Member States and evaluate costs implication for 2019

For Task 3.1 a data sharing agreement (DSA) identifying the type of data to be shared, the common data format and rules for the use of these data was finalized in collaboration with the Institutes involved in the STREAM project. The DSA has been signed by most NCs (Cyprus, Italy, Slovenia, Greece, Bulgaria, Romania, Spain), while others have ensured the data delivery though they have not signed the DSA (France, Croatia, Malta). For task 3.2 the RCG Med & BS data call format was update for the storage of primary data from commercial fisheries sampling including additional information in CS and CL tables. Evaluation of the options regarding the hosting of a RDB against three available scenarios was provided, taking into account the current situation, ongoing studies, developments and suggestions as well as needs from STECF, GFCM and ICES working groups. Auxiliary tools (R-scripts) to standardize and ease the procedures for data processing and delivering to specific data calls including the following data transformations were developed. For Task 3.3 a new tool (R scripts) was developed in order to perform analyses on sampling optimization in terms of trips, of number of individuals to be measured, on the number for biological measures and to perform possible scenarios varying number of trips and measured individuals. The task is in progress as the methods and scripts have been finalized while the case studies were being implementing in the two workshops (the 1st for East Mediterranean & Black Sea that run as parallel session with RCG Med 2018 and the 2<sup>nd</sup> for Western and Central Mediterranean that took place the first week of October. Task 3.4 has not started yet. The final results will be presented during the “Knowledge Exchange Workshop of the STREAM” on March 2019 and can be utilized for WP2020.

The RCG Med & BS noted that a dedicated subgroup formed for sampling optimization would ensure the continuity of the training -especially for all the biological measurements.

Ms Charis Charilaou presented the outcomes of WP7 (Annex IX) that has as a main objective the training of MSs' experts of the region who are involved in data collection, according to their needs. An ad-hoc questionnaire on training needs and mapping of expertise was prepared and circulated during July 2018 to all institutes involved in biological data collection in the region. Feedback was received from 20 institutes from all MSs. The analysis of questionnaires received showed that the main training needs focus on a) the running of simulations in R for sampling optimisation and running quality checks in R, b) the age reading of certain species, c) the training need on identifying PETS, d) the training need on stomach analysis. Two Workshops were foreseen with collaboration with WP3 (sampling optimization tool and implementation of case studies) and one with WP6 (ALKs and age reading). ). The compiled list of experts available for providing training will be provided to the RCG Med&BS for addressing training needs in the region.

#### ***4.2 Regional sampling plans for marine habitat and ecosystem monitoring, feedback from WKPETSAMP.***

Despite the repeated attempts by the RCG MED & BS to contact the co-chairs of the WKPETSAMP, this was not possible. Therefore the main points discussed in WKPETSAMP was presented by Dr. K. Touloumis who attended the meeting (Annex IX).

The main outcomes of the joint WGBYC/WGCATCH Workshop on sampling of by-catch and Protected, Endangered and Threatened (PET) species was presented to the RCG- MED&BS meeting. The Workshop's main objectives were to develop an inventory of existing PET sampling programmes, to assess and compare them, to standardise procedures of storage, maintenance and dissemination of the relevant data and to suggest the best practices and parameters for PET sampling. The proceedings of the Workshop resulted in the compilation of an inventory including information on the logistics, sampling schemes, target populations, the sampled fisheries and the end users of the existing incidental by-catch sampling programmes. Based on this information, the DCF and the dedicated PET sampling programmes of the inventory were compared. The main goal of this task was to detect and assess the strengths and limitations of the DCF Catch sampling schemes. The Workshop concluded that the main challenge would be to appropriately modify existing DCF sampling schemes to be able to satisfy multiple objectives (sampling of both commercial and PET species). To overcome some of the assessed limitations, alternative auxiliary methods of data recording on incidental by-catch of PET species were proposed, including Remote Electronic Monitoring systems, self-sampling and Questionnaires/Interviews. It was also proposed to make appropriate changes on the databases storing DCF data, in order to be able to store incidental by-catch data. The main conclusion of the Workshop was that there is a need for specific best practices in relation to the implementation of by-catch sampling programmes, in particular regarding sampling protocols, training of observers and data capture in relation to sampling of by-catches.

#### ***4.3 Feedback from intersessional work on establishing regional sampling plan***

A regional sampling plan covering commercial fisheries/ stocks/métiers that will be part of the regional Work Plan and may replace the relevant parts of the Member States' national Work

Plans in the region where appropriate is elaborated under WP3 of STREAM project. The RSP will apply to all concerned Member States in the region involved in the fisheries for the selected stock/species (even if they are not part of the consortium). In addition, a Sampling Program for the collection of data on fisheries impacts on the ecosystem which aims at providing support to the design of a Regional Sampling Program covering the collection of data on fisheries impacts on the ecosystem (RSP-IE) is elaborated under WP4 of the STREAM project. The sampling plan will include: a) fish stomach content analysis; b) co-occurrence and relative abundance of species/stocks; c) incidental catch and by-catch of vulnerable species.

RCG suggests that conclusions will be presented in next year's meeting and a specific subgroup could then be established to actually draft a regional work plan to be proposed for implementation in 2021.

#### **4.4 Regional work based on results from 2018 RCG MED & BS Data Call**

During the 4th RCM MED 2007, a recommendation came into force which stated that *“For the purpose of exchanging landings data, as a reference for the selection of species to be included in the biological sampling of the National Programmes, the RCM MED recommends that MS provide the landings data of the previous 3 years required by the DCR during the PGMed meeting, on a common template”*.

During the RCM MED & BS 2016 it was agreed to continue using the landing templates instead of other sources (Eurostat) for completing Table 1A of the Work Plan; this is because the group considers that they provide the most reliable landings data for scientific use.

For 2018 an official data call was launched by the chair of the RCM MED & BS, requesting data on landings, effort, value and biological data for the period 2015-2017 of the stocks listed in Table 1A of Commission Implementing Decision (EU) 2016/1251, for which thresholds may be applied for the collection of biological data., for addressing the following:

- Review and update the landing template for the Mediterranean and for the Black Sea;
- Ranking system for the Mediterranean and Black Sea;

The relevant Data Call was announced in July to all National Correspondents, with a deadline on the 5<sup>th</sup> of September, 2018. The data was required to be submitted in two different data files similar with previous Data Calls (**Annex VI, Annex VII**)

Data were submitted by all Member States in the Mediterranean Sea and the Black Sea. The available data were reviewed by the chairs of RCG MED & BS and PGMed, and clarifications on data values and coding were received whenever requested.

The produced landing templates in landings value (tons) and in contribution (%) of Member States are provided separately for non-elasmobranch and elasmobranch species. Tables 4.4.1 and 4.4.2 refer to non-elasmobranch species, while Tables 4.4.3 and 4.4.4 refer to elasmobranchs. According to Table 1A of Decision (EU) 2016/1251, all commercial sharks, rays and skates should be reported at species level; however the available landings data were not always disaggregated by species.

**Table 4.4.1: Average landings by Member State (in tons) over the 2015-2017 period, for species included in Table 1A of Commission Decision 2016/1251 concerning the Mediterranean Sea and Black Sea**

| Species              | Area                            | Croatia                 | Cyprus   | France | Greece * | Italy    | Malta    | Slovenia | Spain | Bulgaria | Romania | Total landings (t) |
|----------------------|---------------------------------|-------------------------|----------|--------|----------|----------|----------|----------|-------|----------|---------|--------------------|
| European Eel         | <i>Anguilla anguilla</i>        | all areas in the Med    | 0,41     | 0,00   | 694,60   | 0,58     | 74,40    | 0,00     | 16,70 | 0,00     | 0,00    | 786,70             |
| Giant red shrimp     | <i>Aristaeomorpha foliacea</i>  | all areas in the Med    | 0,00     | 0,00   | 0,00     | 54,67    | 2563,60  | 25,99    | 0,00  | 2,10     | 0,00    | 2646,36            |
| Red shrimp           | <i>Aristeus antennatus</i>      | all areas in the Med    | 0,00     | 0,00   | 0,13     | 0,53     | 850,20   | 3,33     | 0,00  | 998,50   | 0,00    | 1852,68            |
| Bogue                | <i>Boops boops</i>              | 1.3, 2.1, 2.2, 3.1, 3.2 | 88,54    | 116,85 | 8,42     | 2558,30  | 1444,10  | 53,77    | 0,60  | 336,10   | 0,00    | 4606,67            |
| Dolphinfish          | <i>Coryphaena equiselis</i>     | all areas in the Med    | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 0,00     | 0,00    | 0,00               |
| Dolphinfish          | <i>Coryphaena hippurus</i>      | all areas in the Med    | 1,14     | 0,31   | 0,91     | 15,74    | 862,70   | 271,61   | 0,00  | 141,50   | 0,00    | 1293,92            |
| Sea bass             | <i>Dicentrarchus labrax</i>     | all areas in the Med    | 9,13     | 6,40   | 193,51   | 122,78   | 302,20   | 0,09     | 3,56  | 108,20   | 0,00    | 745,86             |
| Horned octopus       | <i>Eledone cirrhosa</i>         | 1.1, 1.3, 2.1, 2.2, 3.1 | 59,69    | 0,00   | 0,00     | 0,00     | 1907,30  | 0,02     | 0,00  | 888,00   | 0,00    | 2855,01            |
| Musky octopus        | <i>Eledone moschata</i>         | 1.3, 2.1, 2.2, 3.1      | 351,95   | 0,00   | 0,00     | 331,75   | 2925,60  | 0,33     | 10,60 | 175,00   | 0,00    | 3795,23            |
| Anchovy              | <i>Engraulis encrasicolus</i>   | all areas in the Med    | 10633,53 | 0,61   | 1190,15  | 10378,46 | 38172,80 | 0,00     | 7,11  | 19835,30 | 0,00    | 80217,95           |
| Anchovy              | <i>Engraulis encrasicolus</i>   | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 23,15    | 80,55   | 103,70             |
| Grey gurnard         | <i>Eutrigla gurnardus</i>       | 2.2, 3.1                | 0,00     | 0,00   | 0,00     | 0,00     | 9,80     | 0,00     | 0,00  | 44,60    | 0,00    | 54,40              |
| Squid                | <i>Illex spp, Todarodes spp</i> | all areas in the Med    | 0,00     | 0,79   | 109,38   | 845,18   | 2372,70  | 2,68     | 0,00  | 782,90   | 0,00    | 4113,62            |
| Billfish             | Istiophoridae                   | all areas in the Med    | 0,00     | 0,19   | 0,16     | 0,00     | 9,60     | 1,58     | 0,00  | 0,00     | 0,00    | 11,53              |
| Common squid         | <i>Loligo vulgaris</i>          | all areas in the Med    | 130,65   | 11,47  | 3,48     | 262,38   | 1503,40  | 11,35    | 8,90  | 303,00   | 0,00    | 2234,63            |
| Black-bellied angler | <i>Lophius budegassa</i>        | 1.1, 1.2, 1.3, 2.2, 3.1 | 0,00     | 1,08   | 501,12   | 304,61   | 890,70   | 0,57     | 0,00  | 901,80   | 0,00    | 2599,87            |
| Anglerfish           | <i>Lophius piscatorius</i>      | 1.1, 1.2, 1.3, 2.2, 3.1 | 0,00     | 0,00   | 95,58    | 162,33   | 239,90   | 3,98     | 0,04  | 256,10   | 0,00    | 757,92             |
| Whiting              | <i>Merlangius merlangus</i>     | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 6,80     | 0,34    | 7,15               |
| Hake                 | <i>Merluccius merluccius</i>    | all areas in the Med    | 816,94   | 10,11  | 897,68   | 3299,67  | 8283,10  | 20,24    | 0,99  | 2169,10  | 0,00    | 15497,81           |
| Blue whiting         | <i>Micromesistius poutassou</i> | 1.1, 3.1                |          | 0,00   |          | 334,80   |          | 0,67     | 0,00  | 657,40   | 0,00    | 992,87             |
| Grey mullets         | Mugilidae                       | 1.3, 2.1, 2.2, 3.1      | 110,56   | 0,28   | 8,59     | 127,26   | 883,00   | 0,42     | 7,73  | 468,80   | 0,00    | 1606,63            |
| Red mullet           | <i>Mullus barbatus</i>          | all areas in the Med    | 1038,70  | 29,63  | 304,96   | 2233,98  | 6340,60  | 14,16    | 3,08  | 1815,20  | 0,00    | 11780,30           |
| Red mullet           | <i>Mullus barbatus</i>          | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 630,20   | 3,55    | 633,75             |
| Striped red mullet   | <i>Mullus surmuletus</i>        | all areas in the Med    | 24,85    | 66,96  | 133,36   | 1305,77  | 1692,30  | 37,57    | 0,33  | 591,00   | 0,00    | 3852,15            |
| Common octopus       | <i>Octopus vulgaris</i>         | all areas in the Med    | 238,82   | 26,22  | 1387,01  | 2686,10  | 2369,80  | 26,61    | 0,01  | 2297,10  | 0,00    | 9031,68            |
| Norway lobster       | <i>Nephrops norvegicus</i>      | all areas in the Med    | 246,46   | 0,00   | 32,07    | 0,00     | 1452,10  | 1,17     | 0,00  | 444,30   | 0,00    | 2176,10            |
| Pandora              | <i>Pagellus erythrinus</i>      | all areas in the Med    | 62,14    | 26,48  | 167,80   | 1062,93  | 844,50   | 10,67    | 3,95  | 809,50   | 0,00    | 2987,96            |
| White shrimp         | <i>Parapenaeus longirostris</i> | all areas in the Med    | 674,49   | 1,32   | 43,04    | 2687,59  | 9043,90  | 11,85    | 0,00  | 627,60   | 0,00    | 13089,78           |
| Caramote prawn       | <i>Penaeus kerathurus</i>       | 3.1                     | 0,00     | 0,00   | 0,00     | 1467,64  | 0,00     | 0,00     | 2,27  | 123,10   | 0,00    | 1593,01            |
| Turbot               | <i>Psetta maxima</i>            | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 42,40    | 34,62   | 77,02              |
| Sardine              | <i>Sardina pilchardus</i>       | all areas in the Med    | 51477,12 | 0,14   | 745,21   | 9031,19  | 26785,00 | 1,12     | 26,72 | 12521,40 | 0,00    | 100587,89          |
| Mackerel             | <i>Scomber spp</i>              | all areas in the Med    | 1492,86  | 9,67   | 659,71   | 652,00   | 2544,90  | 491,05   | 2,32  | 2896,70  | 0,00    | 8749,21            |
| Cuttlefish           | <i>Sepia officinalis</i>        | all areas in the Med    | 136,83   | 36,53  | 164,48   | 1971,81  | 6018,70  | 9,64     | 4,16  | 877,80   | 0,00    | 9219,95            |
| Sole                 | <i>Solea solea</i>              | 1.2, 2.1, 3.1           | 229,80   | 0,00   | 59,06    | 473,49   | 2009,60  | 0,01     | 12,51 | 159,00   | 0,00    | 2943,47            |
| Gilthead sea bream   | <i>Sparus aurata</i>            | 1.2, 3.1                | 0,00     | 0,00   | 1023,69  | 585,02   | 0,00     | 1,16     | 21,00 | 936,10   | 0,00    | 2566,98            |
| Picarels             | <i>Spicara smaris</i>           | 2.1, 3.1, 3.2           | 101,48   | 81,39  | 0,00     | 731,16   | 1,30     | 2,16     | 0,00  | 194,10   | 0,00    | 1111,60            |
| Sprat                | <i>Sprattus sprattus</i>        | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 2927,15  | 61,45   | 2988,59            |
| Mantis shrimp        | <i>Squilla mantis</i>           | 1.3, 2.1, 2.2           | 10,44    | 0,00   | 0,00     | 505,59   | 4987,60  | 0,00     | 1,41  | 841,30   | 0,00    | 6346,34            |
| mackerel             | <i>Trachurus mediterraneus</i>  | All areas in the Med    | 245,59   | 3,25   | 64,00    | 61,60    | 732,60   | 12,94    | 2,19  | 2354,90  | 0,00    | 3477,07            |
| mackerel             | <i>Trachurus mediterraneus</i>  | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 135,60   | 26,95   | 162,55             |
| Horse mackerel       | <i>Trachurus trachurus</i>      | all areas in the Med    | 534,06   | 0,38   | 363,00   | 141,18   | 2080,60  | 7,07     | 0,00  | 1833,00  | 0,00    | 4959,28            |
| Horse mackerel       | <i>Trachurus trachurus</i>      | Black Sea GSA 29        | 0,00     | 0,00   | 0,00     | 0,00     | 0,00     | 0,00     | 0,00  | 0,00     | 0,00    | 0,00               |
| Tub gurnard          | <i>Chelidonichthys lucerna</i>  | 1.3, 2.2, 3.1           | 0,00     | 0,00   | 0,00     | 62,31    | 615,50   | 0,81     | 1,29  | 22,70    | 0,00    | 702,62             |
| Clam                 | Veneridae                       | 2.1, 2.2                | 169,44   | 0,00   | 0,00     | 0,00     | 26,80    | 0,00     | 0,16  | 78,50    | 0,00    | 274,89             |
| Transparent gobid    | <i>Aphia minuta</i>             | GSA 9,10,16 and 19      | 0,00     | 0,00   | 0,00     | 0,00     | 40,20    | 0,00     | 0,00  | 23,90    | 0,00    | 64,10              |
| Sand smelt           | <i>Atherina spp</i>             | GSA 9,10,16 and 19      | 0,00     | 0,00   | 0,00     | 0,00     | 21,40    | 0,00     | 0,63  | 49,00    | 0,00    | 71,03              |
| Poor cod             | <i>Trisopterus minutus</i>      | All Regions             | 0,00     | 0,00   | 439,54   | 11,99    | 491,70   | 0,00     | 0,02  | 596,90   | 0,00    | 1540,15            |

\* For Greece available data concern the years 2014 and 2016

**Table 4.4.2: Contribution (%) of Member States to the average landings over the period 2015-2017, for species included in Table 1A of Commission Decision 2016/1251 concerning the Mediterranean Sea and Black Sea.**

|                      | Species                          | Area                 | Croatia | Cyprus | France | Greece * | Italy | Malta | Slovenia | Spain | Bulgaria | Romania |
|----------------------|----------------------------------|----------------------|---------|--------|--------|----------|-------|-------|----------|-------|----------|---------|
| European Eel         | <i>Anguilla anguilla</i>         | Med                  | 0,1%    | 0,0%   | 88,3%  | 0,1%     | 9,5%  | 0,0%  | 0,0%     | 2,1%  | 0,0%     | 0,0%    |
| Giant red shrimp     | <i>Aristaeomorpha foliacea</i>   | Med                  | 0,0%    | 0,0%   | 0,0%   | 2,1%     | 96,9% | 1,0%  | 0,0%     | 0,1%  | 0,0%     | 0,0%    |
| Red shrimp           | <i>Aristeus antennatus</i>       | all areas in the Med | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 45,9% | 0,2%  | 0,0%     | 53,9% | 0,0%     | 0,0%    |
| Bogue                | <i>Boops boops</i>               | 3.2                  | 1,9%    | 2,5%   | 0,2%   | 55,5%    | 31,3% | 1,2%  | 0,0%     | 7,3%  | 0,0%     | 0,0%    |
| Dolphinfish          | <i>Coryphaena equiselis</i>      | Med                  |         |        |        |          |       |       |          |       |          |         |
| Dolphinfish          | <i>Coryphaena hippurus</i>       | Med                  | 0,1%    | 0,0%   | 0,1%   | 1,2%     | 66,7% | 21,0% | 0,0%     | 10,9% | 0,0%     | 0,0%    |
| Sea bass             | <i>Dicentrarchus labrax</i>      | Med                  | 1,2%    | 0,9%   | 25,9%  | 16,5%    | 40,5% | 0,0%  | 0,5%     | 14,5% | 0,0%     | 0,0%    |
| Horned octopus       | <i>Eledone cirrhosa</i>          | 3.1                  | 2,1%    | 0,0%   | 0,0%   | 0,0%     | 66,8% | 0,0%  | 0,0%     | 31,1% | 0,0%     | 0,0%    |
| Musky octopus        | <i>Eledone moschata</i>          | 1.3, 2.1, 2.2, 3.1   | 9,3%    | 0,0%   | 0,0%   | 8,7%     | 77,1% | 0,0%  | 0,3%     | 4,6%  | 0,0%     | 0,0%    |
| Anchovy              | <i>Engraulis encrasicolus</i>    | all areas in the Med | 13,3%   | 0,0%   | 1,5%   | 12,9%    | 47,6% | 0,0%  | 0,0%     | 24,7% | 0,0%     | 0,0%    |
| Anchovy              | <i>Engraulis encrasicolus</i>    | Black Sea GSA 29     | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 0,0%  | 0,0%  | 0,0%     | 0,0%  | 22,3%    | 77,7%   |
| Grey gurnard         | <i>Eutrigla gurnardus</i>        | 2.2, 3.1             | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 18,0% | 0,0%  | 0,0%     | 82,0% | 0,0%     | 0,0%    |
| Squid                | <i>Illex spp., Todarodes spp</i> | Med                  | 0,0%    | 0,0%   | 2,7%   | 20,5%    | 57,7% | 0,1%  | 0,0%     | 19,0% | 0,0%     | 0,0%    |
| Billfish             | Istiophoridae                    | Med                  | 0,0%    | 1,7%   | 1,4%   | 0,0%     | 83,2% | 13,7% | 0,0%     | 0,0%  | 0,0%     | 0,0%    |
| Common squid         | <i>Loligo vulgaris</i>           | Med                  | 5,8%    | 0,5%   | 0,2%   | 11,7%    | 67,3% | 0,5%  | 0,4%     | 13,6% | 0,0%     | 0,0%    |
| Black-bellied angler | <i>Lophius budegassa</i>         | 3.1                  | 0,0%    | 0,0%   | 19,3%  | 11,7%    | 34,3% | 0,0%  | 0,0%     | 34,7% | 0,0%     | 0,0%    |
| Anglerfish           | <i>Lophius piscatorius</i>       | 3.1                  | 0,0%    | 0,0%   | 12,6%  | 21,4%    | 31,7% | 0,5%  | 0,0%     | 33,8% | 0,0%     | 0,0%    |
| Whiting              | <i>Merlangius merlangus</i>      | Black Sea GSA 29     | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 0,0%  | 0,0%  | 0,0%     | 0,0%  | 95,2%    | 4,8%    |
| Hake                 | <i>Merluccius merluccius</i>     | all areas in the Med | 5,3%    | 0,1%   | 5,8%   | 21,3%    | 53,4% | 0,1%  | 0,0%     | 14,0% | 0,0%     | 0,0%    |
| Blue whiting         | <i>Micromesistius poutassou</i>  | 1.1, 3.1             | 0,0%    | 0,0%   | 0,0%   | 33,7%    | 0,0%  | 0,1%  | 0,0%     | 66,2% | 0,0%     | 0,0%    |
| Grey mullets         | Mugilidae                        | 1.3, 2.1, 2.2, 3.1   | 6,9%    | 0,0%   | 0,5%   | 7,9%     | 55,0% | 0,0%  | 0,5%     | 29,2% | 0,0%     | 0,0%    |
| Red mullet           | <i>Mullus barbatus</i>           | all areas in the Med | 8,8%    | 0,3%   | 2,6%   | 19,0%    | 53,8% | 0,1%  | 0,0%     | 15,4% | 0,0%     | 0,0%    |
| Red mullet           | <i>Mullus barbatus</i>           | Black Sea GSA 29     | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 0,0%  | 0,0%  | 0,0%     | 0,0%  | 99,4%    | 0,6%    |
| Striped red mullet   | <i>Mullus surmuletus</i>         | Med                  | 0,6%    | 1,7%   | 3,5%   | 33,9%    | 43,9% | 1,0%  | 0,0%     | 15,3% | 0,0%     | 0,0%    |
| Common octopus       | <i>Octopus vulgaris</i>          | Med                  | 2,6%    | 0,3%   | 15,4%  | 29,7%    | 26,2% | 0,3%  | 0,0%     | 25,4% | 0,0%     | 0,0%    |
| Norway lobster       | <i>Nephrops norvegicus</i>       | Med                  | 11,3%   | 0,0%   | 1,5%   | 0,0%     | 66,7% | 0,1%  | 0,0%     | 20,4% | 0,0%     | 0,0%    |
| Pandora              | <i>Pagellus erythrinus</i>       | Med                  | 2,1%    | 0,9%   | 5,6%   | 35,6%    | 28,3% | 0,4%  | 0,1%     | 27,1% | 0,0%     | 0,0%    |
| White shrimp         | <i>Parapenaeus longirostris</i>  | Med                  | 5,2%    | 0,0%   | 0,3%   | 20,5%    | 69,1% | 0,1%  | 0,0%     | 4,8%  | 0,0%     | 0,0%    |
| Caramote prawn       | <i>Penaeus kerathurus</i>        | 3.1                  | 0,0%    | 0,0%   | 0,0%   | 92,1%    | 0,0%  | 0,0%  | 0,1%     | 7,7%  | 0,0%     | 0,0%    |
| Turbot               | <i>Psetta maxima</i>             | Black Sea GSA 29     | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 0,0%  | 0,0%  | 0,0%     | 0,0%  | 55,1%    | 44,9%   |
| Sardine              | <i>Sardina pilchardus</i>        | Med                  | 51,2%   | 0,0%   | 0,7%   | 9,0%     | 26,6% | 0,0%  | 0,0%     | 12,4% | 0,0%     | 0,0%    |
| Mackerel             | <i>Scomber spp</i>               | Med                  | 17,1%   | 0,1%   | 7,5%   | 7,5%     | 29,1% | 5,6%  | 0,0%     | 33,1% | 0,0%     | 0,0%    |
| Cuttlefish           | <i>Sepia officinalis</i>         | Med                  | 1,5%    | 0,4%   | 1,8%   | 21,4%    | 65,3% | 0,1%  | 0,0%     | 9,5%  | 0,0%     | 0,0%    |
| Sole                 | <i>Solea solea</i>               | 1.2, 2.1, 3.1        | 7,8%    | 0,0%   | 2,0%   | 16,1%    | 68,3% | 0,0%  | 0,4%     | 5,4%  | 0,0%     | 0,0%    |
| Gilthead sea bream   | <i>Sparus aurata</i>             | 1.2, 3.1             | 0,0%    | 0,0%   | 39,9%  | 22,8%    | 0,0%  | 0,0%  | 0,8%     | 36,5% | 0,0%     | 0,0%    |
| Picarel              | <i>Spicara smaris</i>            | 2.1, 3.1, 3.2        | 9,1%    | 7,3%   | 0,0%   | 65,8%    | 0,1%  | 0,2%  | 0,0%     | 17,5% | 0,0%     | 0,0%    |
| Sprat                | <i>Sprattus sprattus</i>         | Black Sea GSA 29     | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 0,0%  | 0,0%  | 0,0%     | 0,0%  | 97,9%    | 2,1%    |
| Mantis shrimp        | <i>Squilla mantis</i>            | 1.3, 2.1, 2.2        | 0,2%    | 0,0%   | 0,0%   | 8,0%     | 78,6% | 0,0%  | 0,0%     | 13,3% | 0,0%     | 0,0%    |
| horse mackerel       | <i>Trachurus mediterraneus</i>   | Med                  | 7,1%    | 0,1%   | 1,8%   | 1,8%     | 21,1% | 0,4%  | 0,1%     | 67,7% | 0,0%     | 0,0%    |
| horse mackerel       | <i>Trachurus mediterraneus</i>   | Black Sea GSA 29     | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 0,0%  | 0,0%  | 0,0%     | 0,0%  | 83,4%    | 16,6%   |
| Horse mackerel       | <i>Trachurus trachurus</i>       | Med                  | 10,8%   | 0,0%   | 7,3%   | 2,8%     | 42,0% | 0,1%  | 0,0%     | 37,0% | 0,0%     | 0,0%    |
| Horse mackerel       | <i>Trachurus trachurus</i>       | Black Sea GSA 29     |         |        |        |          |       |       |          |       |          |         |
| Tub gurnard          | <i>Chelidonichthys lucerna</i>   | 1.3, 2.2, 3.1        | 0,0%    | 0,0%   | 0,0%   | 8,9%     | 87,6% | 0,1%  | 0,2%     | 3,2%  | 0,0%     | 0,0%    |
| Clam                 | Veneridae                        | 2.1, 2.2             | 61,6%   | 0,0%   | 0,0%   | 0,0%     | 9,7%  | 0,0%  | 0,1%     | 28,6% | 0,0%     | 0,0%    |
| Transparent gobiid   | <i>Aphia minuta</i>              | GSA 9,10,16 and 19   | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 62,7% | 0,0%  | 0,0%     | 37,3% | 0,0%     | 0,0%    |
| Sand smelt           | <i>Atherina spp</i>              | GSA 9,10,16 and 19   | 0,0%    | 0,0%   | 0,0%   | 0,0%     | 30,1% | 0,0%  | 0,9%     | 69,0% | 0,0%     | 0,0%    |
| Poor cod             | <i>Trisopterus minutus</i>       | All Regions          | 0,0%    | 0,0%   | 28,5%  | 0,8%     | 31,9% | 0,0%  | 0,0%     | 38,8% | 0,0%     | 0,0%    |

\* For Greece available data concern the years 2014 and 2016

**Table 4.4.3: Average landings by MS (in tons) over the 2015-2017 period for sharks, rays and skates in the Mediterranean Sea and Black Sea.**

| Species                               |                                | Area        | Croatia | Cyprus | France | Greece * | Italy  | Malta | Slovenia | Spain  | Bulgaria | Romania | Total landings (t) |
|---------------------------------------|--------------------------------|-------------|---------|--------|--------|----------|--------|-------|----------|--------|----------|---------|--------------------|
| All commercial Sharks, rays & skates* | Selachii, Rajidae              | All Regions |         |        |        |          |        |       |          |        |          |         |                    |
| Thresher                              | <i>Alopias vulpinus</i>        | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 1,30   | 0,00  | 0,01     | 0,00   | 0,00     | 0,00    | 1,31               |
| Copper shark                          | <i>Carcharhinus brachyurus</i> | All Regions | 0,00    | 0,02   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,02               |
| Gulper shark                          | <i>Centrophorus granulosus</i> | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 1,49  | 0,00     | 7,20   | 0,00     | 0,00    | 8,69               |
| Little gulper shark                   | <i>Centrophorus uyato</i>      | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,77  | 0,00     | 0,00   | 0,00     | 0,00    | 0,77               |
| Basking shark                         | <i>Cetorhinus maximus</i>      | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,50   | 0,00     | 0,00    | 0,50               |
| Kitefin shark                         | <i>Dalotias licha</i>          | All Regions | 0,00    | 0,00   | 0,00   | 1,88     | 0,00   | 0,00  | 0,00     | 1,20   | 0,00     | 0,00    | 3,08               |
| Dasyatidae                            | <i>Dasyatidae</i>              | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 1,20   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 1,20               |
| Common stingray                       | <i>Dasyatis pastinaca</i>      | All Regions | 0,00    | 6,19   | 0,00   | 52,64    | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 1,73    | 60,57              |
| Pelagic stingray                      | <i>Dasyatis violacea</i>       | All Regions | 0,00    | 0,04   | 0,00   | 0,00     | 0,00   | 0,03  | 0,00     | 0,00   | 0,00     | 0,00    | 0,07               |
| Sharks, rays, skates, etc.            | Elasmobranchii                 | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 1,70   | 0,00     | 0,00    | 1,70               |
| Velvet belly                          | <i>Etmopterus spinax</i>       | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,01  | 0,00     | 2,60   | 0,00     | 0,00    | 2,61               |
| Tope shark                            | <i>Galeorhinus galeus</i>      | All Regions | 0,00    | 0,01   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,30   | 0,00     | 0,00    | 0,31               |
| Blackmouth catshark                   | <i>Galeus melastomus</i>       | All Regions | 0,00    | 0,00   | 0,00   | 14,77    | 0,00   | 0,00  | 0,00     | 75,90  | 0,00     | 0,00    | 90,67              |
| Crest-tail catsharks nei              | <i>Galeus spp</i>              | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 5,10   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 5,10               |
| Spiny butterfly ray                   | <i>Gymnura altavela</i>        | All Regions | 0,00    | 0,10   | 0,00   | 0,55     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,64               |
| Sharpnose sevengill shark             | <i>Heptranchias perlo</i>      | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,40   | 0,07  | 0,00     | 51,10  | 0,00     | 0,00    | 51,57              |
| Bluntnose sixgill shark               | <i>Hexanchus griseus</i>       | All Regions | 0,00    | 0,00   | 0,00   | 4,18     | 0,60   | 4,14  | 0,00     | 1,50   | 0,00     | 0,00    | 10,42              |
| Shortfin mako                         | <i>Isurus oxyrinchus</i>       | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,70   | 0,00     | 0,00    | 0,70               |
| Lamna nasus                           | <i>Lamna nasus</i>             | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 1,10   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 1,10               |
| Starry smooth-hound                   | <i>Mustelus asterias</i>       | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,21  | 0,00     | 0,00   | 0,00     | 0,00    | 0,21               |
| Smooth-hound                          | <i>Mustelus mustelus</i>       | All Regions | 23,01   | 0,00   | 0,00   | 0,00     | 0,00   | 10,49 | 2,22     | 24,30  | 0,00     | 0,00    | 60,01              |
| Blackspotted smooth-hound             | <i>Mustelus punctulatus</i>    | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,28  | 0,00     | 0,00   | 0,00     | 0,00    | 0,28               |
| Smooth-hounds nei                     | <i>Mustelus spp</i>            | All Regions | 0,00    | 0,10   | 0,00   | 41,21    | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 41,31              |
| Common eagle ray                      | <i>Myliobatis aquila</i>       | All Regions | 0,00    | 0,00   | 0,00   | 13,41    | 0,00   | 0,00  | 0,19     | 8,20   | 0,00     | 0,00    | 21,80              |
| Angular roughshark                    | <i>Oxynotus centrina</i>       | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 11,40  | 0,00     | 0,00    | 11,40              |
| Blue shark                            | <i>Prionace glauca</i>         | All Regions | 0,00    | 0,53   | 0,00   | 0,00     | 41,50  | 4,09  | 0,00     | 38,40  | 0,00     | 0,00    | 84,52              |
| White skate                           | <i>Raja alba</i>               | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 116,90 | 0,49  | 0,00     | 0,00   | 0,00     | 0,00    | 117,39             |
| Mediterranean starry ray              | <i>Raja asterias</i>           | All Regions | 0,00    | 0,00   | 0,00   | 2,90     | 115,60 | 0,01  | 0,24     | 30,00  | 0,00     | 0,00    | 148,74             |
| Blue skate                            | <i>Raja batias</i>             | All Regions | 0,00    | 0,00   | 0,00   | 2,00     | 0,00   | 0,05  | 0,00     | 0,00   | 0,00     | 0,00    | 2,05               |
| Blonde ray                            | <i>Raja brachyura</i>          | All Regions | 0,00    | 0,00   | 0,00   | 0,82     | 0,00   | 0,02  | 0,00     | 0,00   | 0,00     | 0,00    | 0,84               |
| Sandy ray                             | <i>Raja circularis</i>         | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,01  | 0,00     | 0,00   | 0,00     | 0,00    | 0,01               |
| Thornback ray                         | <i>Raja clavata</i>            | All Regions | 0,00    | 0,00   | 0,00   | 7,66     | 573,30 | 9,32  | 0,31     | 96,30  | 0,00     | 0,27    | 687,16             |
| Maltese ray                           | <i>Raja melitensis</i>         | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,23  | 0,00     | 0,00   | 0,00     | 0,00    | 0,23               |
| Brown ray                             | <i>Raja miraletus</i>          | All Regions | 0,00    | 0,00   | 0,00   | 0,03     | 37,70  | 0,04  | 0,00     | 0,00   | 0,00     | 0,00    | 37,77              |
| Spotted ray                           | <i>Raja montagui</i>           | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 18,10  | 5,92  | 0,00     | 0,00   | 0,00     | 0,00    | 24,02              |
| Longnosed skate                       | <i>Raja oxyrinchus</i>         | All Regions | 0,00    | 0,00   | 0,00   | 0,83     | 0,00   | 0,64  | 0,00     | 0,00   | 0,00     | 0,00    | 1,47               |
| Speckled ray                          | <i>Raja polystigma</i>         | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,04  | 0,00     | 0,00   | 0,00     | 0,00    | 0,04               |
| Raja rays nei                         | <i>Raja spp</i>                | All Regions | 92,55   | 3,60   | 0,00   | 193,48   | 0,00   | 6,21  | 0,00     | 0,00   | 0,00     | 0,00    | 295,84             |
| Rays and skates nei                   | Rajidae                        | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 287,40 | 0,00     | 0,00    | 287,40             |
| Guiltsfishes nei                      | <i>Rhinobatos spp</i>          | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,00               |
| Lusitanian cownose ray                | <i>Rhinoptera marginata</i>    | All Regions | 0,00    | 0,00   | 0,00   | 1,26     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 1,26               |
| Catsharks, etc. nei                   | Scyliorhinidae                 | All Regions | 0,00    | 0,07   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,07               |
| Small-spotted catshark                | <i>Scyliorhinus canicula</i>   | All Regions | 0,00    | 0,00   | 0,00   | 38,86    | 167,00 | 0,95  | 0,00     | 253,80 | 0,00     | 0,00    | 460,61             |
| Catsharks, nursehounds                | <i>Scyliorhinus spp</i>        | All Regions | 12,88   | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 12,88              |
| Nursehound                            | <i>Scyliorhinus stellaris</i>  | All Regions | 0,00    | 0,00   | 0,00   | 0,60     | 1,10   | 0,38  | 0,00     | 0,00   | 0,00     | 0,00    | 2,08               |
| Sphyrna spp                           | <i>Sphyrna spp</i>             | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,10   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,10               |
| Dogfish sharks nei                    | Squalidae                      | All Regions | 44,39   | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 44,39              |
| Picked dogfish                        | <i>Squalus acanthias</i>       | All Regions | 25,91   | 0,00   | 0,00   | 9,80     | 0,00   | 5,51  | 0,01     | 0,20   | 0,00     | 5,95    | 47,38              |
| Longnose spurdog                      | <i>Squalus blainville</i>      | All Regions | 0,00    | 0,00   | 0,00   | 18,86    | 0,00   | 9,44  | 0,00     | 7,80   | 0,00     | 0,00    | 36,10              |
| Dogfishes nei                         | <i>Squalus spp</i>             | All Regions | 0,00    | 0,10   | 0,00   | 0,00     | 54,30  | 6,64  | 0,00     | 0,00   | 0,00     | 0,00    | 61,05              |
| Angelshark                            | <i>Squatina squatina</i>       | All Regions | 0,00    | 0,00   | 0,00   | 2,79     | 0,00   | 0,02  | 0,00     | 0,00   | 0,00     | 0,00    | 2,80               |
| Marbled electric ray                  | <i>Torpedo marmorata</i>       | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,00               |
| Torpedo rays                          | <i>Torpedo spp</i>             | All Regions | 0,00    | 0,00   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 0,00               |
| Houndsharks, smoothhounds             | Triakidae                      | All Regions | 0,00    | 1,24   | 0,00   | 0,00     | 0,00   | 0,00  | 0,00     | 0,00   | 0,00     | 0,00    | 1,24               |

\* For Greece available data concern the years 2014 and 2016

**Table4.4.4: Contribution (%) of Member States to the average landings over the 2015-2017 period for sharks, rays and skates in the Mediterranean Sea and Black Sea.**

| Species                               | Area                           | Croatia     | Cyprus | France | Greece * | Italy  | Malta  | Slovenia | Spain  | Bulgaria | Romania |
|---------------------------------------|--------------------------------|-------------|--------|--------|----------|--------|--------|----------|--------|----------|---------|
| All commercial Sharks, rays & skates* | Selachii, Rajidae              | All Regions |        |        |          |        |        |          |        |          |         |
| Thresher                              | <i>Alopias vulpinus</i>        | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 99,3%  | 0,0%     | 0,7%   | 0,0%     | 0,0%    |
| Copper shark                          | <i>Carcharhinus brachyurus</i> | All Regions | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Gulper shark                          | <i>Centrophorus granulosus</i> | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 17,2%    | 0,0%   | 82,8%    | 0,0%    |
| Little gulper shark                   | <i>Centrophorus uyato</i>      | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Basking shark                         | <i>Cetorhinus maximus</i>      | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 100,0% | 0,0%     | 0,0%    |
| Kitefin shark                         | <i>Dalatias licha</i>          | All Regions | 0,0%   | 0,0%   | 0,0%     | 61,0%  | 0,0%   | 0,0%     | 0,0%   | 39,0%    | 0,0%    |
| Dasyatidae                            | <i>Dasyatidae</i>              | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Common stingray                       | <i>Dasyatis pastinaca</i>      | All Regions | 0,0%   | 10,2%  | 0,0%     | 86,9%  | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 2,9%    |
| Pelagic stingray                      | <i>Dasyatis violacea</i>       | All Regions | 0,0%   | 53,6%  | 0,0%     | 0,0%   | 0,0%   | 46,4%    | 0,0%   | 0,0%     | 0,0%    |
| Sharks, rays, skates,                 | Elasmobranchii                 | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 100,0% | 0,0%     | 0,0%    |
| Velvet belly                          | <i>Etmopterus spinax</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,3%     | 0,0%   | 99,7%    | 0,0%    |
| Tope shark                            | <i>Galeorhinus galeus</i>      | All Regions | 0,0%   | 3,2%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 96,8%    | 0,0%    |
| Blackmouth catshark                   | <i>Galeus melastomus</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 16,3%  | 0,0%   | 0,0%     | 0,0%   | 83,7%    | 0,0%    |
| Crest-tail catsharks                  | <i>Galeus spp</i>              | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Spiny butterfly ray                   | <i>Gymnura altavela</i>        | All Regions | 0,0%   | 14,9%  | 0,0%     | 85,1%  | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Sharpnose sevengill                   | <i>Heptranchias perlo</i>      | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,8%   | 0,1%     | 0,0%   | 99,1%    | 0,0%    |
| Bluntnose sixgill sha                 | <i>Hexanchus griseus</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 40,1%  | 5,8%   | 39,8%    | 0,0%   | 14,4%    | 0,0%    |
| Shortfin mako                         | <i>Isurus oxyrinchus</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 100,0% | 0,0%     | 0,0%    |
| Lamna nasus                           | <i>Lamna nasus</i>             | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 99,7%  | 0,0%     | 0,3%   | 0,0%     | 0,0%    |
| Starry smooth-hound                   | <i>Mustelus astierias</i>      | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Smooth-hound                          | <i>Mustelus mustelus</i>       | All Regions | 38,3%  | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 17,5%    | 3,7%   | 40,5%    | 0,0%    |
| Blackspotted smooth                   | <i>Mustelus punctulatus</i>    | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Smooth-hounds nei                     | <i>Mustelus spp</i>            | All Regions | 0,0%   | 0,2%   | 0,0%     | 99,8%  | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Common eagle ray                      | <i>Myliobatis aquila</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 61,5%  | 0,0%   | 0,0%     | 0,9%   | 37,6%    | 0,0%    |
| Angular roughshark                    | <i>Oxynotus centrina</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 100,0% | 0,0%     | 0,0%    |
| Blue shark                            | <i>Prionace glauca</i>         | All Regions | 0,0%   | 0,6%   | 0,0%     | 0,0%   | 49,1%  | 4,8%     | 0,0%   | 45,4%    | 0,0%    |
| White skate                           | <i>Raja alba</i>               | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 99,6%  | 0,4%     | 0,0%   | 0,0%     | 0,0%    |
| Mediterranean starr                   | <i>Raja asterias</i>           | All Regions | 0,0%   | 0,0%   | 0,0%     | 1,9%   | 77,7%  | 0,0%     | 0,2%   | 20,2%    | 0,0%    |
| Blue skate                            | <i>Raja batis</i>              | All Regions | 0,0%   | 0,0%   | 0,0%     | 97,8%  | 0,0%   | 2,2%     | 0,0%   | 0,0%     | 0,0%    |
| Blonde ray                            | <i>Raja brachyura</i>          | All Regions | 0,0%   | 0,0%   | 0,0%     | 97,4%  | 0,0%   | 2,6%     | 0,0%   | 0,0%     | 0,0%    |
| Sandy ray                             | <i>Raja circularis</i>         | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Thornback ray                         | <i>Raja clavata</i>            | All Regions | 0,0%   | 0,0%   | 0,0%     | 1,1%   | 83,4%  | 1,4%     | 0,0%   | 14,0%    | 0,0%    |
| Maltese ray                           | <i>Raja melitensis</i>         | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Brown ray                             | <i>Raja miraletus</i>          | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,1%   | 99,8%  | 0,1%     | 0,0%   | 0,0%     | 0,0%    |
| Spotted ray                           | <i>Raja montagui</i>           | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 75,4%  | 24,6%    | 0,0%   | 0,0%     | 0,0%    |
| Longnosed skate                       | <i>Raja oxyrinchus</i>         | All Regions | 0,0%   | 0,0%   | 0,0%     | 56,2%  | 0,0%   | 43,8%    | 0,0%   | 0,0%     | 0,0%    |
| Speckled ray                          | <i>Raja polystigma</i>         | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Raja rays nei                         | <i>Raja spp</i>                | All Regions | 31,3%  | 1,2%   | 0,0%     | 65,4%  | 0,0%   | 2,1%     | 0,0%   | 0,0%     | 0,0%    |
| Rays and skates nei                   | Rajidae                        | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 100,0% | 0,0%     | 0,0%    |
| Guitarfishes nei                      | Rhinobatos spp                 | All Regions | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Lusitanian cownose                    | <i>Rhinoptera marginata</i>    | All Regions | 0,0%   | 0,0%   | 0,0%     | 100,0% | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Catsharks, etc. nei                   | Scyliorhinidae                 | All Regions | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Small-spotted catsha                  | <i>Scyliorhinus canicula</i>   | All Regions | 0,0%   | 0,0%   | 0,0%     | 8,4%   | 36,3%  | 0,2%     | 0,0%   | 55,1%    | 0,0%    |
| Catsharks, nursehou                   | <i>Scyliorhinus spp</i>        | All Regions | 100,0% | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Nursehound                            | <i>Scyliorhinus stellaris</i>  | All Regions | 0,0%   | 0,0%   | 0,0%     | 28,6%  | 53,0%  | 18,4%    | 0,0%   | 0,0%     | 0,0%    |
| Sphyrna spp                           | <i>Sphyrna spp</i>             | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Dogfish sharks nei                    | Squalidae                      | All Regions | 100,0% | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Picked dogfish                        | <i>Squalus acanthias</i>       | All Regions | 54,7%  | 0,0%   | 0,0%     | 20,7%  | 0,0%   | 11,6%    | 0,0%   | 0,4%     | 12,6%   |
| Longnose spurdog                      | <i>Squalus blainville</i>      | All Regions | 0,0%   | 0,0%   | 0,0%     | 52,3%  | 0,0%   | 26,1%    | 0,0%   | 21,6%    | 0,0%    |
| Dogfishes nei                         | <i>Squalus spp</i>             | All Regions | 0,0%   | 0,2%   | 0,0%     | 0,0%   | 88,9%  | 10,9%    | 0,0%   | 0,0%     | 0,0%    |
| Angelshark                            | <i>Squatina squatina</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 99,4%  | 0,0%   | 0,6%     | 0,0%   | 0,0%     | 0,0%    |
| Marbled electric ray                  | <i>Torpedo marmorata</i>       | All Regions | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%   | 100,0%   | 0,0%   | 0,0%     | 0,0%    |
| Torpedo rays                          | <i>Torpedo spp</i>             | All Regions | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |
| Houndsharks, smoot                    | Triakidae                      | All Regions | 0,0%   | 100,0% | 0,0%     | 0,0%   | 0,0%   | 0,0%     | 0,0%   | 0,0%     | 0,0%    |

\* For Greece available data concern the years 2014 and 2016

## Ranking system for the Mediterranean and Black Sea fisheries

A ranking system of métiers at level 6 was performed at regional level (Mediterranean Sea, Black Sea - GSA29).

As in previous years, the ranking system applied was the one described in the old DCF Decision 2010/93/EU, according to which a ranking of the métiers is performed three times: firstly according to their share in the total landings, secondly according to their share in the total value of the commercial landings and thirdly according to their share in the total effort (days at sea). For each ranking, the shares were cumulated starting with the largest, until a cut-off level of 90% was reached. At the end of the procedure, all métiers selected through each ranking were added.

Data used: Average data on landings, value and effort over the period 2015-2017 were used, which were received under the 2018 RCG Med&BS Data Call. For Greece available data concerned landings with reference years 2014 and 2016, since the available data for 2015 and 2017 had limited coverage of the year concerned.

### Results:

#### Mediterranean Sea

27 métiers were identified for the Mediterranean Sea, listed in Table 4.4.5 Specifications provided on miscellaneous (MISC) and other (OTH) métiers are provided in Table 4.4.6.

**Table 4.4.5: List of identified métiers at level 6 in the Mediterranean Sea.**

|                   |                  |
|-------------------|------------------|
| DRB_MOL_0_0_0     | LTL_LPF_0_0_0    |
| FPO_DEF_0_0_0     | MISC             |
| FPO_MOL_0_0_0     | OTB_DEF_>=40_0_0 |
| FYK_CAT_0_0_0     | OTB_DWS_>=40_0_0 |
| FYK_DEF_0_0_0     | OTB_MDD_>=40_0_0 |
| GND_DEF_0_0_0     | OTH              |
| GND_SPF_0_0_0     | OTM_MPD_>=20_0_0 |
| GNS_DEF_>=16_0_0  | PS_LPF_14_0_0    |
| GNS_SLP_>=16_0_0  | PS_SPF_>=14_0_0  |
| GTR_DEF_>=16_0_0  | PTM_SPF_>=20_0_0 |
| LA_SLP_14_0_0     | SB-SV_DEF_0_0_0  |
| LHP-LHM_CEP_0_0_0 | TBB_DEF_0_0_0    |
| LHP-LHM_FIF_0_0_0 |                  |
| LLD_LPF_0_0_0     |                  |
| LLS_DEF_0_0_0     |                  |

**Table 4.4.6: Specifications provided by MS on the use of MISC and OTH metiers.**

| MISC               | MS  | Notes                                                                                                                                 |
|--------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------|
| Misc_LHP           | ESP | Pole and line fishing used to catch naturally schooling fish which can be attracted to the surface throwing live bait over the board. |
| Misc_LLS           | ESP | Deep water longline traditionally used in commercial fishing of the black spot seabream ( <i>Pagellus bogaraveo</i> )                 |
| FPO_DEMSP_>=40_0_0 | HRV |                                                                                                                                       |
| HAR_DEF_0_0_0      | HRV |                                                                                                                                       |
| MIS_DEF_0_0_0      | HRV |                                                                                                                                       |
| MIS_MIS_0_0_0      | HRV |                                                                                                                                       |
| OTM_MPD_0_0_0      | HRV |                                                                                                                                       |
|                    |     |                                                                                                                                       |
| OTH                | MS  |                                                                                                                                       |
| FPO_MOL_0_0_0      | FRA |                                                                                                                                       |
| GTN_DEF_0_0_0      | FRA |                                                                                                                                       |
| GTR_MOL_0_0_0      | FRA |                                                                                                                                       |
| LHP_LPF_0_0_0      | FRA |                                                                                                                                       |
| OTM_SPF_0_0_0      | FRA |                                                                                                                                       |
| OTT_DEF_0_0_0      | FRA |                                                                                                                                       |

**Table 4.4.7: Results of the ranking system at a cut-off level of 90% based on average landings (tons) over the period 2015-2017 for the whole Mediterranean Sea (with MISC aggregated).**

| Metiers at lvl 6 | Average Landings | %    | CumSum |
|------------------|------------------|------|--------|
| PS_SPF_>=14_0_0  | 151762961        | 0.36 | 0.36   |
| OTB_DEF_>=40_0_0 | 85139720         | 0.20 | 0.57   |
| PTM_SPF_>=20_0_0 | 46861719         | 0.11 | 0.68   |
| PS_LPF_14_0_0    | 23903502         | 0.06 | 0.74   |
| GTR_DEF_>=16_0_0 | 18410612         | 0.04 | 0.78   |
| DRB_MOL_0_0_0    | 17247815         | 0.04 | 0.82   |
| GNS_DEF_>=16_0_0 | 14352987         | 0.03 | 0.86   |
| OTB_MDD_>=40_0_0 | 14106227         | 0.03 | 0.89   |
| LLD_LPF_0_0_0    | 9600410          | 0.02 | 0.91   |

**Table 4.4.8: Results of the ranking system at a cut-off level of 90% based on average value of landings (euro) over the period 2015-2017 for the Mediterranean Sea (with MISC aggregated).**

| Metiers at lvl 6 | Average Value | %    | CumSum |
|------------------|---------------|------|--------|
| OTB_DEF_>=40_0_0 | 435238399     | 0.32 | 0.32   |
| PS_SPF_>=14_0_0  | 140917572     | 0.10 | 0.42   |
| GTR_DEF_>=16_0_0 | 129230261     | 0.09 | 0.52   |
| OTB_MDD_>=40_0_0 | 108470028     | 0.08 | 0.60   |
| OTB_DWS_>=40_0_0 | 93175536      | 0.07 | 0.67   |
| GNS_DEF_>=16_0_0 | 81559226      | 0.06 | 0.72   |
| LLD_LPF_0_0_0    | 66302975      | 0.05 | 0.77   |
| PTM_SPF_>=20_0_0 | 52229407      | 0.04 | 0.81   |
| MISC             | 51172956      | 0.04 | 0.85   |
| DRB_MOL_0_0_0    | 44117222      | 0.03 | 0.88   |
| LLS_DEF_0_0_0    | 31465230      | 0.02 | 0.90   |

Since miscellaneous MISC métiers were selected through the ranking system, the ranking system was performed again, disaggregating the MISC métiers based on the information provided. In this case, the métiers selected through the ranking system concerning value of landings are provided in the Table below.

**Table 4.4.9: Results of the ranking system at a cut-off level of 90% based on average value of landings (euro) over the period 2015-2017 for the Mediterranean Sea (with MISC disaggregated).**

| Metiers at lvl 6 | Average Value of Landings (euro) | %    | CumSum | Notes                                                                                              |
|------------------|----------------------------------|------|--------|----------------------------------------------------------------------------------------------------|
| OTB_DEF_>=40_0_0 | 435238399                        | 0.32 | 0.32   |                                                                                                    |
| PS_SPF_>=14_0_0  | 140917572                        | 0.10 | 0.42   |                                                                                                    |
| GTR_DEF_>=16_0_0 | 129230261                        | 0.09 | 0.52   |                                                                                                    |
| OTB_MDD_>=40_0_0 | 108470028                        | 0.08 | 0.60   |                                                                                                    |
| OTB_DWS_>=40_0_0 | 93175536                         | 0.07 | 0.67   |                                                                                                    |
| GNS_DEF_>=16_0_0 | 81559226                         | 0.06 | 0.72   |                                                                                                    |
| LLD_LPF_0_0_0    | 66302975                         | 0.05 | 0.77   |                                                                                                    |
| PTM_SPF_>=20_0_0 | 52229407                         | 0.04 | 0.81   |                                                                                                    |
| DRB_MOL_0_0_0    | 44117222                         | 0.03 | 0.84   |                                                                                                    |
| LLS_DEF_0_0_0    | 31465230                         | 0.02 | 0.87   |                                                                                                    |
| PS_LPF_14_0_0    | 30802552                         | 0.02 | 0.89   | HRV: There is no landing or landing value per se as all catch is transferred to cages for farming. |
| FPO_DEF_0_0_0    | 25476838                         | 0.02 | 0.91   |                                                                                                    |

**Table 4.4.10: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2015-2017 for the Mediterranean Sea (with MISC aggregated).**

| Metiers at lvl 6 | Average Effort | %    | CumSum |
|------------------|----------------|------|--------|
| OTB_DEF_>=40_0_0 | 795785         | 0.27 | 0.27   |
| GTR_DEF_>=16_0_0 | 723851         | 0.24 | 0.51   |
| GNS_DEF_>=16_0_0 | 437908         | 0.15 | 0.65   |
| MISC             | 149093         | 0.05 | 0.70   |
| FPO_DEF_0_0_0    | 122285         | 0.04 | 0.74   |
| OTB_MDD_>=40_0_0 | 118405         | 0.04 | 0.78   |
| LLS_DEF_0_0_0    | 118254         | 0.04 | 0.82   |
| PS_SPF_>=14_0_0  | 98936          | 0.03 | 0.85   |
| OTB_DWS_>=40_0_0 | 84004          | 0.03 | 0.88   |
| LLD_LPF_0_0_0    | 82330          | 0.03 | 0.91   |

Since MISC métiers were selected through the ranking system, the ranking system was performed again, disaggregating the MISC métiers. In this case, the métiers selected through the ranking system concerning effort are provided in the Table below.

**Table 4.4.11: Results of the ranking system at a cut-off level of 90% based on average effort over the period 2015-2017 for the Mediterranean Sea (with MISC disaggregated).**

| Metiers at lvl 6 | Average Effort | %    | CumSum |
|------------------|----------------|------|--------|
| OTB_DEF_>=40_0_0 | 795785         | 0.27 | 0.27   |
| GTR_DEF_>=16_0_0 | 723851         | 0.24 | 0.51   |
| GNS_DEF_>=16_0_0 | 437908         | 0.15 | 0.65   |
| FPO_DEF_0_0_0    | 122285         | 0.04 | 0.69   |
| OTB_MDD_>=40_0_0 | 118405         | 0.04 | 0.73   |
| LLS_DEF_0_0_0    | 118254         | 0.04 | 0.77   |
| PS_SPF_>=14_0_0  | 98936          | 0.03 | 0.80   |
| OTB_DWS_>=40_0_0 | 84004          | 0.03 | 0.83   |
| LLD_LPF_0_0_0    | 82330          | 0.03 | 0.86   |
| DRB_MOL_0_0_0    | 62266          | 0.02 | 0.88   |
| FYK_DEF_0_0_0    | 45699          | 0.02 | 0.90   |

In overall, 13 metiers were selected through the ranking procedure in the Mediterranean Sea (see Table 4.4.12).

**Table 4.4.12: Overall métiers selected through ranking procedure over the period 2015-2017 for the Mediterranean Sea.**

| Metiers at lvl 6 | Selected based on landings | Selected based on value | Selected based on effort |
|------------------|----------------------------|-------------------------|--------------------------|
| DRB_MOL_0_0_0    | √                          | √                       | √                        |
| FPO_DEF_0_0_0    |                            | √                       | √                        |
| FYK_DEF_0_0_0    |                            |                         | √                        |
| GNS_DEF_>=16_0_0 | √                          | √                       | √                        |
| GTR_DEF_>=16_0_0 | √                          | √                       | √                        |
| LLD_LPF_0_0_0    | √                          | √                       | √                        |
| LLS_DEF_0_0_0    |                            | √                       | √                        |
| OTB_DEF_>=40_0_0 | √                          | √                       | √                        |
| OTB_DWS_>=40_0_0 |                            | √                       | √                        |
| OTB_MDD_>=40_0_0 | √                          | √                       | √                        |
| PS_LPF_14_0_0    | √                          | √                       |                          |
| PS_SPF_>=14_0_0  | √                          | √                       | √                        |
| PTM_SPF_>=20_0_0 | √                          | √                       |                          |

### ***Black Sea (GSA29)***

11 metiers were identified for the Black Sea, listed in Table 4.4.13. Specifications provided on miscellaneous (MISC) metiers are provided in Table 4.4.14.

**Table 4.4.13: List of identified metiers at level 6 in the Black Sea.**

|                     |
|---------------------|
| FPO_DEF_0_0_0       |
| GNS_DEF_>=16_0_0    |
| GNS_DEF_360-400_0_0 |
| GNS_SLP_>=16_0_0    |
| LHP-LHM_FIF_0_0_0   |
| LLS_DEF_0_0_0       |
| MISC                |
| OTM_MPD_>=13_19_0_0 |
| PS_SPF_>=14_0_0     |
| SB-SV_DEF_0_0_0     |
| TBB_DEF_0_0_0       |

**Table 4.4.14: Specifications provided by MS on the use of MISC métiers.**

| MISC              | MS  |
|-------------------|-----|
| LHM_SPF_0_0_0     | BGR |
| LHP_DEF_0_0_0     | BGR |
| LLD_DEF_0_0_0     | BGR |
| NO - without gear | BGR |

**Table 4.4.15: Results of the ranking system at a cut-off level of 90% based on average landings (tons) over the period 2015-2017 for the Black Sea.**

| Metiers at lvl 6    | Average Landings | %    | CumSum |
|---------------------|------------------|------|--------|
| OTM_MPD_>=13_19_0_0 | 3592875          | 0.90 | 0.90   |

**Table 4.4.16: Results of the ranking system at a cut-off level of 90% based on average value of landings (euro) over the period 2015-2017 for the Black Sea.**

| Metiers at lvl 6    | Average Value | %    | CumSum |
|---------------------|---------------|------|--------|
| OTM_MPD_>=13_19_0_0 | 2114073       | 0.69 | 0.69   |
| GNS_DEF_360-400_0_0 | 540916        | 0.18 | 0.87   |
| FPO_DEF_0_0_0       | 293397        | 0.10 | 0.96   |

**Table 4.4.17: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2015-2017 for the Black Sea.**

| Metiers at lvl 6    | Average Effort | %    | CumSum |
|---------------------|----------------|------|--------|
| GNS_DEF_>=16_0_0    | 7597           | 0.33 | 0.33   |
| OTM_MPD_>=13_19_0_0 | 5095           | 0.22 | 0.56   |
| FPO_DEF_0_0_0       | 4437           | 0.19 | 0.75   |
| GNS_DEF_360-400_0_0 | 2169           | 0.10 | 0.85   |
| MISC                | 1829           | 0.08 | 0.93   |

Since MISC métiers were selected through the ranking system, the ranking system was performed again, disaggregating the MISC métiers based on the information provided. In this case, the métiers selected through the ranking system concerning effort are provided in the Table 4.4.18.

**Table 4.4.18: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2015-2017 for the Black Sea (with MISC disaggregated).**

| Metiers at lvl 6    | Average Effort | %    | CumSum |
|---------------------|----------------|------|--------|
| GNS_DEF_>=16_0_0    | 7597           | 0.33 | 0.33   |
| OTM_MPD_>=13_19_0_0 | 5095           | 0.22 | 0.56   |
| FPO_DEF_0_0_0       | 4437           | 0.19 | 0.75   |
| GNS_DEF_360-400_0_0 | 2169           | 0.10 | 0.85   |
| TBB_DEF_0_0_0       | 1360           | 0.06 | 0.91   |

In overall, 5 metiers were selected through the ranking procedure in the Black Sea (see Table 4.4.19).

**Table 4.4.19: Métiers selected through ranking procedure over the period 2015-2017 for the Black Sea**

| Metiers at lvl 6    | Selected based on landings | Selected based on value | Selected based on effort |
|---------------------|----------------------------|-------------------------|--------------------------|
| FPO_DEF_0_0_0       |                            | √                       | √                        |
| GNS_DEF_>=16_0_0    |                            |                         | √                        |
| GNS_DEF_360-400_0_0 |                            | √                       | √                        |
| OTM_MPD_>=13_19_0_0 | √                          | √                       | √                        |
| TBB_DEF_0_0_0       |                            |                         | √                        |

#### **4.5 Next steps and actions**

They are already presented above for each issue separately

## 5. Data quality (assurance and control) (TOR 5).

- ***Feedback from the data sub group*** (ToRs listed in LM report)
- ***Relevant feedback from data workshops***
- ***Further steps towards DB development***

RCG MED & BS considered that there is an urgent need to create a Regional Data Base (RDB) which is foreseen by European Regulations (EU) 2017/1004, (EU) 2016/1701, (EU) 2016/1251. A lot of time was spent on plenary discussing this issue which resulted in Recommendation 3, (see Annex III). Primarily, each MS one by one, expressed their consent in the plenary concerning their agreement on the urgent need of creating a RDB. Then, WP 3- Task 3.2 of the STREAM project was used as a template about the options available for hosting the RDB, which were GFCM, JRC and ICES. Following this discussion a subgroup was formed within RCG MED& BS in order to work on all issues raised in the plenary concerning the RDB, including the formation of a Steering Committee (SC) who will lead the process, the possible locations for hosting of the RDB, related costs and data policies. The subgroup presented the Preliminary Work Plan for the RDB-SC in the plenary which can be found in Annex VIII. It was decided and agreed upon the plenary that each MS will nominate two individuals, with expertise, in order to form a SC by mid-November. The SC will convene before the end of the year and produce a road map of the steps to be taken. Eirini Mantzouni, Researcher from the Fisheries Research Institute-Kavala/Greece, will act as preliminary chair until the formation of the SC. The SC will then decide upon its final Chair. The Chair of the SC will draft a roadmap of following actions to be performed in order to set-up the RDB of MED & BS.

- ***Upload logs***

This point does not apply to the Mediterranean and Black Sea.

- ***Feedback to MS on data anomalies***

This point does not apply to the Mediterranean and Black Sea.

- ***Documentation of quality procedures***

Procedures to assess the quality of biological data that will be stored at regional level will be developed under WP6 of STREAM project. The aim was to identify possible shortcomings in the existing approaches of checking biological data and propose procedures for improving and enhancing the quality of such checks. The overall target is to develop a practical framework for detecting and flagging potential sources of bias in biological data at regional level.

Also, RCG recognizing that several interesting tools are being implemented under the STREAM project and in order to enable the use of these tools by each MS agrees on the need to set up a network of expert to be trained on statistical tools and R packages on sampling stratification and optimization of biological data. The objective of the network will be the revision by country of the sampling stratification and proposing sampling optimisation using the sampling design

tool and data. All the information about the network of experts are already given in TOR 2, point 2.2.

- ***Update of WorkPlans and Annual reports.***

This point does not apply to the Mediterranean and Black Sea yet.

- ***Metiers and other variables, feedback from metier work group WKMET***

Clarification on how to store the variables (updated metier, stock names, harbour codes etc).

The outcomes from DCF Métier Workshop (WKMET) were presented by Mr Matt Elliot (Annex IX). The main objectives of the workshop were:

- To review current algorithms and processes used for allocating a trip to a métier based on transversal data.
- To understand and document the problems, issues and anomalies arising from métier calculation in different Member States.
- To provide standard guidelines for determining or allocating a trip to a métier or multiple métiers and how to aggregate the data.
- To provide and reference metadata for the key inputs to métiers (gear, mesh and species/species groups) and how they are aggregated.
- Evaluate standard format/or suggest appropriate existing format (transversal data) for input into métier algorithm and develop a standard R /SQL/SAS/ script and pseudo code for métier calculation.
- To define a strategy for storing and maintaining metadata (methods and tables) that define the métiers.

The recommendation made by the WKMET were the following:

- The list of approved métiers should be maintained and publicly available (at the ICES website);
- Additionally, a GitHub SharePoint be set up for reference lists and documentation;
- ICES is happy to support a site within the ICES GitHub - needs a little expertise and dedicated pan-regional RCG effort to design and set up;
- RCG Chairs should consult with ICES as to how ICES RDB administrators might use this if the GitHub was to be the key source for the restricted lists;
- A procedure would need to be drawn up for updating the content of the GitHub.

According to WKMET the task for the RCG's are: to decide on a repository for reference lists, documentation and métier descriptions, to decide if they want to encourage métier descriptions, to handle the overlapping métiers within FAO areas, to proceed for managing métier list at the RDB.

Regarding RCG Med&BS, the use of the métier system for the collection of biological and transversal data was adopted since 2010 by the implementation of DCF Decision 2010/93/EU. All the information on the way that the ranking is performed as well as the results of the ranking for 2018 are presented in TOR4, point 4.4.

- ***Next steps and actions***

## 6. Surveys (TOR 6).

- ***Feedback from the intersessional group on cost sharing.***
- ***Feedback from STECF meeting (EWG 18-04). Discuss proposal of EWG 18-04 to use stocks in Tables 1A and 1C of EU MAP as a starting point for the DST. Does the RCG want to include additional stocks?***

Dr. Venetia Kostopoulou from DG MARE provided feedback from EWG 18-04 (Annex IX). Reference was made to the Surveys not included in Table 10 of EU MAP, an historical overview was made on the meetings dealing with surveys, the evaluation process used and ended up with the Evaluation process proposed by STECF EWG 18-04 and the main outcomes.

The Member States and Regional Coordination Groups were requested to populate the two tables ('stocks' and 'surveys' tables) with a proposed list of surveys, to be included in the new DCF legal framework. In addition, the RCGs were asked whether the starting point for this exercise - as suggested by the EWG 18-04 should be the stocks listed under Tables 1A and 1C of the EU MAP.

The presentation was followed by an extensive discussion where clarification were given by the COM and the main points are presented below:

- The methodology on surveys to be made will be completely different compared to previous years. The starting point will now be the List of stocks and priority will be given for the species where data is collected.
  - The list of stocks is very long but not all stocks have to be surveyed; the aim is to highlight what is needed to be surveyed, end users will also do this. The point is to map everything out for the revision of the EU MAP. Include all stocks in table 1a and 1c for the column of the stocks database.
  - In table 1A a lot of information is missing, i.e. for the MEDIAS and MEDITS surveys so much information is collected but never assessed. By doing the exercise the other way round, the experts can see what is being collected; by only listing table 1A we are missing the information collected.
  - This new DST has many loops that provide information on the weak points of the surveys, and what should be the next steps. The DST will help to efficiently identify gaps and duplication in survey coverage
  - The ecosystem approach to fisheries is also dealt with in the evaluation. The EWG 18-04 identified the indicators that are related to fisheries, and an overview of data collected for those indicators in surveys.
  - In the list of indicators, the stocks' socioeconomic point of view is not considered.
- ***Review 2018 regional coordination (MEDITS, MEDIAS)***

### MEDITS

Mr George Tserpes presented the conclusions of MEDITS Coordination meeting held from 18 to 19 of April 2018 in Split, Croatia (Annex IX). He informed the group that MEDITS surveys was not accomplished for 2017 in Greek GSAs (20, 22 and 23). In several Italian regions it was accomplished with some delays (autumn/winter) due to administrative issues, while for the other areas no particular problems were faced, and the survey was accomplished according to the agreed protocols. MEDITS Reference Taxonomic list (TM list) was updated and is available in the MEDITS web-site. A special volume of Scientia Marina including manuscripts based on MEDITS data is under preparation and it is expected to be released by the end of 2018 - beginning of 2019. He noted that guidelines regarding the use of MEDITS data should be developed. The survey contributes to the collection of data for assessing MSFD indicators further to the FAO/GFCM initiative, MEDITS scientists will provide technical support to non EU-member states for the accomplishment of MEDITS-compatible surveys in non-currently sampled GSAs. Collaboration among MEDITS and Black Sea demersal surveys will be enforced through participation of Black Sea scientists to the MEDITS meetings. The group offered support for the use of MEDITS data for a JRC project on ecological modelling. There was also contribution to EMODnet Chemistry with information about marine litter data obtained from the MEDITS surveys, collaboration with ICES WG/COMEDA and development of synergies with the EU-funded (EASME) RECFISH project.

The next MEDITS coordination meeting will be held in France in the spring of 2019.

## **MEDIAS**

Mr Andrea De Felice (CNR-ISMAR, Italy) presented the work of MEDIAS Steering Committee (Annex IX).

MEDIAS is listed as a DCF mandatory survey and started in 2009 according to Council Regulation (EC) N° 199/2008, Commission Regulation (EC) N° 665/2008 and Commission Decision N°2010/93/EU. The main goal of these acoustic surveys is to evaluate the abundance and spatial distribution of small pelagic stocks, independently of the data provided by commercial fisheries, and to assess the impact of the fishing activity on the environment (EC 199/2008, Article 12). Target species are anchovy (*Engraulis encrasicolus*) and sardine (*Sardina pilchardus*) in the Mediterranean Sea. Oceanographic data are also acquired during the surveys in order to describe environmental properties in the pelagic ecosystem and to understand the link between climate change and the variability in the abundance and spatial distribution of small pelagic fish.

A list of the GSAs covered by Mediterranean International Acoustic Surveys is reported below:

- GSAs 1 & 6                      Northern Alboran Sea & Northern Spain
- GSA 7                              Gulf of Lion
- GSAs 9 & 10                    Ligurian Sea, North & South Tyrrhenian Sea (officially MEDIAS surveys since 2017)
- GSA 15                            Malta islands (not covered in 2017)
- GSA 16                            South of Sicily
- GSAs 17 & 18                  Northern & Southern Adriatic Sea (Eastern GSA 18 no DCF)
- GSAs 20 & 22                  Eastern Ionian and Aegean Seas



**Figure 6.1. Tracks of the acoustic surveys held in 2016 in the Mediterranean Sea, including non-EU acoustic surveys (i.e. Morocco, Montenegro and Albania).**

The MEDIAS Steering Committee met in Ancona (Italy) between 17<sup>th</sup> -19<sup>th</sup> of April 2018, and was chaired by Dr. Andrea De Felice and hosted by the CNR-ISMAR of Ancona. The meeting was attended by 26 colleagues from the European Union countries involved in acoustic surveys in the Mediterranean Sea and in the Black Sea.

The main aims of the 11<sup>th</sup> MEDIAS meeting were to present the results of the MEDIAS carried out in 2017, to coordinate the MEDIAS to be performed in 2018, to improve and update the common Protocol for the MEDIAS that is incorporated in the DCF framework and reflected in the MEDIAS Handbook, to revise the ToRs from 2018 and to establish the ToRs for 2019.

The surveys held in 2017 in GSA 1,6,7,9,10,16,17 (east & west), 18, 20 and 22 were presented (Figure 6.1). A presentation concerning the survey held in GSA 29 was held by Romanian scientists. All the scheduled surveys were completed except the survey in GSA 22 (Aegean Sea) due to a late signature of the specific contract by the competent Greek Ministry and it was possible to cover only GSA 20 (eastern Ionian Sea), traditionally monitored in September. A presentation by Dr. Angelo Bonanno showed the general concept of GFCM Mid Term Strategy aimed at: (1) Reverse the declining trend of fish stocks through strengthened scientific advice in support of management; (2) Support livelihoods for coastal communities through sustainable small-scale fisheries; (3) Curb illegal unreported and unregulated (IUU) fishing, through a regional plan of action; (4) Minimize and mitigate unwanted interactions between fisheries and marine ecosystems and environment, and (5) Enhance capacity-building and cooperation. The MEDIAS group could be involved in GFCM Mid Term Strategy through expertise sharing towards non-EU countries in which acoustic surveys are not being held or are not yet standardized by an international protocol.

The **TORS for 2018** were the following:

- Update MEDIAS handbook;
- Update the MEDIAS Website;
- Discussion on calibration procedure;

- To report each group's workflow from raw data to biomass estimation in order to define a possible script for acoustic data elaboration benefitting from what is already available in EchoR;
- Discussion on plankton monitoring survey design;
- To present the last tests on CV estimation routine in R and evaluate official adoption for MEDIAS surveys;
- To work on Marine Strategy Framework Directive for ecosystem descriptors and to evaluate the contribution of MEDIAS;
- To update the common work on the tentative Special Issue of a Journal.

Regarding the calibration procedure, each MEDIAS group presented briefly the scientific echosounders they use, frequencies and calibration procedures applied. The outcome of the discussion was that at the moment all groups are using SIMRAD echosounders even if there is some variability with the ancillary frequencies available. All the groups have at least 38 and 120 kHz available. The calibration procedures are all in agreement with *Demer et al.* (2015).

For the CV estimation, the script is related to acoustic survey biomass estimations developed by Marco Barra (CNR IAMC) and based on Walline (2007) has been tested in most of the areas. There is still something to fix in the script and some more tests to be performed by some of the MEDIAS groups; in the following months an improved version of the script will be released together with a manual of instructions. Presumably next year this script will be officially adopted as CV estimation procedure for biomass estimates in MEDIAS.

For the plankton monitoring synoptic with acoustic survey A general discussion on the recent proposal to include a zooplankton monitoring along with the acoustic survey funded by DCF, took place. The conclusions were that, although most of the groups already collect plankton samples within the acoustic survey aiming to improve our knowledge on the:

- Spawning and nursery areas for anchovy and possibly gilt sardine;
- Zooplankton spatial distribution as derived from acoustic data;
- Population dynamics of small pelagics in terms of zooplankton distribution and abundance.

In order to analyze the collected data, obtain results and provide them in a systematic way to DCF, additional funding is required as these analyses need more manpower, more days at sea, specific sampling material, etc.

The group continued the discussion started the previous years about the production of papers from the MEDIAS to contribute to a Special Issue of a Scientific Journal. Possible Guest Editors were identified in the MEDIAS group. Initially, certain topics were proposed for the Special Issue; these topics were of general interest or were initiated in past projects as AcousMed and needed to be finalized. Moreover, individual papers (per research group) are expected. The group also agreed to address other groups working in the Mediterranean to contribute.

The group discussed some improvements to be introduced to MEDIAS Handbook. These updates have been directly placed in the last version of the Handbook

Regarding the anchovy and sardine age determination, the MEDIAS group agrees to use otolith reading criteria for anchovy and sardine in accordance with ICES WKARA2 report (2016) and to follow the recommendation of that meeting to consider as birthdate for anchovy the 1st of January from an assessment point of view in relation to time-steps in the assessment. About anchovy and sardine maturity scale, for the MEDIAS group it is strongly recommended to use

the ICES WKSPMAT scale during the lab processing for classifying the reproductive phase for anchovy and sardine, particularly for identifying mature/immature which are very relevant to stock assessment purposes, in order to obtain the L50 estimation. This scale allows reaching a higher accuracy since it has been developed specifically for small pelagics (indeterminate spawners). Data conversion to MEDITS stages has to be adopted only if no other choices are available.

After the presentation of the workflows in use by the MEDIAS groups from raw data to biomass estimation, it was decided to try to translate those aspects of the workflows not contemplated in EchoR scripts through the organization of a specific session, in parallel with next MEDIAS Coordination Meeting, with the experts from each group that already worked with this software in R.

For the MEDIAS website, it was decided to make some documents and maps freely available to the public. In particular: MEDIAS Coordination Meeting reports, survey designs, MEDIAS Handbook, maps with spatial distribution of target species per area and a link to the principal publications from the group. The website in the future will have a more GIS oriented aspect for an easier and faster consultation of the survey results in a geographical context.

Regarding possible future expansions of the MEDIAS project the CNR-ISMAR and CNR-IAMC have expressed their interest to cover GSA 19 (western Ionian Sea) and GSA 11 (Sardinia) respectively by acoustic survey. The MEDIAS Steering Committee agreed to ask for the inclusion in the MEDIAS of these new areas in order to fill the existing knowledge gaps in Italian seas; in the meanwhile possibilities to carry out these surveys within the framework of specific projects, until the inclusion in the MEDIAS, will be explored. The possibility to gather data concerning vulnerable species, marine litter and jellyfish has been discussed. The group is available to build up proposals in case there is an interest in this sense by EU or GFCM.

Concerning the MEDIAS proposals the group agrees to continue submitting its proposals at RCG meetings, but evaluate also the possibility to look for other ways to proceed with the proposals with specific projects at various levels or under the umbrella of GFCM activities.

MEDIAS group is proposing the building of a common database through a specific project, based on the past decisions concerning the common format of the database during AcousMed project and during some of the previous MEDIAS Coordination Meetings. Another proposal is the intercalibration exercise among the MEDIAS groups to be conducted at a unique location with all the research vessels and equipment in use during MEDIAS surveys. MEDIAS group proposes also the introduction of a plankton monitoring activity synoptically with MEDIAS acoustic surveys to be added to the DCF to improve the knowledge useful for acoustic signals discrimination (mainly fish from plankton) and to improve ecosystem knowledge by adding information on small pelagic fish preys in an ecosystem approach perspective.

The foreseen TORs for the MEDIAS 2019 were the following:

General:

- to join and harmonize the ongoing acoustic surveys in the Mediterranean Sea and Black Sea;
- to provide information for management decisions;

- to provide input for stock assessment purposes concerning the stocks which are managed internationally;
- to provide information for Good Environmental Status in the MSFD.

Specific:

- To update MEDIAS handbook;
- To update the MEDIAS Website;
- Conduct a parallel session on the adaptation of the MEDIAS groups workflows to R procedures;
- To work on Marine Strategy Framework Directive for ecosystem descriptors and to evaluate the contribution of MEDIAS;
- To update the common work on the tentative Special Issue of a Journal.

The 12<sup>th</sup> MEDIAS meeting will take place in Athens, Greece, in the period 9-11 April 2019.

- Next steps and actions  
They are already presented above for each issue separately

## **7. Diadromous species (TOR 7)**

Together with the RCG MED & BS 2018 a parallel session on the diadromous species – Eel meeting took place at FRI's premises. The sub group was attended by 12 experts on European eel, representing 10 countries, from the Baltic to Mediterranean regions. The subject of the discussions was about the Management Framework for Eel within EU and Member State waters and the proposal of new recommendations for WGEEL 2019. This meeting provided a consistent and adaptive framework for including the Data required for the assessment and management of European eel at national and international level. Simultaneously, the WGEEL's responses to the Recommendations posed by RCG 2017 were evaluated (Annex IX).

Although data calls are notified to everyone through the official calendars of the various organizations, i.e. COM/JRC, ICES, GFCM; little or no information exist on the actual data that were provided by the countries. Apart from the Joint ICES/EIFAAC/GFCM WGEEL, no other information exist on the degree of compliance of the countries to the Data Calls. WGEEL 2018 preliminary reports that not all requested countries responded to the Joint ICES/EIFAAC/GFCM 2018 data call on Eel. However, some countries were not aware of the eel meetings or how to respond to all the data calls, so they decided to respond only to the GFCM Data Call.

The DSG is supportive of the development of Regional Database and Estimation System (RDBEs) and its overall objective to provide a single platform for countries to produce statistical estimates used as inputs for assessment working groups producing advice and status reports. Furthermore, the DSG recognizes that a regional database is a requirement for moving forward with regional coordination, hence an important tool for the RCG-s.

Easy accessible data on regional level is also a necessary tool to be able to make progress in quality assurance (QA) at the regional and pan-regional level. Moreover, in the future, the RDBES will be an important tool in providing data accessible (related to Transparent Assessment Framework (TAF)).

The DSG requested the members to consider standing for the election of chair of the DSG. The group was of the opinion it would be best if the DSG was chair by two chairs, as it is currently, one with a European eel background, and one with a migratory salmonid background.

It was propose to continue the Diadromous sub-RCG, but two eel sub-sub groups will be organized, which will discuss: (i) pan-regional issues all together, and (ii) sub-groups by region. In addition the group suggests that from next year the DSG should meet in a single meeting, with both eel and salmon/sea trout experts present. Furthermore and taking into consideration the initial idea that the DSG should rotate its meetings with the meetings of the relevant RCGs the next meeting should take place in 2019 at the RCG Atlantic.

Moreover, in order to facilitate a better understanding of the unique issues in data collection related to diadromous fish the DSG recommends that a representative of the DSG should be present at the Liaison Meeting between the RCGs and STECF.

RCG MED & BS is aware of the critical status of the eels and proposed that some measures should be adopted.

## 8. Recreational Fisheries (TOR 8)

- ***Review progress since last year***

According to EUMAP, Member States shall provide catch estimates from existing recreational fishery surveys, including those carried out under the data collection framework or from an additional pilot study. These surveys shall allow assessment of the share of catches from recreational fisheries in relation to commercial catches for all species in a marine region for which recreational catch estimates are required under this multiannual Union programme. EUMAP also requires that the subsequent design and extent of national surveys of recreational fisheries, including any thresholds for data collection, shall be coordinated at marine region level and shall be based on end-user needs.

A study commissioned by the EU in 2017 revealed 9 million recreational fishermen in the EU and can be found in the following link

([http://www.europarl.europa.eu/RegData/etudes/STUD/2017/601996/IPOL\\_STU\(2017\)601996\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/601996/IPOL_STU(2017)601996_EN.pdf)).

- ***Review progress of pilot studies***

Mr. Anastasios Papadopoulos presented the pilot study for recreational fisheries in Greece, which is part of the NWP (Annex IX). It has a three year duration, from 2017 until 2019. The aim of the pilot study is to estimate the number of recreational fishermen in the country, to record their fishing practices and avidity, and to collect biological and quantitative data of their catches for the first time in Greece. The survey was planned to evolve in three phases: a) the screening survey, 2) the diary survey and 3) the on-site survey.

The screening survey implemented in late 2017, gave insight on the demographics of the recreational fishermen (age, sex, education, profession and family status). It indicated that almost 9% of the population (>800.000) are active fishers older than fifteen years of age. Three fishing modes were most apparent: a) fishing from a boat, b) fishing from the coast and c) spearfishing. Most of the fishermen (66%) caught small quantities of fish per year (0-5 kgr). Most of them were not frequent fishermen since 53% of them fished from 1 to 5 times/year and most of them spent a small amount of money for the activity (1-50€/year). The screening survey also gave us the representative pool of individual fishermen who were willing to participate in the second phase of the study, the Diary survey. During this phase which is still ongoing, the participants will regularly report details of their methods and practices such as trips, areas, gear and catches (species, length, weight), by filling in a diary sheet. The third phase of the pilot study is the on-site sampling where FRI/HCMR collaborators will record fishing activity as well as biological data seasonally, for one week and for 24 hours per day in ports and beaches randomly selected from two sites in Aegean and one site in Ionian Sea.

The pilot study was based on methodology presented in the various ICES workgroups (WGRFS). Upon completion of the pilot study the number of active recreational fishermen in marine waters along with critical qualitative and quantitative data on recreational fishing in Hellas will be identified and evaluated for the first time.

- ***Role of RCG-how can regional coordination support pilot studies and sampling plans?***

RCG noted that a subgroup on recreational fisheries already exists under the ICES umbrella (WGRFS). This WG covers tasks such as the harmonization of existing guidelines/methodologies; the identification of data needs; the sharing of knowledge and experience in data collection. However, issues concerning recreational fisheries in the North countries are completely different to the issues faced by the Mediterranean group.

RCG recalls the work under implementation by GFCM on recreational fisheries and the handbook on data collection methodologies that will be finalized next year as well as the work that is under implementation in the STREAM project (P5 – Small-scale fisheries and recreational fisheries) which will produce best practice methodologies for sampling, processing, analysing and managing biological and spatial data of recreational fishery.

- ***Next steps and actions***

RCG MED & BS propose the organisation of an ad-hoc workshop on recreational fisheries (see TOR2, point 2.2).

## **9. Impact of management measures on data collection (TOR 9).**

### **Feedback from the intersessional group on Landing obligation**

At the 2017 Liaison meeting it was agreed upon that a pan regional RCG sub-group will be set up to look at the implication of the landing's obligation on catch sampling programmes. The ToRs and workplan, as developed initially by the RCG North Atlantic, were published in the 2017 Liaison report. In 2018 an intersessional group was scheduled to review MS template returns and the RDB data once VMS data is available and compare the different metrics which could highlight the scale of any uncertainties and potential gaps in sampling schemes.

For the Mediterranean and the Black Sea MSs there is an exemption from the landing obligation for certain demersal and small pelagic species. Specifically, the commission delegated Regulation (EU) 2018/161 introduced a de minimis exemption from the landing requirement for certain types of small scale pelagic fishing in the Mediterranean Sea. Also, the Commission Delegated Regulation (EU) 2017/86 established a discard plan for certain demersal fisheries in the Adriatic Sea, the south-eastern Mediterranean Sea and the western Mediterranean Sea. It covers demersal fisheries for sole, hake, scallop, Venus shells, carpet shells, red mullet and deep-water rose shrimp and introduces a Survivability exemption and de minimis exemption for the above mentioned species. The plan was updated in 2017 by Commission Delegated Regulation 2018/153.

In 2018, three groups of Member States from the Mediterranean PESCAMED (Spain, France and Italy), SUDESTMED (Cyprus, Greece, Italy and Malta) and ADRIATICA (Croatia and Italy), submitted new sets of joint recommendations. These recommendations were assessed by the STECF EWG 18-06. The main findings and the summary of additional information sent relating to exemptions are presented in Table 5 of the "Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the landing obligation joint recommendations (STECF-18-06)", while the outcomes of their assessment by EWG 18-06 are summarized in table 9.1.1 and a summary of the high survivability applications is given in Table 9.2.1 of the same report.

- **Next steps and actions**

The MS participating in the above mentioned groups will cooperate to provide the information needed to support the new recommendations.

## **10. Incidental by-catch of birds, mammals, reptiles and fish (TOR 10)**

### ***10.1. Review progress of pilot studies***

During RCM MED & BS 2016 it was agreed to be prepared a list of métiers important for incidental catches. Based on this list, starting from 2018, MSs would have to carry out pilot studies on a yearly basis. The RCG MED & BS 2017 recommended MSs to follow the planned monitoring programme of the GFCM on the incidental catch of vulnerable species, and carry out the following pilot studies:

- 2018: Pilot study for assessing incidental catches of vulnerable species from bottom trawlers
- 2019: Pilot study for assessing incidental catches of vulnerable species from longlines
- 2020: Pilot study for assessing incidental catches of vulnerable species from set nets (gillnets).

MS should perform on-board observations for those métiers which do not fall within the biological on-board observations but which are deemed important for incidental by-catch of PETs. Member States were encouraged to follow the methodology provided by MARE/2014/19 Med & BS project, Deliverable.3.2 - handbook with guidelines for monitoring incidental by catch and processing the collected data and the GFCM guidelines on incidental catch (under preparation). Data to be collected should include: identification of species, number and weight (when possible) of individuals, gear specifications, location and timing of catches.

RCG MED & BS noted that there is a general need for discussion at regional level the following issues:

- Addressing regional needs for the collection of stomach contents, benthos and marine litter; identification of data needs; share knowledge and experience in the data collection.
- Harmonization of common protocol on data collection; issues related to data sharing; analysis on data quality.

RCG considers that there is no need of a specific subgroup under RCG for the time being because these points are covered by the STREAM project that is expected to produce the final results by next spring. In addition, GFCM is implementing handbook on data collection methodologies for by catch and vulnerable species.

### ***10.2. Feedback from GFCM***

According to the representative of the GFCM secretariat the incidental captures of vulnerable species, as well as discards, are serious issues hampering the sustainability of fishery activities in the GFCM area of application and there is a need to expand incidental catch surveys and standardize practices in order to compare fisheries, as well as test potential methods and eventual mitigation tools. It is expected that in the frames of GFCM mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries particularly the Target

4 minimize and mitigate unwanted interactions between fisheries and marine ecosystems and environment representative data will be obtained to facilitating the adoption of required management measures towards the reduction of by catch rates.

### ***10.3. Next steps and actions***

RCG recommends that the final results of STREAM project should be presented at the next year RCG meeting.

RCG also considers that MED&BS Member States are delivering data do the ICES WGBYC for which a data call is issued annually.

RCG considers that MED & BS experts should take part to the WGBYC meeting.

## **11. Next venue and chairs (TOR11)**

The previously agreed schedule (from past RCM Med&BS) for the chairmanship of the RCG that covers the period 2016 – 2025 was the following:

- Slovenia (2016-2017),
- Greece (2018-2019),
- Bulgaria (2020-2021)
- Malta (2022-2023) and
- Croatia (2024-2025).

In year 2018 the RCG MED & BS was co-chaired by Mr Apostolos Karagiannakos and Mr Jernej Švab, and in year 2019 it will be co-chaired by Mr Apostolos Karagiannakos Ms Simona Nicheva.

It was suggested that from 2019, it should be foreseen that one day of the meeting all NCs must attend.

For the meeting in 2019 Malta kindly offered to be the host it with possible dates 16-20<sup>th</sup> of September with a suggested short meeting in June. For 2020 it was suggested to have the main meeting of the RCG MED & BS 2020 in France.

## **12. AOB (TOR 12)**

### **Clarifications/Suggestions:**

- Dates of RCG2019 were decided in LM, however MS were not made aware of this change until RCG2018. RCG MED&BS Member States are not in agreement with the change of the annual meeting dates from September to June. This is justified because of the heavy workload at that time, as Data Calls along with surveys like MEDITS and MEDIAS are in progress. Finally, the past years have seen a near unanimous attendance of MS representatives, by changing the dates to June there is a risk of reduced attendance which would impede the progress and process of the RCG MED&BS.
- It is the intention and willingness of this RCG to have more prominent participation in the related expert groups for communicating with all end users.
- RCG recommendation towards the STECF – when there is an evaluation of an AR and Data Transmission Failures, the STECF should consult a background document like the WP which can be used to filter out comments that are not relevant to the data collection practices of MS, like asking for data from pilot studies.
- Pending the outcomes of STECF EWG, the RCG suggests to create short guidelines on how MS and NCs are supposed to reply along with the context of the reply to the EWG. There is an operational deadline although this is not in the regulation. At this point MARE are categorizing and mapping all data transmission issues and situations. Most common replies are that MS do not address the issue or that they will do something in the future, so there is no real reply and the process must begin again. This matter should be in the agenda for next year.

### 13. Glossary

|         |                                                                        |
|---------|------------------------------------------------------------------------|
| AR      | Annual Report (of activities carried out by MS under the DCF)          |
| WP      | Annual Workplan                                                        |
| CFP     | Common Fishery Policy (EU)                                             |
| CR      | Control Regulations (EU)                                               |
| DCF     | Data Collection Framework (follow up of DCR)                           |
| DC-MAP  | Multi Annual Programme for Data Collection (follow up of DCF)          |
| EEZ     | Exclusive Economic Zone                                                |
| EMFF    | European Maritime and Fisheries Funds                                  |
| EWG     | STECF Expert Working Group                                             |
| FPA     | Fishing Partnership Agreement                                          |
| GFCM    | General Fisheries Commission for the Mediterranean (FAO)               |
| IATTC   | Inter-American Tropical Tuna Commission                                |
| ICCAT   | International Commission for the Conservation of Atlantic Tunas        |
| ICES    | International Council for the Exploration of the Sea                   |
| IOTC    | Indian Ocean Tuna Commission                                           |
| JSC     | Joint Scientific Committees (of the FPA)                               |
| LDF     | Long Distance Fishery                                                  |
| LM      | Liaison Meeting                                                        |
| LP      | Large Pelagic species                                                  |
| MS      | Member State(s) (of the EU)                                            |
| NA      | North Atlantic                                                         |
| NP      | National Programme (of activities carried out by MS under the DCF)     |
| NS&EA   | North Sea and Eastern Arctic                                           |
| OP      | Operational Programme                                                  |
| OST     | Open Source Tools                                                      |
| PGCCDBS | Planning Group on Commercial Catches, Discards and Biological Sampling |
| PGECON  | Planning Group on Economic Issues                                      |
| PGMed   | Mediterranean Planning Group for Methodological Development            |
| RCG     | Regional Coordination Group                                            |
| RCM     | Regional Coordination Meeting                                          |

|          |                                                                                              |
|----------|----------------------------------------------------------------------------------------------|
| RDB      | Regional Data Base (of the RCM)                                                              |
| RDB S.C. | Regional Data Base Steering Committee                                                        |
| RFMO     | Regional Fisheries Management Organization                                                   |
| RoP      | Rules of Procedure                                                                           |
| SCRS     | Standing Committee on Research and Statistics (ICCAT)                                        |
| SDEF     | Standard Data Exchange Format                                                                |
| STECF    | Scientific, Technical and Economic Committee for Fisheries                                   |
| WCPFC    | Western and Central Pacific Fisheries Commission                                             |
| WKPICS   | ICES Workshop on the Practical Implementation of Statistical Sound Catch Sampling Programmes |
| WP       | Work Plan for data collection in the fisheries and aquaculture sectors                       |

## **14. Annexes**

### **Annex I. Final Agenda**

**RCG Med & BS 2018**

**Fisheries Research Institute**

**Nea Peramos, Kavala, Greece**

**17-21 September 2018**

#### **Monday 17th September**

*14:00 -14:30*

##### **Adoption of Agenda, format of the report and Rapporteurs.**

- Welcome and Introduction of participants
- Adoption of the agenda, subgroups formation, plenaries, rapporteurs

*14:30-16:15*

##### **TOR 1. Review progress since 2017 RCG's and 2017 Liaison meeting (14th report).**

- Feed-back from Liaison meeting and broad summary of RCG related activities during 2017, including subgroups established. (A. Karagiannakos)

Coffee break 16:15 – 16:45

*16:45- 18:00*

##### **TOR 9. Impact of management measures on data collection**

- Feedback from the intersessional group on Landing obligation
- Next steps and actions

#### **Tuesday 18th September**

*09:00 – 18:00*

##### **TOR 2. Governance model for the regional coordination group.**

- Discuss the role(s) of RCGs in the DCF environment (EU MAP 'regional approach based on end user needs') and their relations with other 'DCF groups' (for e.g. STECF, PGECON)(there was a similar point in the TORs last year under 'data quality' section) (Venetia Kostopoulou)
- Feedback on Rules and Procedures for RCGs and proposed timing for adoption

Teleconference with France (Camille Dross, Benoît Archambault)

Coffee break 11:00 – 11:15

- Present the outcomes of different EU projects (MARE/2016/22 grants Fish Hub) - Based on outcome from FishPi2 and STREAM regarding intersessional groups, how to proceed? Which ones to stay? Pan regional vs regional? ToRs? Presentation of the STREAM project (general overview, Alessandro Ligas and outputs of WP1, Paolo Carpentieri)
- Information on DCF legal framework and related legal acts: adoption of AR template; upcoming work on EU-MAP after 2020 preparation. (Venetia Kostopoulou)
- Next steps and actions

Lunch 13:00 – 14:30

#### **In parallel session 1:**

**1st Training Workshop on sampling optimization – use of the SD tool developed by MARE/2016/22 project STREAM. (start Tuesday 18th 14:30, end Friday 21st 13:00)**

#### **In parallel session 2:**

**Diadromous species - Eel meeting (start Tuesday 18th 14:30, end Thursday 20th 18:00)**

#### **TOR 6. Surveys**

- Feedback from the inter sessional group on cost sharing.
- Feedback from STECF meeting (EWG 18-04). Presentation of the outcome of STECF EWG 18-04 (Venetia Kostopoulou)

Coffee break 16:15 – 16:45

- Discuss proposal of EWG 18-04 to use stocks in Tables 1A and 1C of EU MAP as a starting point for the DST. Does the RCG want to include additional stocks?
- Review 2018 regional coordination (MEDITS, MEDIAS) (George Tserpes & Andrea De Felice)
- Next steps and actions

### **Wednesday 19th September**

09:00 – 18:00

#### **TOR 3. End-user interactions and identification of end-user needs**

- Feedback of end-user needs from ICES/GFCM (Federico De Rossi), JRC, STECF, other end users to the RCGs. Mapping of end user needs and information on end user meeting on the margins of the next Liaison meeting (1/10).
- Presentation of the four manuals on data collection methodologies were presented on: 1) recreational fisheries; 2) surveys; 3) discards; 4) incidental by-catch. The aim of these

manuals is to harmonize methodologies and create a common reference scheme for data collection (by the GFCM the representatives).

- Discussion on the content of the abovementioned manuals and examination of the extent to which these manuals are: i) in line with the EU DCF, and ii) whether they create additional data collection obligations for EU MS.
- Produce an overview from the RDB on regional fisheries

Coffee break 11:00 – 11:15

- Review issue list for the 2019/2020 benchmark stocks (by region) and produce an overview of sampling and quality on the stocks to be benchmarked in 2019.
- Review of 2018 (2019) data calls and feedback from the RCGs to ICES/JRC/GFCM.
- Next steps and actions.

Lunch 13:00 – 14:30

#### **TOR 10. Incidental by-catch of birds, mammals, reptiles and fish**

- Review progress of pilot studies
- Feedback from GFCM
- Next steps and actions

Coffee break 16:15 – 16:45

#### **TOR 8. Recreational Fisheries**

- Review progress since last year
- Review progress of pilot studies
- Role of RCG – how can regional coordination support pilot studies and sampling plans?

#### **Thursday 20th September**

09:00 – 18:00

#### **TOR 5. Data quality (assurance and control)**

- Feedback from the data sub group (ToRs listed in LM report)
- Relevant feedback from data workshops
- Further steps towards DB development
- Upload logs
- Feedback to MS on data anomalies

Coffee break 11:00 – 11:15

- Documentation of quality procedures
  - what's already in place ?
  - examples from Table 5A
- Update of WorkPlans and Annual reports.
  - Table 1a automatic? Commission recommendation should be completed automatically
  - The use of the RDB to answer data calls, AR, etc – develop output (R scripts)
- Metiers and other variables, feedback from metier work group WKMET

- Clarification on how to store the variables (updated metier, stock names, harbour codes etc).
- Next steps and actions

Lunch 13:00 – 14:30

#### **TOR 4. Regional plans**

- Feedback from EU projects (STREAM ); Clarification regional plan vs regional sampling plan. What has already been established and can be used in setting up regional plans? Presentations of the outcomes of WP3 (Maria Teresa Facchini), WP4 (Bea Guijarro), WP6 (George Tserpes) and WP7 (Charis Charilaou).
- Regional sampling plans for marine habitat and ecosystem monitoring, feedback from WKPETSAMP.

Coffee break 16:15 – 16:45

- Feedback from inter sessional work on establishing regional sampling plan
- Regional work based on results from 2018 RCG Med&BS Data Call
- Next steps and actions

#### **Friday 21st September**

(09:00 – 13:30)

#### **TOR 7. Diadromous species**

- Review work of Session 2 – Diadromous species – Eel meeting
- Next steps and actions
- Plenary final results and conclusions

Coffee break 11:00 – 11:15

- Next venue and chairs

#### **Teleconference with France (Camille Dross, Benoît Archambault)**

#### **Teleconference with Spain (María Moset Martínez)**

**AOB**

## Annex II. Participants

| Name                       | Country  | Institution                                                                                                                                                            | Role                               | email                                                              |
|----------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------|
| Simona Nicheva             | Bulgaria | Executive agency for fisheries and aquaculture                                                                                                                         | Expert/NC                          | simona.nicheva@iara.government.bg                                  |
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| Apostolos Karagiannakos    | Greece   | Ministry of Rural Development & Food, DG for Sustainable Fisheries, Directorate for Fisheries Policy & Fisheries Resources, Dpt for CFP, COM & International Relations | Biologist, NC, chairman of the RCG | akaragiannakos@minagric.gr                                         |
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|                    |         |                                                             |                             |                                                                                        |
|--------------------|---------|-------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------|
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| Kostas Touloumis   | Greece  | INALE                                                       | PETS coordinator for FRI    | <a href="mailto:touloumisk@inale.gr">touloumisk@inale.gr</a>                           |
| George Tserpes     | Greece  | Hellenic Centre of Marine Research                          | Researcher, MEDITS chairman | gtserpes@hcmr.gr                                                                       |
| Eirini Tzouramani  | Greece  | INAGROK                                                     | Socioeconomics researcher   | <a href="mailto:tzouramani@agreri.gr">tzouramani@agreri.gr</a>                         |
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| Andrea De Felice   | Italy   | CNR-ISMAR                                                   | Researcher, MEDIAS chairman | a.defelice@ismar.cnr.it                                                                |
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|                               |          |                                                                                                                                                                                                                                                                                                                                      |                                                                    |                                                                                        |
|-------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------|
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| Teleconference                |          |                                                                                                                                                                                                                                                                                                                                      |                                                                    |                                                                                        |
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### Annex III. Recommendations from the RCG MED & BS 2018

| <b><i>Amendment of the Rules of procedure for the RCG MED &amp; BS</i></b> |                                                                                                                                                                                                                                                                                                                                 |
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| <b>RCG MED &amp; BS 2018 Recommendation 1</b>                              | RCG MED&BS 2018 recommend the follow up of the amended draft text of the Rules of Procedure as attached to this report (Annex II), which was reviewed and discussed during a designated sub group and finally in the plenary of the meeting.                                                                                    |
| <b>Justification</b>                                                       | Article 9(5) of EU Regulation 2017/1004 of the EP and of the Council, <i>on the establishment of a Union framework for the collection, management, and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) 199/2008</i> (recast). |
| <b>Follow-up actions needed</b>                                            | The amended draft text containing the agreed RoPs to be discussed at the LM. After LM, a draft text with comments from LM to be circulated to the NCs. When reviewed by the NCs, the final text can then be adopted by written procedure of the RoPs for MED&BS by the end of 2018.                                             |
| <b>Responsible persons for follow-up actions</b>                           | The chair of MED&BS 2018 will present the amended draft to LM. The Chair of RCG MED&BS 2018 will circulate the amended draft of the RoPs to all NCs.                                                                                                                                                                            |
| <b>Time frame (Deadline)</b>                                               | LM, end of 2018. NC                                                                                                                                                                                                                                                                                                             |

| <b><i>Establishment of Intersessional sub groups for the RCG MED &amp; BS</i></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>RCG MED &amp; BS 2018</b><br><b>Recommendation 2</b>                           | RCG MED&BS 2018 recommends the organization of an ad-hoc workshop on recreational fisheries, along with the creation of two Subgroups: one on Data requirements & data transmission issues and a second Subgroup on sampling stratification and optimization of biological data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Justification</b>                                                              | <p><b>Ad-hoc workshop on recreational fisheries:</b> RCG considers that a subgroup on recreational fisheries already exists under the ICES umbrella (WGRFS), so there is no need to create another one. RCG recalls the work under implementation by GFCM on recreational fisheries and the handbook on data collection methodologies that will be finalized next year. However, RCG MED&amp;BS considers that, according to EUMAP, MS shall provide catch estimates from existing recreational fishery surveys, including those carried out under the data collection framework or from an additional pilot study, by the end of 2018. These surveys shall allow assessment of the share of catches from recreational fisheries in relation to commercial catches for all species in a marine region for which recreational catch estimates are required under this multiannual Union programme. EUMAP also requires that the subsequent design and extent of national surveys of recreational fisheries, including any thresholds for data collection, shall be coordinated at marine region level and shall be based on end-user needs. Therefore, RCG MED&amp;BS recommends to organize an ad-hoc workshop on recreational fisheries.</p> <p><b>Data transmission issues:</b> RCG considers the need to establish a permanent subgroup on data requirements and data related regional specificities and issues by end users. The aim of this subgroup is to try to streamline and simplify the process of data transmissions to end-users in order to avoid duplication of reporting of the same type of data. In addition, the sub group should assess DT failures before submission to MS.</p> <p><b>Sampling stratification and optimization of biological data:</b> RCG agrees on the need to set up a network of experts to be trained on statistical tools and R packages on sampling stratification and optimization of biological data. Several interesting tools are being implemented under the STREAM project and two working groups have already been organized by the STREAM project to finalize the tools. The network should enable the use of the tool at a regional level and each MS should nominate experts to be part of the network.</p> |

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| <b>Follow-up actions needed</b>                  | <p><b>Ad-hoc workshop on recreational fisheries:</b> Review of pilot studies implemented in EU MED&amp;BS MS, Presentation of the outcomes of the STREAM project, Assessment of the share of catches from recreational fisheries in relation to commercial catches for all species in the Mediterranean and in Black Sea, Design of national surveys of recreational fisheries, including list of species and thresholds for data collection for the future EUMAP (2020 and onwards)</p> <p><b>Data transmission issues:</b> The first meeting of the subgroup will be convened in January 2019. RCG considers that, apart from experts nominated by each MS, main end users (STECF/JRC, GFCM) and Commission should participate.</p> <p><b>Sampling stratification and optimization of biological data:</b> The network should work in the following months in order to provide final results for presentation and discussion in the next RCG MED&amp;BS 2019.</p> |
| <b>Responsible persons for follow-up actions</b> | <p><b>Ad-hoc workshop on recreational fisheries:</b> To be decided</p> <p><b>Data transmission issues:</b> Ivana Vukov will coordinate this sub group.</p> <p><b>Sampling stratification and optimization of biological data:</b> To be decided</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Time frame (Deadline)</b>                     | <p><b>Ad-hoc workshop on recreational fisheries:</b> The workshop is planned for the second week of April 2019, Italy.</p> <p><b>Data transmission issues:</b> Continuous work during the year will provide results for presentation and discussion for RCG MED&amp;BS 2019.</p> <p><b>Sampling stratification and optimization of biological data:</b> The network should work in the following months in order to provide final results for presentation and discussion in the next RCG MED&amp;BS 2019.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| <b>Setting up of a Regional Database for the RCG MED &amp; BS</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCG MED &amp; BS 2018 Recommendation 3</b>                     | RCG MED & BS 2018 considers the development of a regional database as an urgent priority in order to allow for the efficient use of the data received from the official RCG data calls and avoid duplication of work.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Justification</b>                                              | <p>Article 9(3) of EU Regulation 2017/1004 of the EP and of the Council, on the establishment of a Union framework for the collection, management, and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) 199/2008 (recast).</p> <p><i>“Regional coordination groups shall aim at developing and implementing procedures, methods, quality assurance and quality control for collecting and processing data with a view to enabling the reliability of scientific advice to be further improved. For that purpose, regional coordination groups shall aim to develop and implement regional databases.”</i></p> |
| <b>Follow-up actions needed</b>                                   | <p>NCs will send the two relevant nominations for the Steering Committee (SC) by 10<sup>th</sup> of October.</p> <p>The SC will convene before the end of 2018 and finalise a roadmap on issues concerning the RDB. Issues to be decided on: Agreement on the level of disaggregation (proposal for submission of anonymised raw data), the legal framework, the best option on who will host, funding opportunities for the maintenance, storage and operational costs.</p>                                                                                                                                                                                                                                   |
| <b>Responsible persons for follow-up actions</b>                  | <p>NCs will send the two nominations for the SC within two weeks from the RCG MED &amp; BS 2018.</p> <p>Eirini Mantzouni, Researcher from the Fisheries Research Institute, will act as preliminary chair until the formation of the SC. The SC will then decide upon its final Chair. The Chair of the SC will draft a roadmap of following actions to be performed in order to form the RDB of MED &amp; BS.</p>                                                                                                                                                                                                                                                                                             |
| <b>Time frame (Deadline)</b>                                      | LM, end of 2019. NC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| <b>Mesozooplankton sampling in MEDIAS surveys</b> |                                                                                                                                                                |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RCG MED &amp; BS 2018 Recommendation 4</b>     | RCG Med&BS 2018 recommends a sampling on mesozooplankton to be planned and carried out in MEDIAS framework (recall of RCM Med & BS-LP recommendation of 2016). |

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| <b>Justification</b>                             | The RCMG Med&BS considered that the development of a plankton sampling during MEDIAS surveys would be useful in order to have an index of productivity to be associated to small pelagic fish biomass and its spatial distribution. This information is valid as an ecosystem indicator for MSFD, but also as ground truth of acoustic non-target organisms. In addition, plankton sampling will provide new information on pelagic ecosystem, eventually useful for future ecosystem based management (EBM). The ichthyoplankton fraction of the collected samples could give more information on anchovy (given the survey period) spawning and nursery areas. |
| <b>Responsible persons for follow-up actions</b> | Commission, Liaison Meeting, MS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Time frame (Deadline)</b>                     | Sampling – during MEDIAS surveys                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## **Annex IV. Amended Rules of Procedures**

### **Rules of Procedure for the Mediterranean and Black Sea Regional Coordination Group (RCG MED & BS)**

#### **1. Scope**

- 1.1. These Rules of Procedure are valid for the Regional Coordination Group (RCG) for the Mediterranean and Black Sea (RCG MED & BS) in the framework of the Regulation (EU) 2017/1004 of the European Parliament and of the Council on the establishment of a Union framework for the collection, a management and use of data in fisheries sector and support for scientific advice regarding the Common Fisheries Policy and repealing Council regulation (EC) No 199/2008 (recast).
- 1.2. These Rules of Procedure are established based on the Article 9(5) of the above mentioned Regulation.
- 1.3. The RCG MED & BS and these Rules of Procedure are established by the following EU Member States coordinating their data collection activities in the RCG MED & BS: Bulgaria, Croatia, Cyprus, France, Greece, Italy, Malta, Romania, Slovenia and Spain.
- 1.4. Within the framework of Regulation (EU) 2017/1004 the mandate of the RCG Med&BS is to:
  - To coordinate data collection activities with other Member States in the Med&BS marine region, and with other RCGs and the Commission where issues affect several marine regions;
  - To aim at developing and implementing procedures, methods, quality assurance and quality control for collecting and processing data with a view to enabling the reliability of scientific advice to be further improved;
  - To aim to develop and implement a regional database for the Med & BS;
  - To prepare draft regional work plans, when necessary;
  - To develop procedures, methods, quality assurance and quality control for collecting and processing data, regionally coordinated sampling strategies and conditions for delivery of data in the regional database;
  - To agree on cost-sharing arrangements for participation in research surveys at sea, when necessary and
  - To provide the Commission with any regional specificities and regional agreements concluded in regards to delegated and implementing acts referred to in Article 4(1) of Regulation (EU) 2017/1004.
- 1.5. In accordance with Article 9(5) of Regulation (EU) 2017/1004 the RCG MED & BS applies these Rules of Procedure in order to coordinate the above mentioned activities.

#### **2. Working language**

- 2.1. The working language of the RCG is English.

### **3. Meetings of the RCG**

- 3.1. To perform its duties, the RCG shall hold at least once a year an annual meeting unless agreed otherwise by the RCG. An annual meeting shall consist of plenary sessions and may include work in groups.
- 3.2. The RCG may hold additional meetings to the annual meeting. The duration, form, meeting venue, terms of reference and other relevant elements for such an additional meeting may be agreed at the RCG annual meeting or in a written procedure initiated by the RCG Chairperson. The venue of the RCG annual meeting rotates between Member States coordinating their data collection activities in the same marine region unless otherwise agreed by the RCG.
- 3.3. Based on a written invitation from a third country, the RCG may agree to hold its annual or additional meeting in a venue provided by the third country.
- 3.4. No later than two month before the annual or additional meeting, the Member State or a third country organizing the annual or additional meeting shall be responsible for providing details of accommodation, travel and other organizational information relevant for the meeting.
- 3.5. European Commission and the National correspondents (NC) of each Member State coordinating the data collection activities in the same marine region shall nominate their participants to a RCG meeting and may choose the number of their participants to a RCG meetings with due regard of the items on the agenda at the relevant RCG meeting. Nominated participants should be communicated to the RCG chair.
- 3.6. Member States not listed in point 1.3., may nominate a NC or an expert to participate a RCG meeting.
- 3.7. Nominated person(s) intending to participate in a RCG meeting shall inform the contact point of the hosting country indicated by that hosting country within the set deadline for that meeting.
- 3.8. The RCG shall be responsible for providing a necessary platform for documents and other information related to the meeting and to its term of reference. The RCG may be assisted in this task by ICES, GFCM, European Commission or an institution or body with e.g. the necessary resources and technical capabilities.
- 3.9. Only nominated persons may represent the relevant MS, or the EC in the RCG meetings.
- 3.10. In case the national correspondent is not able to participate for the meeting, he or she may send his or her vote directly by email to the RCG chair. If no vote has been received from one of the national correspondents, the vote will take place in a written procedure up to 1 month from end of meeting.

#### **4. RCG groups**

- 4.1. To carry out its duties as set out in the Article 9 of the Regulation (EU) 2017/1004, the RCG may agree to establish permanent or temporary bodies, groups, subgroups or other arrangements (hereafter called *groups*). The RCG may provide terms of references for these groups and appoint the chairperson(s), coordinator(s), rapporteur(s), secretary, or any other role(s) or working practices necessary for these groups. The RCG may mandate these group(s) to appoint the chairperson(s), coordinator(s), rapporteur(s), secretary, or any other necessary role(s) and the terms of reference for such group(s).
- 4.2. These groups may carry out their duties during and between the RCG meetings, as appropriate. The form, duration, participants, participating bodies and other relevant elements of such work may be agreed by the RCG. The chairperson or a person named by the chairperson of such group shall keep the RCG informed on the progress of such work at appropriate intervals.
- 4.3. When a group is mandated to prepare a draft regional work plan in accordance with the Article 9 of Regulation (EU) 2017/1004, relevant Member States shall appoint expert(s) with the necessary expertise related to that draft regional work plan to participate in the group's work. NCs and the European Commission may participate the group's work at all stages. ICCAT, GFCM and STECF may be invited to participate at any stage.
- 4.4. The ICCAT, GFCM and the STECF should be empowered to actively participate during meetings and discussions pertaining to the RCG and any of its subgroups, proposing new terms of reference and additional items on the agenda, with the only restriction being not able to cast a vote when decisions are to be taken.

#### **5. RCG recommendations for further activities, national work plans or other relevant activities, listed in section 1, and preparation of a draft regional work plan in accordance with the Article 9(8) of the Regulation (EU) 2017/1004**

- 5.1. The RCG may give recommendations for further activities to be carried out by the Member States on all issues related to the developing and implementing procedures, methods, quality assurance and quality control for collecting and processing data based on the scope of the Regulation (EU) 2017/1004. The recommendations should provide, but are not limited to, clear and understandable stand-alone guidance on the recommended activities to be carried out, its justification, a foreseen time frame for fulfilment and to the extent possible, person(s) or institution(s) responsible for the follow up of such recommendation.
- 5.2. RCG Med&BS can produce agreements, proposals, suggestions and other forms of addressing the members of the RCG Med&BS. For addressing other subjects outside the RCG Med&BS it can produce recommendations. Recommendations shall be decided unanimously by consensus of participating members of the RCG Med&BS or by written procedure. The chairperson shall report on recommendations to the relevant subjects.

- 5.3. RCG may agree internal work plans or any other type of plans to orientate its internal work.
- 5.4. When a RCG group has been mandated to prepare a draft regional work plan, the chairperson of that group or a person mandated by that group, shall keep the RCG informed of the progress of such work at intervals agreed by the RCG.
- 5.5. The chairperson of the group may request a draft regional work plan to be put on the agenda of a RCG meeting for a discussion and/or for a decision making.
- 5.6. If the group mandated to prepare a draft regional work plan has not reached unanimity in preparing the draft regional work plan, Member States' experts or national correspondents participating in the group's work, may indicate their difference of opinions with appropriate justification in the group's report to the RCG meeting where the draft work plan is to be discussed and/or decided upon. European Commission may indicate in the group's report its concerns.

## **6. Decision making on a regional work plan or other relevant activities, listed in section 1.**

- 6.1. NC of the Member States referred to in para 1.3. shall unanimously agree on adopting a regional work plan or other relevant activities listed in section 1 by consensus.
- 6.2. Where unanimity is not achieved the draft regional work plan shall contain clear statements indicating the different view of the participants (Member States or other relevant participants) and justification for the deviation from the agreed draft regional work plan.
- 6.3. A decision on a draft regional work plan may be taken at exceptional situations by written procedure. This exceptional situation may be, amongst others, when there is no consensus at the meeting or the NC is not able to be present at the RCG meeting. The chairperson(s) of the RCG may initiate such a written procedure after a mandate with the necessary details to organize and proceed with a written procedure has been given to the chairperson(s) at the RCG annual meeting by the NC or their representatives present at the RCG meeting. In this case the chairperson of the RCG shall notify the RCG on the results of the written procedure within two weeks after the written procedure has ended.
- 6.4. The chairperson of the RCG may request, if necessary, observers at the annual meeting to be absent during the discussions related to the adoption of the draft regional work plan. If a regional sampling plan has been agreed upon it becomes an obligation of all involved member states in the region.

## **7. Cooperation between RCGs, the European Commission and other relevant bodies**

- 7.1. The chairperson of the RCG and/or other person(s) appointed by the RCG in the annual meeting or by the written procedure may participate and represent the RCG in coordination referred to in Article 9(6) of Regulation 2017/1004 (i.e. Liaison meeting).

## **8. Observer participation to the RCG meetings in accordance with Article 9(7) of Regulation (EU) 2017/1004**

8.1. In accordance with the Article 9(7) of the Regulation (EU) 2017/1004, RCG shall invite as observers relevant end users of scientific data, including appropriate scientific bodies as referred to in Article 26 of Regulation (EU) No 1380/2013, regional fisheries management organizations, Advisory Councils and third countries, when necessary.

8.2 The RCG shall evaluate the necessity to invite observers based on the justification send by the potential observers and with due regard to the items on the agenda of the RCG meeting.

The justification send by the potential observer shall contain the following information:

- Indicate the relevance of their participation from the Common Fisheries Policy and/or regional fisheries management point of view;
- Indicate their interest in scientific data relevant to the RCG as accurately as possible;
- Indicate the scientific bodies/groups in their relevant institution or country conducting the scientific analyses based on the relevant data;
- Indicate the management body with a legal mandate for fisheries management within the CFP for which the scientific analysis based on the RCG data is conducted for;
- Indicate how, to whom and where the results of the scientific analysis referred above are intended to made available;
- Organizational details and details of the representative to be nominated to participate and
- Commitment to comply with the rules and conditions set by the RCG and any other information considered relevant by the potential observer

The RCG shall consider the information provided and may request additional information.

8.3. The RCG shall decide by written consensus of the Member States that are part of the RCG which observers shall be invited to the RCG meeting.

8.4 With the exception to what is said above, the representatives of the STECF, General Fisheries Commission for the Mediterranean (GFCM) and International Commission for the Conservation of Atlantic Tunas (ICCAT) have a permanent possibility to participate at all RCG meetings. They should be empowered to actively participate during meetings and discussions pertaining to the RCG and any of its subgroups, proposing new terms of reference and additional items on the agenda, with the only restriction being not able to cast a vote when decisions are to be taken.

8.5. After a written confirmation from the RCG chairperson, observers have the possibility to participate to the RCG meetings. The conditions set for the participation may include, but are not limited to, limitations on participation to RCG meetings or group work, limits on access to data or to be present when data is presented or available, possibility to provide written contributions or to give presentations, name of the person(s) and organizations.

- 8.6. Observers are bound with the conditions referred above. If there are justified reasons to consider, that one or more of the conditions set by the RCG in the written confirmation or otherwise, are violated repeatedly or seriously by the observer, the necessity of the observer to participate or the conditions for the participation may be re-evaluated. The observer shall be informed of this, including the results of the re-evaluation, by a letter from the RCG chairperson after consulting and in consent with the national correspondents of the RCG responding to the chairperson's consultation.
- 8.7. If considered useful by the RCG, observers may be asked by the RCG chairperson to provide written contributions or presentations directly linked to the agenda points of the specified RCG meeting they are entitled to participate with the view to facilitate the discussions and contribute to the fulfilment of the RCG tasks.

## **9. Terms of Reference for the RCG**

- 9.1. The RCG may agree and amend the Terms of Reference for the RCG taking into account necessary contributions and information deemed relevant by the RCG. This may include consultation with appropriate bodies or institutions prior or during the decision making to approve the Terms of Reference for the RCG.
- 9.2. In addition to the Terms of Reference, the RCG may develop other internal documents to organize its work, taking into account requirements in Article 9(3) of Regulation (EU) 2017/1004 as well as other relevant requirements, contributions and information.
- 9.3. The Terms of Reference and other internal working documents may be agreed in the annual RCG meeting or by written procedure.

## **10. Agenda and submission of documents**

- 10.1. A draft agenda for the annual RCG meeting shall be drafted in accordance with the agreed annual Terms of Reference and made available no later than two months in advance to the meeting. A draft agenda shall be approved at the beginning of the meeting. The approved agenda may be supplemented during the meeting.
- 10.2. The draft agenda must ensure that all the voting decisions take place in one day. The exact date of voting decisions should be indicated in the draft agenda.
- 10.3. A draft regional work plan or the documentation for the other relevant activities, listed in section 1, where a decision is expected to be taken in accordance with the draft agenda of the RCG annual meeting, shall be made available to the NC one month in advance of the meeting where the decision is expected to be taken. A draft regional work plan for a decision in the RCG annual meeting made available later than one month before the RCG annual meeting, may be considered and decided upon at that meeting in case of consent of all the NC.
- 10.4. The draft agenda should indicate on which day during the meeting the decision on the draft regional work plan is to be taken.

## **11. Election of the RCG chairperson(s)**

- 11.1. The Chairperson may be appointed by the RCG on the basis of the agreed rotation by the RCG.
- 11.2. One term for a chairperson covers the period of two years. A chairperson may serve no more than two consecutive terms. The role will rotate between Member States coordinating their data collection activities in the same marine region unless otherwise agreed by the RCG.
- 11.3. RCG may decide to have co-chairperson(s).

## **12. The chairperson(s) responsibilities and agenda**

- 12.1. The chairperson(s) of the RCG shall promote effective and productive work and working methods of the RCG. The chairperson(s), an institution or a person indicated by the chairperson shall be responsible for making the documents and information available in time and shall take all necessary action to that effect.
- 12.2. The chairperson(s) is responsible for preparing agendas for the RCG meetings after consulting the national correspondents of that RCG and other institutions/bodies, as appropriate.

## **13. Reporting from the RCG meeting**

- 13.1. The chairperson of the RCG or a person appointed by the chairperson shall be responsible for drawing up a report from a RCG annual meeting. The report shall contain, but is not limited to, agreements, proposals, suggestions and other forms of addressing the members of the RCG Med&BS, recommendations of the RCG, the decisions taken by vote and the voting results, a summary of the RCG intersessional progress and of the RCG discussions, future work directions, ToRs, the intended work to be carried out before the next meeting, the list of foreseeable RCG meetings and list of participants, their contact information, role and institution.
- 13.2. The report shall be made available to the participants of the meeting and publicly, as appropriate, within two months after the RCG annual meeting has ended. Reports from other RCG subgroups meetings shall be distributed within one month after the meeting has ended unless otherwise decided by the RCG.

## **14. Amending rules of procedure**

- 14.1. These Rules of procedure may be amended by consensus of the national correspondents.

## Annex V. RCG MED & BS – 2018 Data Call

### RCG MED & BS - Data call 2018

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In accordance with the EU DCF (Regulation (EU) 2017/1004), the RCG chairs for the Med&BS herewith asks Member States to provide data at DCF level 6 **by 5<sup>th</sup> September 2018**. The characteristics of the data required are described below.

#### Content

The 2018 data call requests data for the period 2015-2017 and is based on tables used in the past by the Group, for addressing Ranking system of métiers for Med & BS and Landing template for Med & BS.

The simplified SDEF format organized in 3 tables dedicated to Landings, Efforts, Sampling for addressing issues related to sampling optimization and quality will not be requested for 2018, following the upgraded work carried out under Project STREAM (MARE/2016/22).

More specifically, the data call addresses the following:

| RCG Med & BS Data Call Content                                                     | Data required           | Data file                                    | Species                               |
|------------------------------------------------------------------------------------|-------------------------|----------------------------------------------|---------------------------------------|
| Ranking system for the Mediterranean and for the Black Sea                         | Landings, Effort, Value | Ranking_Med&BS Table_2018 RCMMEDBS Data Call | All species landed <b>(combined)</b>  |
| Review and update the landing template for the Mediterranean and for the Black Sea | Landings                | Landings template_2018 RCMMEDBS Data Call    | Species included in Landings template |

Detailed data and table descriptions are provided in the relevant data files.

#### Feedback and data transmission

Data should be sent by mail to the RCG Med&BS and PGMed chairs (e mail addresses below) in xlsx or csv format. Detailed instructions are in the templates. If any technical difficulty is encountered to provide the data, please contact for support Charis Charilaou ([ccharilaou@dfmr.moa.gov.cy](mailto:ccharilaou@dfmr.moa.gov.cy)).

Note that data submitted will only be used for the purpose of the working group and will not be stored in any database. Outputs from the ToRs will be in the form of tables containing aggregated data, as it was the case the previous years.

We look forward to your cooperation.

20/07/2018

Apostolos KARAGIANNAKOS, chair RCG Med&BS, [syg023@minagric.gr](mailto:syg023@minagric.gr)

Jernej ŠVAB, co chair RCG MED&BS, [Jernej.Svab@gov.si](mailto:Jernej.Svab@gov.si)

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**Annex VI. Landings template for 2018 RCMMEDBS Data Call (for years 2015, 2016, 2017).**

|                                       |                                   | Member State:           |      |      |      |                      |
|---------------------------------------|-----------------------------------|-------------------------|------|------|------|----------------------|
|                                       | Species                           | Area                    | 2015 | 2016 | 2017 | Average landings (t) |
| European Eel                          | <i>Anguilla anguilla</i>          | all areas in the Med    |      |      |      |                      |
| Giant red shrimp                      | <i>Aristaeomorpha foliacea</i>    | all areas in the Med    |      |      |      |                      |
| Red shrimp                            | <i>Aristeus antennatus</i>        | all areas in the Med    |      |      |      |                      |
| Bogue                                 | <i>Boops boops</i>                | 1.3, 2.1, 2.2, 3.1, 3.2 |      |      |      |                      |
| Dolphinfish                           | <i>Coryphaena equiselis</i>       | all areas in the Med    |      |      |      |                      |
| Dolphinfish                           | <i>Coryphaena hippurus</i>        | all areas in the Med    |      |      |      |                      |
| Sea bass                              | <i>Dicentrarchus labrax</i>       | all areas in the Med    |      |      |      |                      |
| Horned octopus                        | <i>Eledone cirrhosa</i>           | 1.1, 1.3, 2.1, 2.2, 3.1 |      |      |      |                      |
| Musky octopus                         | <i>Eledone moschata</i>           | 1.3, 2.1, 2.2, 3.1      |      |      |      |                      |
| Anchovy                               | <i>Engraulis encrasicolus</i>     | all areas in the Med    |      |      |      |                      |
| Anchovy                               | <i>Engraulis encrasicolus</i>     | Black Sea GSA 29        |      |      |      |                      |
| Grey gurnard                          | <i>Eutrigla gurnardus</i>         | 2.2, 3.1                |      |      |      |                      |
| Squid                                 | <i>Illex spp., Todarodes spp.</i> | all areas in the Med    |      |      |      |                      |
| Billfish                              | Istiophoridae                     | all areas in the Med    |      |      |      |                      |
| Common squid                          | <i>Loligo vulgaris</i>            | all areas in the Med    |      |      |      |                      |
| Black-bellied angler                  | <i>Lophius budegassa</i>          | 1.1, 1.2, 1.3, 2.2, 3.1 |      |      |      |                      |
| Anglerfish                            | <i>Lophius piscatorius</i>        | 1.1, 1.2, 1.3, 2.2, 3.1 |      |      |      |                      |
| Whiting                               | <i>Merlangius merlangus</i>       | Black Sea GSA 29        |      |      |      |                      |
| Hake                                  | <i>Merluccius merluccius</i>      | all areas in the Med    |      |      |      |                      |
| Blue whiting                          | <i>Micromesistius poutassou</i>   | 1.1, 3.1                |      |      |      |                      |
| Grey mullets                          | Mugilidae                         | 1.3, 2.1, 2.2, 3.1      |      |      |      |                      |
| Red mullet                            | <i>Mullus barbatus</i>            | all areas in the Med    |      |      |      |                      |
| Red mullet                            | <i>Mullus barbatus</i>            | Black Sea GSA 29        |      |      |      |                      |
| Striped red mullet                    | <i>Mullus surmuletus</i>          | all areas in the Med    |      |      |      |                      |
| Common octopus                        | <i>Octopus vulgaris</i>           | all areas in the Med    |      |      |      |                      |
| Norway lobster                        | <i>Nephrops norvegicus</i>        | all areas in the Med    |      |      |      |                      |
| Pandora                               | <i>Pagellus erythrinus</i>        | all areas in the Med    |      |      |      |                      |
| White shrimp                          | <i>Parapenaeus longirostris</i>   | all areas in the Med    |      |      |      |                      |
| Caramote prawn                        | <i>Penaeus kerathurus</i>         | 3,1                     |      |      |      |                      |
| Turbot                                | <i>Psetta maxima</i>              | Black Sea GSA 29        |      |      |      |                      |
| Sardine                               | <i>Sardina pilchardus</i>         | all areas in the Med    |      |      |      |                      |
| Mackerel                              | <i>Scomber spp.</i>               | all areas in the Med    |      |      |      |                      |
| Cuttlefish                            | <i>Sepia officinalis</i>          | all areas in the Med    |      |      |      |                      |
| Sole                                  | <i>Solea solea</i>                | 1.2, 2.1, 3.1           |      |      |      |                      |
| Gilthead sea bream                    | <i>Sparus aurata</i>              | 1.2, 3.1                |      |      |      |                      |
| Picarels                              | <i>Spicara smaris</i>             | 2.1, 3.1, 3.2           |      |      |      |                      |
| Sprat                                 | <i>Sprattus sprattus</i>          | Black Sea GSA 29        |      |      |      |                      |
| Mantis shrimp                         | <i>Squilla mantis</i>             | 1.3, 2.1, 2.2           |      |      |      |                      |
| Mediterranean horse mackerel          |                                   |                         |      |      |      |                      |
|                                       | <i>Trachurus mediterraneus</i>    | All areas in the Med    |      |      |      |                      |
| Mediterranean horse mackerel          |                                   |                         |      |      |      |                      |
|                                       | <i>Trachurus mediterraneus</i>    | Black Sea GSA 29        |      |      |      |                      |
| Horse mackerel                        | <i>Trachurus trachurus</i>        | all areas in the Med    |      |      |      |                      |
| Horse mackerel                        | <i>Trachurus trachurus</i>        | Black Sea GSA 29        |      |      |      |                      |
| Tub gurnard                           | <i>Chelidonichthys lucerna</i>    | 1.3, 2.2, 3.1           |      |      |      |                      |
| Clam                                  | Veneridae                         | 2.1, 2.2                |      |      |      |                      |
| Transparent gobiid                    | <i>Aphia minuta</i>               | GSA 9,10,16 and 19      |      |      |      |                      |
| Sand smelt                            | <i>Atherina spp</i>               | GSA 9,10,16 and 19      |      |      |      |                      |
| Poor cod                              | <i>Trisopterus minutus</i>        | All Regions             |      |      |      |                      |
| All commercial Sharks, rays & skates* | Selachii, Rajidae                 | All Regions             |      |      |      |                      |
|                                       |                                   |                         |      |      |      |                      |
| * To be reported at species level     |                                   |                         |      |      |      |                      |

**Format:**

| Landings           |                 |
|--------------------|-----------------|
| Field name         | Description     |
| Total landings (t) | landing in tons |

## Annex VII. Ranking of metier for Med&BS, 2018 RCG MED & BS Data Call

### File:

| Flag country | GSA | Year | Fishing activity category Level 6 | Specify MISC / OTH | Landings (kg) | Effort (days-at-sea) | Value (€) |
|--------------|-----|------|-----------------------------------|--------------------|---------------|----------------------|-----------|
|              |     |      |                                   |                    |               |                      |           |
|              |     |      |                                   |                    |               |                      |           |
|              |     |      |                                   |                    |               |                      |           |

### Format:

| Value                             |                                                                                                                                                                                                                                              |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field name                        | Description / Comments                                                                                                                                                                                                                       |
| Flag country                      | ISO 3166 – 1 alpha-3 codes. The flag country of the vessel.                                                                                                                                                                                  |
| GSA                               | See GFCM Geographic stratification coding.                                                                                                                                                                                                   |
| Year                              | Years required: 2014, 2015, 2016.                                                                                                                                                                                                            |
| Fishing activity category Level 6 | Select from Fishing activity category level 6 code list                                                                                                                                                                                      |
| Specify MISC / OTH                | If needed specify                                                                                                                                                                                                                            |
| Landings (kg)                     | Landings in kg                                                                                                                                                                                                                               |
| Effort (days-at-sea)              | Number of days at sea as defined in Commission Implementing Decision (EU) 2016/1251 adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019. |
| Value (€)                         | In euro                                                                                                                                                                                                                                      |

### Codes:

| GFCM geographic stratification |                       | Country |             | Fishing activity category level 6 |                                                                                                                    |
|--------------------------------|-----------------------|---------|-------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Code                           | Description           | Code    | Description | Code                              | Description                                                                                                        |
| GSA1                           | Northern Alboran Sea  | BGR     | Bulgaria    | DRB_MOL_0_0_0                     | Boat dredge for molluscs                                                                                           |
| GSA2                           | Alboran Island        | CYP     | Cyprus      | FPN_LPF_0_0_0                     | Stationary uncovered pound nets for large pelagic                                                                  |
| GSA3                           | Southern Alboran Sea  | ESP     | Spain       | FPO_DEF_0_0_0                     | Pot and Traps for demersal species                                                                                 |
| GSA4                           | Algeria               | FRA     | France      | FYK_CAT_0_0_0                     | Fyke nets for eels                                                                                                 |
| GSA5                           | Balearic Island       | GRC     | Greece      | FYK_DEF_0_0_0                     | Fyke nets for demersal species                                                                                     |
| GSA6                           | Northern Spain        | HRV     | Croatia     | GND_DEF_0_0_0                     | Driftnets for demersal fish                                                                                        |
| GSA7                           | Gulf of Lions         | ITA     | Italy       | GND_SPF_0_0_0                     | Driftnets for small pelagic fish                                                                                   |
| GSA8                           | Corsica Island        | MLT     | Malta       | GNS_DEF_360-400_0_0               | Set gillnets for demersal fish (for Black Sea region)                                                              |
| GSA9                           | Tyrrhenian Sea        | ROU     | Romania     | GNS_DEF_>=16_0_0                  | Set gillnets for demersal fish according meshsize                                                                  |
| GSA10                          | South Tyrrhenian Sea  | SVN     | Slovenia    | GNS_SLP_>=16_0_0                  | Set gillnets for small and large pelagics according meshsize regulation                                            |
| GSA11.1                        | Sardinia (west)       |         |             | GTR_DEF_>=16_0_0                  | Set trammel nets for demersal species according meshsize regulation                                                |
| GSA11.2                        | Sardinia (east)       |         |             | LA_SLP_14_0_0                     | Lampara nets according to meshsize regulation                                                                      |
| GSA11                          | Sardinia              |         |             | LHP-LHM_FIF_0_0_0                 | Hand and Pole lines for finfish                                                                                    |
| GSA12                          | Norther Tunisia       |         |             | LHP-LHM_CEP_0_0_0                 | Hand and Pole lines for cephalopods                                                                                |
| GSA13                          | Gulf of Hammamet      |         |             | LLD_LPF_0_0_0                     | Drifting longlines for large pelagic                                                                               |
| GSA14                          | Gulf of Gabes         |         |             | LLS_DEF_0_0_0                     | Set longlines for demersal fish                                                                                    |
| GSA15                          | Malta Island          |         |             | LTL_LPF_0_0_0                     | Trolling lines for large pelagic                                                                                   |
| GSA16                          | South of Sicily       |         |             | OTB_DEF_>=40_0_0                  | Bottom otter trawl for demersal species                                                                            |
| GSA17                          | Northern Adriatic     |         |             | OTB_DWS_>=40_0_0                  | Bottom otter trawl for deep water species                                                                          |
| GSA18                          | Southern Adriatic Sea |         |             | OTB_MDD_>=40_0_0                  | Bottom otter trawl for mixed demersal and deep water species                                                       |
| GSA19                          | Western Ionian Sea    |         |             | OTM_MPD_>=13_19_0_0               | Pelagic trawl according meshsize regulation (for Black Sea region)                                                 |
| GSA20                          | Eastern Ionian Sea    |         |             | OTM_MPD_>=20_0_0                  | Midwater otter trawl for mixed demersal and pelagic species                                                        |
| GSA21                          | Southern Ionian Sea   |         |             | PS_LPF_14_0_0                     | Purse seine for large pelagic                                                                                      |
| GSA22                          | Aegean Sea            |         |             | PS_SPF_>=14_0_0                   | Purse seine for small pelagics according meshsize regulation                                                       |
| GSA23                          | Crete Island          |         |             | PTM_SPF_>=20_0_0                  | Pelagic pair trawl for small pelagic species                                                                       |
| GSA24                          | North Levant          |         |             | SB-SV_DEF_0_0_0                   | Beach and boat seines for demersal species                                                                         |
| GSA25                          | Cyprus Island         |         |             | TBB_DEF_0_0_0                     | Beam trawl for demersal trawling                                                                                   |
| GSA26                          | South Levant          |         |             | MISC                              | Miscellaneous metiers (defined at national level)                                                                  |
| GSA27                          | Levant                |         |             | OTH                               | Other metier, included in Appendix IV of DCF Decision 93/2010 for the region, but not regionally agreed at level 6 |
| GSA28                          | Marmara Sea           |         |             |                                   |                                                                                                                    |
| GSA29                          | Black Sea             |         |             |                                   |                                                                                                                    |
| GSA30                          | Azov Sea              |         |             |                                   |                                                                                                                    |

## **Annex VIII. Ad hoc sub group for reinforcement and functioning of Steering Committee on setting up of RCGMED & BS Regional Data Base**

RCG MED & BS 2018 considers the development of a regional database as an urgent priority in order to allow for the efficient use of the data received from the official RCG data calls and avoid duplication of work.

RCG MED & BS 2018, considering the needs of a regional data base, as foreseen in the EU DC legislation, i.e.: Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008, Commission Implementing Decision (EU) 2016/1701 of 19 August 2016 laying down rules on the format for the submission of work plans for data collection in the fisheries and aquaculture sectors, Commission Implementing Decision (EU) 2016/1251 of 12 July 2016 adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019, and the deliverables of the STREAM Project regarding the RDB, decided to form an ad-hoc Subgroup to create a Steering Committee to resume steps on establishment and operation of RCGMED&BS Regional Data Base.

In the same aim a Recommendation of the group is foreseen to be adopted during the same meeting held between 17-21.09.2018, in Kavala/Greece.

In the plenary, it was decided the formation of an internal Ad hoc subgroup that would be led by Constantin Stroeie, National Correspondent of Romania. The internal sub group comprised on the representatives of Greece, Romania, Slovenia, Croatia, Spain, Cyprus. The GFCM Representative, as a major end user, as observer was invited being the officer for DCRF of this RFMO for Mediterranean and Black Sea.

The scope of the Subgroup was to: review data policy, from the last recommendation adopted by the RCM MED & BS 2013, data base structure (if possible at the moment) and to decide on the compentence of the Steering Committee for RDB (RDB-SC) and its functioning rules.

The Subgroup approved the Preliminary Work Plan for RDB-SC:

- Compentence of the SC: each MS in the area should nominate its representative to the committee and an alternate (in case of impossibility for the nominee to participate to the SC meetings) – no later than 15.11.2018, so that at the latest 31.12.2018 the Steering Committee to start working;
- List of possible locations to host RDB, based on the proposals of MSs: EU in its premises at JRC, by creating a dedicated platform for. The proposal was made considering the fact that JRC data base, actually is comprising all most important data transmitted by MSs in the area, and as a specialised research centre belonging to the EC, the hosting, maintenance and other related costs of RDB would be easier covered by the EC, as a part of its support inside the DCF requirements for a such data base; and GFCM as a major end user in the area, having already, in its records, all data submitted by EU MSs in the region;
- Estimates the total related RDB costs, taking into consideration the abovementioned and the necessity to determine the budget for it, respectively the MSs contribution, to be included in

the next regulation for fishery European fund in the next cycle 2021-2027, eventually, to be approved at EU level;

- Finalise the data policy, structure needs, biological, technical, socio-economic and economic data on fishery (marine and inland fishery, fresh water and marine aquaculture, fish processing industry), environment data, fish trade etc., having as starting point in the analyses and the forwarding steps on, the last Recommendation of RCMed&BS2013 referring to RDB, experience and actual status gained by the former RDB-SC;
- Road map to follow.

The constituent meeting of the RCG MED & BS RDB - Steering Committee should be organised by the actual provisional committee no later than 31.12.2018.

Eirini Mantzouni, Researcher from the Fisheries Research Institute-Kavala/Greece, will act as preliminary chair of the SC until its formation. The SC will then decide upon its final Chair. The Chair of the SC will draft a roadmap of following actions to be performed in order to set-up the RDB of MED & BS.

## **Annex IX. Presentations**

**PRESENTATION 1 BY APOSTOLOS KARAGIANNAKOS**

**TITLE: REVIEW PROGRESS SINCE 2017 RCG**



**Data Collection Framework**

**Regional Coordination Group  
Mediterranean & Black Sea 2018**

**17-21 September 2018**



**Fisheries Research Institute  
Nea Peramos, Kavala, GREECE**



**14TH LIAISON MEETING  
DG MARE 9-10 OCTOBER 2017**

Under the new DCF (recast)  
*Article 8 and 9(1), 9(2) of the Regulation (EC) No 2017/10041*

- Member states cooperate and coordinate their actions with other Member States and third countries in the same marine region
- Further improve the data quality and reliability of data collection methods
- Improve data collection activities

Five Regional Coordination Groups (RCG) have been established and are operational in the framework of the DCF:

- Baltic (RCG Baltic),
- North Sea & Eastern Arctic (RCG NS&EA),
- North Atlantic (RCG NA)
- Mediterranean/Black Sea/Large Pelagics (RCG Med& Black Sea)
- Long Distance Fisheries RCG LD).

*According to article 9(6) of the Regulation (EC) 2017/1004*

Regional coordination groups shall coordinate with each other and with the Commission, where issues affect several marine regions.

Liaison meeting is organised every year after the RCG meetings.

The participants of the Liaison Meeting (LM) are the chairs of STECF DCF EWGs, the chairs (incoming and outgoing) of the different RCGs, the chair(s) of the PGECON, the core DCF data end-users (e.g. ICES, ICCAT and GFCM), the chairs of the steering groups of Regional Databases and the Commission.

With the adoption of the DCF (recast) the role of the Liaison meeting has changed compared to the previous DCF period 2009-2016 to being an official forum where recommendations from the Regional Coordination Meetings (RCMs) are reviewed and, if endorsed, MS should take these recommendations into account in their national programmes.

The Liaison Meeting:

- a sub-group of the Commission Expert Group on Fisheries Data Collection
- a forum where issues that affect several marine regions can be addressed and discussed.

The 14th Liaison meeting was held in Brussels on 9th and 10th October 2017 to address the following Terms of Reference:

**TOR 1. Discussion on possible follow-up to the main outputs/recommendations of:**

- a) The 2017 RCGs - specific recommendations addressed to the Liaison Meeting
- b) PGECON, PGMed – outcomes and recommendations from their 2017 meeting
- c) PGDATA, WGCATCH, WGBIOP – key outcomes and recommendations from their 2017 meetings
- d) STECF EWG and STECF Plenary - outcomes and recommendations from their 2017 meetings
- e) Data end users (ICES, STECF, RFMOs – GFCM, IATTC, ICCAT, IOTC, WCPFC, NAFO, SPRFMO, CEEAF, WECAFC)

**TOR2. Rules of Procedures**

- a) Present RoP as agreed in each of the RCGs
- b) Discuss parallelisms
- c) Future steps

**TOR 3. Data handling**

- a) RCM data calls – overview of how MS responded
- b) Overview of use of the Regional Databases for RCGs in 2017 and problems identified
- c) Future developments for Regional Databases
- d) Data calls – main changes in data calls anticipated next year

**TOR 4. Governance structure**

- a) RCG groups: tentative changes in structure/number of RCGs
- b) Cooperation of RCGs with other DCF 'groups': cooperation between RCGs; communication with PGECON; role of RCGs in evaluation of National/Regional Reports and establishment of cooperation with STECF
- c) Cooperation with end users
- d) Vision of future RCG role(s): discussion on short- and medium-term objectives
- e) Future role of the Liaison Meeting

#### **TOR 5. AOB**

- a) Agree on a list of recommendations relating to DCF (that MS will need to report on in their AR2017)
- b) Review and prioritize DCF-related study proposals from RCGs, PGECON, EGs etc.
- c) Potential list of recommended meetings for 2018 as guidance for MS
- d) Requested outcomes of RCGs: list of scientific surveys; Table 1A of Work Plan
- e) Landing obligation (Discuss main issues that came out of the RCGs)
- f) Announcement of new chairs (where relevant), next meeting(s) and venues
- g) Format of report

#### **Main issues discussed and outcomes of 2017 RCGs**

##### **The Regional Coordination Group of the Baltic Sea region (RCG Baltic)**

- Compliance and control of the **landing obligation**

Possible solutions were discussed, such as (i) obligatory observer coverage (with reference to the Swedish approach), (ii) obligatory CCTV coverage (equipping a random subset of the fleet with random analysis of CCTV recordings) and/or (iii) reserve discard-top up or any proportion of TAC which can only be fished with onboard observer or CCTV installed.

- The **Rules of Procedures (RoP)** of the RCG Baltic, were adopted. The RoP will be reviewed after the first year;
- Progress on a **cost-sharing model of research surveys**;
- R-scripts and analysis tools available for **RDB data analysis**;
- Complexity of the sampling of **marine recreational fisheries**;
- The **Diadromous species subgroup (DSG)** met as a pan-regional group within the RCG Baltic.

#### **The Regional Coordination Group North Sea and Eastern Arctic (RCG NS & EA)**

- Increase the communication between the end users and data providers
- Updating the EU-MAP table 10 survey list and ICES information on surveys used in advice to combine two tables including all the relevant information.
- Generic code building on the variables from the RDB used also by ICES to get a stock overview in relation to benchmark process.
- No agreement on the Rules of Procedure was reached during this RCG NS&EA meeting.

#### **The 1st annual meeting of the Regional Coordination Group North Atlantic (RCG NA)**

With a role to:

- Develop, implement and maintain Regional Work Plans.
- Establish a governance model and develop a road map to meet the aims of the RCG
- Determine the regional work required for 2018 to meet the aims of the new RCG.

Agreement on:

- rules and procedures for the RCGNA,
- progressing the development of regional sampling plans and establishing criteria to test designs;
- improving communication with end-users and experts
- analysis of the data uploaded to RDB demonstrated how it could be used to review achievements, the quality, coverage and impact of current sampling levels relative to commercial landings and effort with a focus on potential quality indicators.

The impact of the landing obligation on scientific sampling schemes was also reviewed.

### **The Regional Coordination Group Long Distant Fleet (RCG LDF)**

- reviewed the Long Distance Fisheries activity by MS in CECAF and SPRMFO areas with the use of updated 2016 data provided by MS
- addressed the expressed interest and need stemming from the DG MARE to support the development of a database holding the data for fisheries in non-EU waters and inclusion in the RDB currently in use by the RCGs dealing with EU waters.
- suspend sampling of small pelagics in the CECAF area until clear guidance has been provided by the end-user
- discussed the current call for proposals on 'Strengthening regional cooperation' (MARE/2016/22) but no actions were taken to address this call
- discussed the observer requirements for sampling in SPRFMO waters.

### **Main issues discussed and outcomes of 2017 Planning & Working Groups**

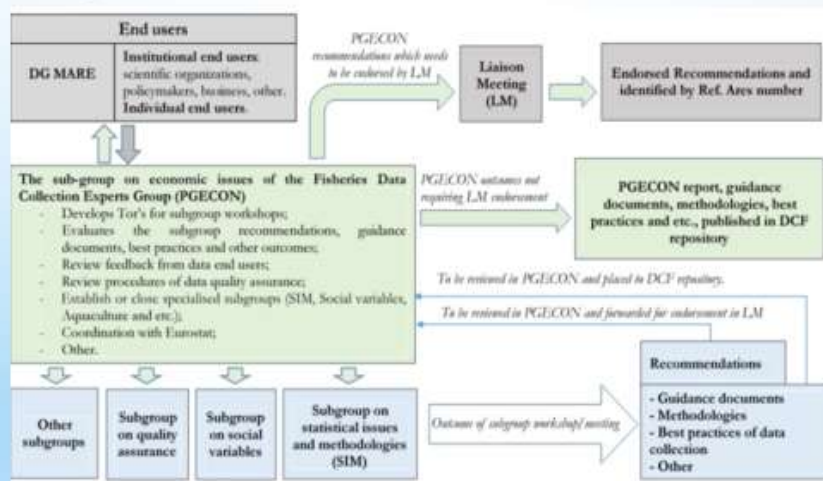
#### **• Main outcomes from Planning Group on Economic issues (PGECON)**

- Development of quality assurance framework for DCF data  
A methodological document, including a detailed description of methods of surveys,  
Annual Quality report, with tables specifying quality indicators
- Development of guidelines for social variables data collection in fisheries.  
In the EU MAP, collection of socio-economic data was extended with new requirements to include social variables for fishing fleet, aquaculture and fish processing industry

In terms of employment stratification used the major groups of fleets, namely small scale fisheries, large scale fisheries and distant water fisheries.

- "Employment by gender" to the following groups: Males, Female and Unknown (if needed).
- "Employment by nationality" to at least the following groups; National; EU; EEA (non EU); and Other (Non-EU/EEA).
- "Employment by age" Taking into account needs of EMMF for monitoring define age classes: <15; 15-24; 25-39; 40-64; 65+.
- "Employment by employment status" should, at least, be
  - categorised into two groups: "Owner/employer" (vessel owner involved in vessel activity/operation) and "Employee" (all engaged workers on-board, excluding owners).
- 'Education Level' PGECON recommends to use the International Standard Classification of Education (ISCED 2011), defining social variable "Employment by education level" e.g., "Low education"; "Medium education and "High education".

#### Structure, governance and mandate of PGECON



Work flow chart of PGECON

#### **Concept of integrated dissemination of DCF data**

Presented by a consultant company and outlined the development of a pilot interface (FishHub - Study on Availability and Dissemination of DCF Data) for integrated dissemination of DCF economic, transversal and biological data. Issues on confidentiality of data were discussed.

#### **Presentation of results from Subgroup workshop on Statistical Issues and Methodologies**

- Reviewed the work conducted by the PGECON Subgroup on Statistical Issues and Methodologies (SIM) which was established in PGECON 2016.
- Definition of variables.
- A joint workshop on the Small Scale Fleet and on fishing activity levels in economic data collection was held in The Hague, on 25th-29th September 2017.

#### **The Planning Group on Data Needs for Assessments and Advice (PGDATA)**

- evaluation of the 2017 ICES data calls and also on length data from data limited stocks
- finalize the ToRs for the workshop on BIOPTIM and establish the work process and preparation for the workshop.

*The BIOPTIM aims to look at ways in which biological parameters obtained from sampling commercial catches can be optimized so that the time and money spent on sampling can be effectively justified in terms of providing quality information to end users. The aim is to develop an R tool-box which can be used by national labs to quantify the effects of different sampling intensities and sampling designs, and support discussions on the advantages and disadvantages of different sampling strategies in terms of time and cost savings involved*

- implementing the SmartDots software developed by ILVO to replace WebGR as the regional/European system for otolith age reading and possible maturity classification
- taking the feedback from the 2016 benchmark data evaluation meeting for the Irish Sea (WKIRISH2) and Kattegat cod (WKBALT) aiming to increase the data quality and the communication between the expert groups
- suggested a further development and maintenance of the Data Quality Assurance Repository.

### **The Working Group On Commercial Catches (WGCATCH)**

WGCATCH main target is to ensure the quality of commercial catch data, which underpins stock assessments and advice. In order to achieve this, the group documents sampling schemes, establishes best practice guidelines and provides advice on the uses of commercial fishery data. The group also evaluates how new data collection regulations, or management measures, may alter the way data needs to be collected and provides guidelines about biases and disruptions induced in time-series of commercial data.

This year the group addressed a broad range of subjects:

Commercial catch or landings per unit effort indices (CPUE/LPUE):  
documentation of national sampling designs  
STECF FDI data call  
Landing obligation:  
Participation in the ICES advisory process:  
Small-Scale Fisheries data:  
Protected Endangered and Threatened Species (PETS):  
Regional Data Base (RDB):  
Interseasonal workshops for 2017:  
Links with PGDATA  
Publication on statistically sound sampling schemes  
Estimation procedures in the Regional DataBase (RDB)  
Repository of resources relevant to catch sampling  
Sampling of incidental bycatches  
Training course on Design and Analysis of Statistical Sound catch sampling programmes

### **Working Group on Biological Parameters (WGBIOP)**

- identified broad sets of new and existing biological parameters that are emerging as critical components of modern assessment.
- handled the reviewing of calibration exercises on biological parameters, their outcomes and recommendations for such actions.
- endorsed the implementation of a new template for categorizing the nature of the recommendations and facilitate an operational recommendation-system.
- Presented SmartDots (age-reading platform), a new software developed by ILVO and taken on board by ICES.

### Main outcomes from the STECF EWG and STECF plenary

The EWGs discussed principles and criteria for:

- improving the evaluation procedure and evaluating data quality in WPs and ARs,
- quality indicators for end user needs,
- minimum requirements for DCF data quality,
- guidelines for MS to fill in WPs and ARs, and
- the role of various bodies in this process.

In the STECF view:

- RCGs have a central role to implement the standards to be followed and coordinate the national sampling programs within a region.
- RCGs are also the ones most legitimate to coordinate and formalise what is needed for common tools such as RDBs, R packages etc.
- RCGs could be tasked with producing standard and automatised data quality reports at regional level.

**The EWG recommended that the forthcoming RCGs consider modifications of Table 1A of the WP template (section 3.2.2.1 in the EWG report).**

### Evaluation of DCF 2016 Annual Reports & Data Transmission

The evaluation of 184 DT issues concluded that 102 issues were justified as satisfactory, 39 unsatisfactory and 43 'unknown'.

**Most DT issues originated from the data calls on Mediterranean & Black Sea assessment, fleet economics and fisheries-dependent information (FDI, formerly effort data call).**

With regard to improvements in the AR evaluation, several suggestions have been made by the EWG. Amongst these, the following can be of key relevance to the RCGs:

1. An additional step that allows feedback by MS after the pre-screening before the EWG. As this will require more time within the overall process, the STECF proposed to set the legal AR submission deadline (none defined in the DCF 're-cast' Reg. 2017/1004) to mid-May;
2. To organize the results of the evaluation, summarized currently through the 'traffic light table' (compliance level by module) on a MS basis, to a regional basis. The results shown in this way would allow the EWG and other expert groups such as the RCGs to identify issues in the ARs that are common to several MS in the same region, and in doing so, will promote cooperation and coordination at a regional level to solve common problems; and
3. In the future, to increase/improve the collaboration of the EWG with other expert groups, such as the RCGs, not only to ensure that the results of the assessments are properly conveyed to these groups, but also to receive inputs from RCGs that may inform the assessments.

## End-users feedback

### GFCM

The representative of the GFCM Secretariat (Mr. Federico De Rossi, Data Compliance Officer), provided the LM with an update on the recent developments of GFCM, as EU data end user, in the field of fisheries data quality, towards the improvement of compliance assessment.

Explained the newly established online platform of Data Collection Reference Framework (DCRF), for the submission of fisheries data by Contracting Parties and Cooperating non-contracting Parties (CPCs)

On the basis of data quality checks, preliminary feedback reports, on the status of the submitted data by CPCs, including stock assessment for priority species (mid-term strategy 2017-2020), will be released and facilitate the work of the SAC and the CoC of the GFCM in defining quality indicators (possibly in 2018).

## Issues with data calls

### JRC/STECF

#### Fisheries dependent information

An issue of major concern relates to the disconnect between the data aggregations required to address the requests of DG MARE and the aggregations at which the Member States are able to collect data or at which they consider is sensible to provide. The amount and coverage of data does not correspond to the level of detail required. Such discrepancies since the start of the 'Effort' (old-FDI) data calls. It has become more of a problem with the development of the New-FDI data call.

#### Fleet economics

1. Clustering of fleet segments especially i) inconsistent clustering over time; ii) clustering of segments that deploy different fishing techniques; iii) Super- (unnecessary) clustering. Such clustering compromises the economic performance analyses,
2. Missing data for some segments and Member States.
3. Differences between 'value of landings' and 'income from landings'. As the two variables are generally obtained from different sources, it is reasonable that they differ somewhat. However, significant differences (>10%) are still observed in many cases.
4. Questionable 'official' survey data – for example, the over-reporting of cost items and under reporting of income. Some data quality control is needed, i.e., information collected cross validation with other information/sources and/or some form of error-adjustment is used.
5. Logbook data issue. Logbook data are mandatory under the control regulation.
6. There is concern regarding reporting data by vessel length overall (LOA) groups. Such groupings need to match with LOA groups called under the new FDI so that the fleet economic data and FDI databases can be linked.

#### **Mediterranean and Black Sea**

1. Sampling intensity seems to be less than optimal and in some cases is very low.
2. Discard reporting is highly variable from year to year and by métier.
3. Sample size for landings/discards and numbers of samples for age and/or length for some GSAs and species reported as zero or missing for all years. Estimation methods e.g., for landings and discards and for catch-at-age are not well explained or not explained at all.
4. Discrepancies between the landings reported under Med and BS data call and those in the fleet economic data call.
5. Timing of MEDITS survey is not consistent across Member States.
6. In many cases the time series of data is short – for some MS, the time series of data starts in 2007 even though they have been subject to the DCR and DCF since 2002.
7. As for the fleet economic call, some member states do not supply data by vessel length categories.

#### **Regional Databases for RCGs in 2016 and problems identified**

- The regional database is populated through the data calls for RCG Baltic, RCG NS&EA and RCG NA
- This allow for much appreciated development of a new RDB which is something that the RCGs repeatedly have asked for.
- The RCGs more clearly identify their present and future needs in relation to the databases.

#### **Data calls**

- No substantial changes in 2018 data calls
- The GFCM data deadlines are already set through GFCM recommendations and ICCAT is expected for its routine data requirements.

## Governance structure

### RCGs – tentative changes in structure / number of RCGs

For years, the structure and number of RCGs (RCMs at that time) has been debated over the light of improving efficiency and reduction of the number of meetings. This discussion mainly focused on the three 'Northern' groups. At LM 2017, the other groups, RCG LDF, RCG MED and well as RCG LP expressed the wish to remain under the current scope.

For the 'Northern' groups, combining RCG NS&EA and NA seems most obvious, this merge could however not be decided upon at the LM without additional consultation of the groups. Recent pan-regional work in the subgroups clearly indicate that the RCGs are already moving into improved regional cooperation, paving the way for further integration while keeping an eye on specific regional aspects.

Restructuring the RCGs is part of the current MARE/2016/22 call. The RCGs will reconsider the composition of the meetings in the light of the outcomes of the call. Sieto Verver (chair RCG LDF) will ensure reporting specific ideas to the RCGs coming from the call. Apart from merging groups, in the future consideration shall be given to other setups as well.

The current regional scope of RCGs, as defined since LM 2010 remains valid until updated (if needed) in the light of the above mentioned project. The current scope therefore remains:

- the Baltic Sea (ICES areas III b-d), RCG Baltic;
- the North Sea (ICES areas IIIa, IV and VIId), the Eastern Arctic (ICES areas I and II), the ICES Divisions Va, XII & XIV and the NAFO areas. RCG NS&EA;
- the North Atlantic (ICES areas V-X, excluding Va and VIId), RCG NA;
- the Mediterranean Sea and the Black Sea, RCG MED&BS;
- long distance fisheries : regions where fisheries are operated by Community vessels and managed by Regional Fisheries Management Organizations (RFMOs)

**Cooperation of RCGs with other DCF 'groups': cooperation between RCGs; communication with PGECON; role of RCGs in evaluation of National/Regional Reports and establishment of cooperation with STECF**

The group discussed cooperation between RCGs and other groups associated with the DCF. There were no suggestions for further cooperation between the RCGs and the STECF, although there was a strong desire that JRC personnel dealing with handling data calls on behalf of the STECF should participate in RCG meetings together with other end-users of DCF data.

The group noted the good progress being made by the PGECON. The link between biological and economic data is currently on-going and should continue until a solution is found. The group also noted that there are issues related to the small-scale (under 10m) fisheries that still need to be addressed.

The current situation of ad hoc communication between the RCGs and PGECON seems to work reasonably well and as issues arise, there may be a need to request that representatives from RCGs attend meetings of PGECON.

With regard to other DCF-related groups (e.g. PG data PG catch etc), more dissemination of their reports would be useful.

**AOB**

- **Agree on a list of recommendations relating to DCF (that MS will need to report on in their AR2017)**
- **The development of the new RDB**
- **Potential list of recommended meetings for 2018 as guidance for MS**

The LM did not discuss potential meetings where it is expected MSs experts participate.

The Mediterranean and Black Sea MSs are participating in relevant GFCM and other meetings relevant for Data collection.

- **Requested outcomes of the RCGs: list of scientific surveys. Table 1A of WP**

An overview of scientific surveys from RCG NS&EA, RCG Baltic and RCG NA was presented.

- **SmartDots, a tool for age-reading and maturity workshops & exchanges (replacement of WebGr).**

- **Landing obligation (Discuss main issues that came out of the RCGs)**

The LM considered that no additional information to the information given in the various RCG report could be added. The implementation of the landing obligation is a challenge when running scientific observers programmes as fishers might refuse to carry observers onboard as they may see illegal discarding or may record information that might conflict with the recordings in the official logbook or landing declaration. At present, there is not yet sufficient information to be able evaluate whether observer data are biased.

**Thank you for your attention!**



## PRESENTATION 2 BY ALESSANDRO LIGAS

**TITLE: Strengthening Regional cooperation in the area of fisheries biological data collection in the Mediterranean and Black Sea, STREAM (SI2.770115)**



Call for Proposals MARE/2016/22 "Strengthening regional cooperation in the area of fisheries data collection", Annex 1 "Biological data collection in EU waters"

***Strengthening Regional cooperation in the area of fisheries biological data collection in the Mediterranean and Black Sea, STREAM (SI2.770115)***

**RCG Med&BS, 17-21 September 2018, Kavala**

***Project Coordinator: Alessandro Ligas (ligas@cibm.it)***



STREAM is one of the four grants funded under the EU Call for Proposals MARE/2016/22 "Strengthening regional cooperation in the area of fisheries data collection".

Building on the previous Call for Proposals (MARE/2014/19), the Call MARE/2016/22 is aimed at further supporting projects to enable Member States to build up experience in new areas of regional (and EU wide) cooperation.



MARE/2016/22

### MAIN OBJECTIVES

Building on the experience from the grants MARE/2014/19 Med&BS and FishPi, STREAM intends to provide elements, tools and expertise that will promote and support the design of Multiannual Regional Work Programmes (MRWP) in the Mediterranean and Black Sea relying on a common and harmonized design.

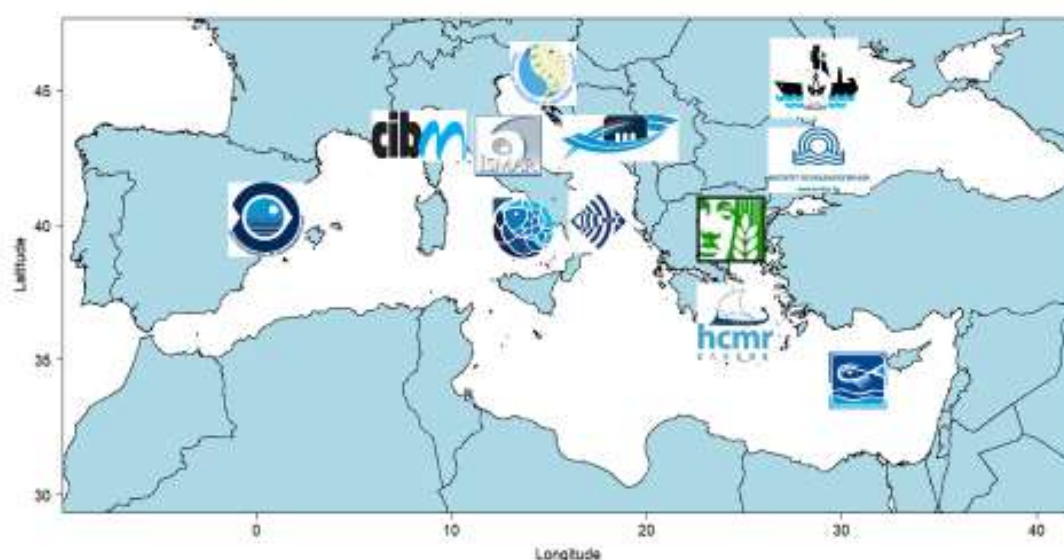
The MRWP will include a regional sampling scheme covering commercial fisheries, impacts on the ecosystem (i.e., community indicators, trophic ecology, bycatch), and procedures for quality assessment of biological data at regional level.

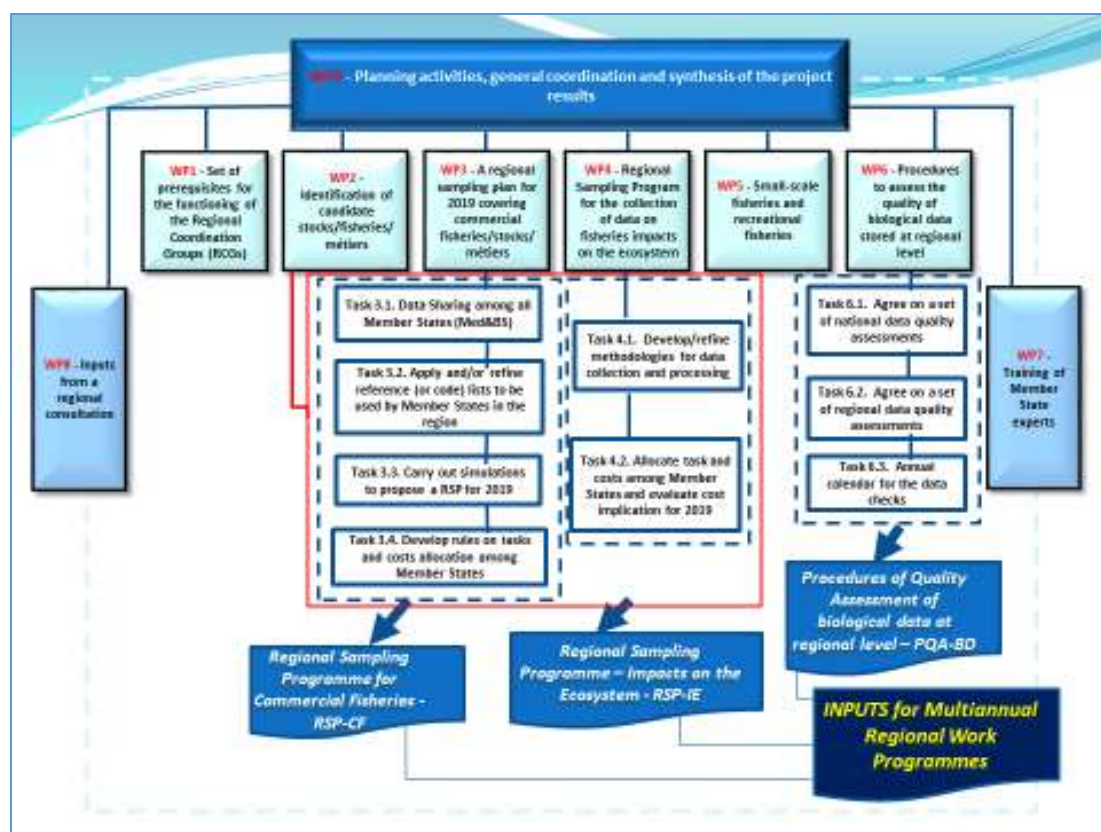
STREAM will provide tools (e.g. routines, R scripts, methodological approaches, etc.) useful to the improvement of data precision, completeness and accuracy.



MARE/2016/22

### Project Consortium: 12 Partners from 8 countries





MARE/2016/22

### WP2 – Identification of candidate stocks/fisheries/métiers presenting a wide scope for regional sampling and for which Member States could share sampling tasks

Chair: Marina Panayotova (IO-BAS); Co-chair: Giuseppe Scarcella (CNR-ISMAR)

Partners Involved: IO-BAS, CNR-ISMAR, CIBM, COISPA, NISEA, HCMR, IEO, IOF, NIMRD, REVIVO

WP2 was aimed at identifying the most important stocks and fisheries (métiers), beneficial for regional sampling, for which Member States could share sampling tasks.

The most important target species, fisheries and métiers were identified by using a ranking system, which takes into account a 75% threshold of the cumulative value and volume of landings in the period 2013-2015, following the approach used under the framework of the STECF EWG 15-19.

The selection of candidate stocks took also into account their status in terms of overexploitation assessed in the framework of relevant working groups (GFCM and STECF). The selection of such stocks was based on high ratios of  $F/F_{MSY}$  (e.g.  $> 1.66$ ).

| MARE/2016/22                  |                  |                          |                                 |                                                                                                               |
|-------------------------------|------------------|--------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------|
| Area                          | GSA's            | Countries                | Fisheries                       | Species                                                                                                       |
| Western Mediterranean         | 1, 2, 5, 6, 7, 8 | Spain, France            | DEMSP_OTB, LLS                  | <i>M. merluccius</i> (HKE)<br><i>P. longirostris</i> (DPS)                                                    |
| Western Mediterranean         | 9, 10, 11        | Italy                    | DEMSP_OTB, MDDWSP_OTB, LLS, GNS | <i>M. merluccius</i> (HKE)<br><i>P. longirostris</i> (DPS)<br><i>N. navagius</i> (NEP)                        |
| Western Mediterranean         | 1, 2, 5, 6       | Spain                    | DWSP_OTB                        | <i>A. antennatus</i> (ARA)                                                                                    |
| Western Mediterranean         | 9, 10, 11        | Italy                    | DWSP_OTB, MDDWSP_OTB            | <i>A. antennatus</i> (ARA)<br><i>A. filineus</i> (ARS)                                                        |
| Western Mediterranean         | 1, 2, 5, 6, 7    | Spain, France            | SPF_PS                          | <i>E. encrasicolus</i> (ANE)<br><i>S. pilchardus</i> (PIL)                                                    |
| Western Mediterranean         | 9, 10, 11        | Italy                    | SPF_PS                          | <i>E. encrasicolus</i> (ANE)<br><i>S. pilchardus</i> (PIL)                                                    |
| Adriatic Sea                  | 17, 18           | Italy, Croatia, Slovenia | DEMSP_OTB                       | <i>M. merluccius</i> (HKE)<br><i>M. barbana</i> (MUT)<br><i>N. navagius</i> (NEP)<br><i>Solea solea</i> (SOL) |
| Northern Adriatic             | 17               | Italy, Croatia, Slovenia | DEMSP_TTB, DEMSP_GNS            |                                                                                                               |
| South Adriatic and Ionian sea | 18, 19, 20       | Italy, Greece            | DEMSP_OTB, DWSP_OTB, MDDWSP_OTB | <i>P. longirostris</i> (DPS)<br><i>A. antennatus</i> (ARA)                                                    |
| Adriatic Sea                  | 17, 18           | Italy, Croatia, Slovenia | SPF_PS, SPF_FTM                 | <i>E. encrasicolus</i> (ANE)<br><i>S. pilchardus</i> (PIL)                                                    |
| Strait of Sicily              | 15, 16           | Italy, Malta             | DWSP_OTB, DEMSP_OTB, MDDWSP_OTB | <i>M. merluccius</i> (HKE)<br><i>P. longirostris</i> (DPS)<br><i>A. filineus</i> (ARS)                        |
| Eastern Mediterranean         | 22, 23, 25       | Greece, Cyprus, Italy    | DWSP_OTB, DEMSP_OTB             | <i>M. merluccius</i> (HKE)<br><i>A. filineus</i> (ARS)<br><i>M. barbana</i> (MUT)                             |
| Black Sea                     | 29               | Bulgaria, Romania        | DEMSP_GNS, MDPSP_GNS            | <i>S. mactans</i> (TUR)                                                                                       |
| Black Sea                     | 29               | Bulgaria, Romania        | MDPSP_OTM, MDPSP_FPN, SPF_GNS   | <i>M. barbana</i> (MUT)                                                                                       |
| Black Sea                     | 29               | Bulgaria, Romania        | SPF_OTM                         | <i>S. sprattus</i> (SPR)                                                                                      |

The results of WP2 were presented in the deliverable D2.1 "Identification of the most important stocks at regional level and relative fleets (métiers)".



MARE/2016/22

## WP4 – Regional Sampling Program for the collection of data on fisheries impacts on the ecosystem

Chair: Beatriz Guijarro (IEO); co-chair: Paolo Sartor (CIBM)

Partners involved: IEO, CIBM, COISPA, CNR-ISMAR, NISEA, HCMR, FRI, DFMR, IOF, IO-BAS, NIMRD, REVIVO.

**Main objective:** To elaborate a MRWP covering the collection of data on fisheries impacts on the ecosystem

1. Data on stomach contents of fish.
2. Data on co-occurrence and relative abundance of species/stocks.
3. Data on incidental catch and by-catch of non-target species, such as protected, endangered or threatened species (PET species).

**Specific objectives:**

- Identify areas of regional cooperation for the implementation of the regional sampling plan on fisheries impact on the ecosystem.
- Develop or refine methodologies for data collection, processing and raising and propose solutions for data storage at regional level.
- Allocate among Member States the tasks for the collection and analysis of these data, and assess cost implications

**Data on stomach contents of fish (B. Guijarro, IEO)**

The starting point is represented by the outcomes of the MARE/2014/19 Med&BS project (Strengthening regional cooperation in the area of fisheries data collection in the Mediterranean and Black Sea), which proposed a protocol for the collection and analysis of stomach content data in European hake and turbot.

STREAM is also cooperating with the **Workshop on sampling, processing and analyzing the stomach contents (WKSTCON)**, which was held in Palma de Mallorca (Spain, 24-27 April 2018), and chaired by Beatriz Guijarro and Maria Vallis (IEO).

The WP4 team is now working on a proposal to be applied to the stocks/fisheries identified by WP2, taking into account the preliminary results of the pilot studies on European Hake in the Med and turbot in the Black Sea, as well as the outputs and recommendations from WKSTCON.

**ToRs of WKSTCON:**

- Review of methodologies used in the stomach content analysis, with special relevance to the volumetric method.
- Dietary indices and their interpretation.
- Data analysis at species, multispecies and ecosystem levels.
- Complementary methodologies (stable isotopes, condition index, fatty acids)
- Proposal of a common sampling methodology at Med&BS level.

24 participants from 8 countries: Bulgaria, Croatia, France, Greece, Italy, Slovenia, Spain and United Kingdom



***Review of methodologies***

- Volumetric method
- Gravimetric method
- Numerical method
- ICES methodology
- Stable isotopes
- Fatty acids and lipids

***Data analysis at species, multispecies and ecosystem levels***

- How to measure and compare diets
- Trophic levels
- Stable isotopes
- Condition factors
- Fatty acids and lipids
- Trophodynamic and ecosystem models: ISOWEB, ATLANTIS, NICHEOVER, Ecopath

**Seven case studies were presented and discussed during WKSTCON**



***Data on incidental catch of non target species, such as protected, endangered or threatened species (P. Sartor, CIBM)***

The methodological approach developed under the project MARE/2014/19 Med&BS will be reviewed and updated. An analysis of pros and cons of the approach will be performed, also taking advantage of the preliminary results that will come from the pilot studies carried out under the MSs work plans.

Contacts have already been started with experts from GFCM working on the implementation of a monitoring program on the incidental catch of vulnerable species. Further cooperation will be put in place with the relevant experts and WPs working in the FishPi<sup>2</sup> project.

The new programme on data collection of incidental by catch will be designed also with the aim of supporting evaluation of possible mitigation measures to minimize the unwanted catches. New handbooks and guidelines for the data collection and identification of PET species, for on-board observers and self-sampling will be prepared.



#### **Outcomes**

- Stomach contents: summary of pros and cons of the different methods
- Comparison with other methods: stable isotopes and fatty acid analysis
- Common sampling methodology updating MARE/2014/19 Med&BS results

#### **Recommendations**

- Establish a permanent WKSTCON (reporting to WKBIOP, ACCOM, GFCM, RCGMed&BS) to meet every two years from 2019
- Pilot studies based on samples from surveys
- Create a reference collection (tool or database)
- Need of human resources to carry out the sampling and data analysis
- Mailing list of experts



### **WP5 – Small-scale fisheries and recreational fisheries**

**Chair: Fabio Grati (CNR-ISMAR); co-chair Jakov Dulčić (IOF)**

**Partners involved: CNR-ISMAR, IOF, CIBM, COISPA, NISEA, FRI, DFMR, IEO, IO-BAS, NIMRD, REVIVO**

WP5 will evaluate the availability, quality and existing gaps of transboundary data for SSF and RF, taking into account four Case Studies (CSs): Adriatic Sea, Aegean Sea, north-western Mediterranean Sea, and Black Sea.

WP5 will formulate guidelines for the collection of data concerning the spatial distribution of the fishing effort for the two sectors (best practice methodologies for sampling, processing, analysing and managing biological and spatial data of SSF and RF).

WP5 chair attended the ICES Working Group on Recreational Fisheries Surveys (WGRFS, Faro, Portugal, 11-15 June 2018). Three projects funded under the Call MARE/2016/22 (STREAM, FishPi2 and SECFISH) were presented in plenary session by the respective WP leaders. This was a unique occasion to share common views and agree on a strict collaboration for the projects implementation during the upcoming months. A summary of STREAM project will be included in the WGRFS 2018 report.



MARE/2016/22

### WP8 - Inputs from a regional consultation

Chair: G. Lembo (COISPA); co-chair V. Raykov (IO-BAS)

Participants: CIBM, COISPA, CNR-ISMAR, NISEA, HCMR, FRI, IEO, DFMR, IOF, IO-BAS, NIMRD, REVIVO

**Objectives:**  
 Consultation with Member States (either involved in the project or not) on the outcomes achieved from WP1 to WP6.

Consultations have been established with:

- ✓ National Correspondents (NC) of all Member States. Progress of the project (deliverables, workshops, relevant milestones) will be communicated through the sharepoint and an alert message;
- ✓ In the case of Black Sea, the involvement of Turkish experts will also allow establishing consultations with non-EU Countries;
- ✓ Web meetings will be organized requesting a feedback on the documentation to NCs.
- ✓ In the final stage a face-to-face meeting will be organized with all the NCs, project partners and end users.

*This WP is interacting with all WPs and especially with WP0 and WP7*

## PRESENTATION 3 BY VENETIA KOSTOPOULOU

**TITLE: Updates on EU DCF legal framework**



# Updates on EU DCF legal framework

**DG MARE, Unit C3**



## DCF legal framework Upcoming issues

### Annual report template EU-MAP revision



## Adoption of the new AR Template

### Overview of work since EWG 17-07 on AR 2016 evaluation:

- new DCF requires that the AR Template is adopted through a COM Implementing Act (art 11(1) of the DCF Regulation)
- development of a new AR Template: EWG 17-17 (content and automation recommendations for the AR) and technical meeting of February 2018
- presentation of the AR template at NC meeting of 21/02 – comments by March
- AR and Guidance finalised and sent to MS for submission of 2017 ARs on 14 March
- the template: under adoption end August



## **EU-MAP update** **(COM Implementing Decision 2016/1251)**

- current EU-MAP is in force until 2019. Opportunity to further refine EU-MAP content and align it with the new EMFF.

COM will work in a 2 step approach during 2019-2020:

Step 1. extension of EU-MAP

Step 2. revision of EU-MAP

+ Work Plan template to follow soon after the EU-MAP contents have been stabilised



## **EU-MAP update** **(COM Implementing Decision 2016/1251)**

Details on the COM 2 step approach:

Step 1. extension of EU-MAP:

- for one/two years (by 2021)
- No change of substance versus current EU-MAP; no consultations
- COM needs, as per the new DCF Regulation 2017/1004, to split the EU-MAP text into a COM Delegated Act (EP and Council scrutiny on biological, environmental and socio-economic data) and a COM Implementing Act (thresholds for data collection and list of surveys)
- Aim to adopt the COM Delegated and Implementing act during 2019.



## **EU-MAP update** **(COM Implementing Decision 2016/1251)**

Details on the COM 2 step approach:

*Step 2. revision of EU-MAP:*

- **as of next year, in parallel with the work on extension, launch of consultations with RCGs, PGECON, MS etc on EU-MAP contents**
- **organise specific EWG on surveys list revision and overall on EU-MAP revision**
- **aim to preserve the core requirements of EU-MAP + make adjustments on a case by case basis + work on pilot studies to convert them into data collection**
- **hope to be able to adopt the new EU-MAP (COM Delegated Act and COM Implementing Act) in 2020**

*- Work Plan template (COM Implementing Decision) to follow soon after the EU-MAP contents have been stabilised*



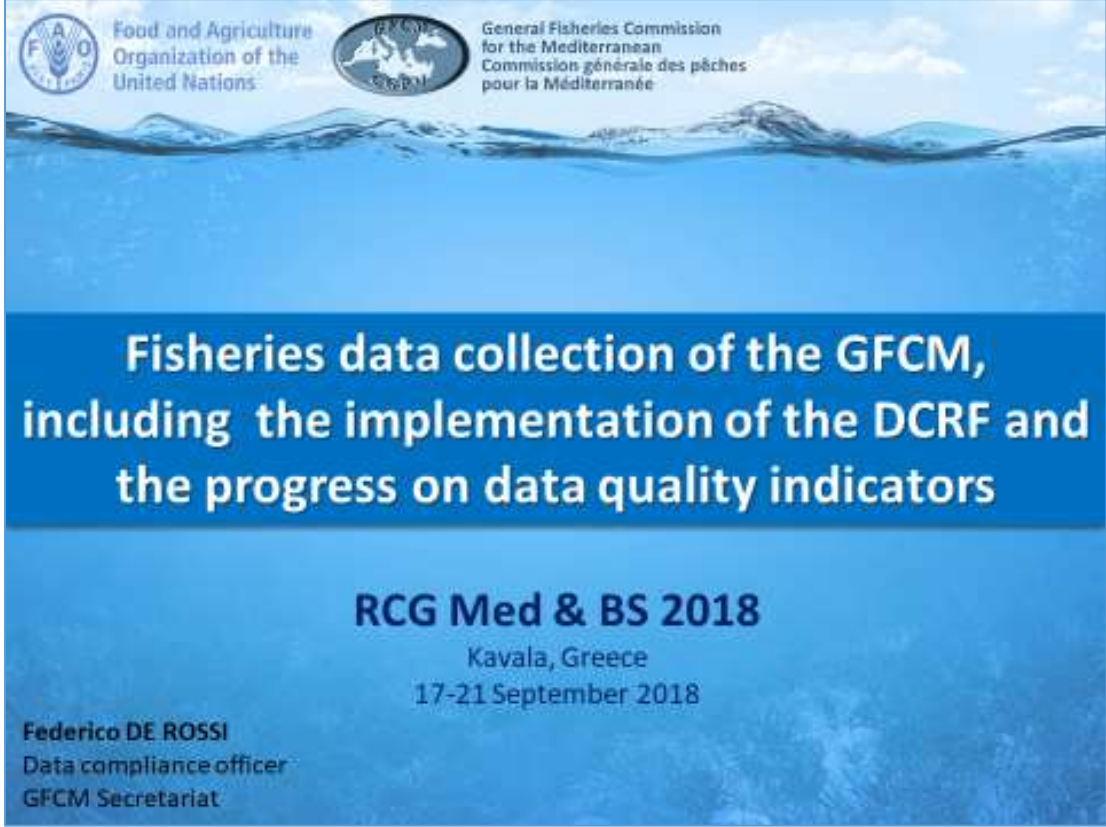
## **RCG role in EU-MAP revision**

RCGs are requested to:

- **already discuss data needs at regional level which will need to be included in the future EU-MAP (will not include needs which can be defined at regional level)**
- **reply to the consultation on the EU-MAP: RCGs will receive a consultation document to reply to beginning of next year and finalise it during the next meeting in June 2019**
- **be flexible and proactive (organise themselves and produce clear, concise, well-argued documents) to facilitate the EU-MAP revision, considering the tight adoption schedule**

## PRESENTATION 4 BY FEDERICO DE ROSSI

**TITLE: Fisheries data collection of the GFCM, including the implementation of the DCRF and the progress on data quality indicators.**



Food and Agriculture Organization of the United Nations

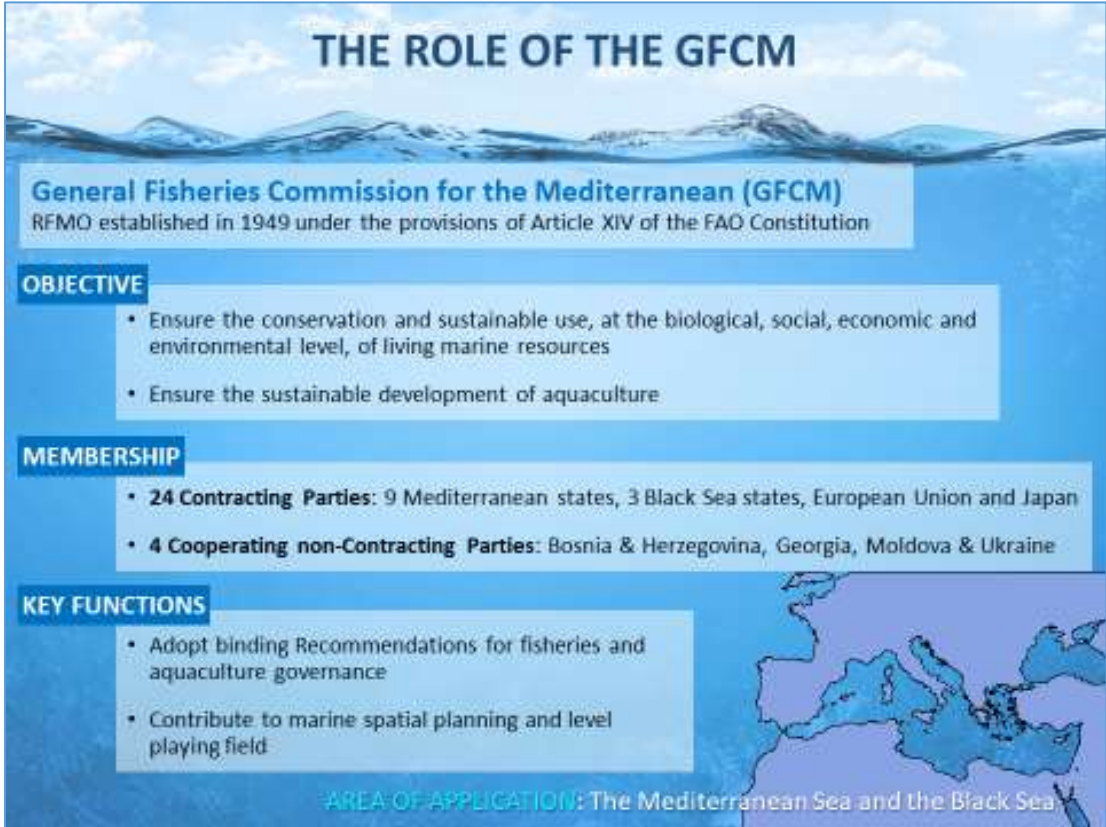
General Fisheries Commission for the Mediterranean  
Commission générale des pêches pour la Méditerranée

# Fisheries data collection of the GFCM, including the implementation of the DCRF and the progress on data quality indicators

## RCG Med & BS 2018

Kavala, Greece  
17-21 September 2018

Federico DE ROSSI  
Data compliance officer  
GFCM Secretariat



## THE ROLE OF THE GFCM

**General Fisheries Commission for the Mediterranean (GFCM)**  
RFMO established in 1949 under the provisions of Article XIV of the FAO Constitution

**OBJECTIVE**

- Ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of living marine resources
- Ensure the sustainable development of aquaculture

**MEMBERSHIP**

- **24 Contracting Parties:** 9 Mediterranean states, 3 Black Sea states, European Union and Japan
- **4 Cooperating non-Contracting Parties:** Bosnia & Herzegovina, Georgia, Moldova & Ukraine

**KEY FUNCTIONS**

- Adopt binding Recommendations for fisheries and aquaculture governance
- Contribute to marine spatial planning and level playing field

**AREA OF APPLICATION:** The Mediterranean Sea and the Black Sea

## GFCM - COLLECTION OF DATA IN SUPPORT OF ADVICE

### IMPORTANCE OF THE FISHERIES DATA

A strong and well established collection and submission of fisheries data in the GFCM area of application allows to provide comprehensive, reliable and timely information in support of the GFCM decision making process, based on scientific advice as formulated by its relevant subsidiary bodies.

GFCM receives data from Mediterranean and Black Sea states through different channels:

- In reply to existing [GFCM Recommendations](#) (compulsory)
- Through [national reports](#) to the Scientific Advisory Committee on Fisheries (SAC) and the Working Group of the Black Sea (WGBS)
- Through [Stock Assessment Forms](#) (SAFs)

## DATA COLLECTION REFERENCE FRAMEWORK (DCRF)

Sound data collection for scientific-based management

A new, comprehensive framework for the collection and submission of fisheries-related data, the GFCM Data Collection Reference Framework (**DCRF**), collecting data on: [Catch](#), [Incidental catch of vulnerable species](#), [Fishing fleet](#), [Fishing effort](#), [Socio-economics](#), [Biological information](#)



The [DCRF manual](#) (English and French) in support of the Contracting Parties and Cooperating non-contracting Parties (CPCs) of the GFCM to comply with existing data requirements through the provisions of indications

## DCRF ONLINE PLATFORM



The **DCRF online platform** for the data reporting of CPCs to the GFCM in line with the requirements of the following GFCM decisions:

- Rec. GFCM/41/2017/6 (submission of data on fishing activities)
- Rec. GFCM/33/2009/5 (Fleet register)
- Rec. GFCM/33/2009/6 (Authorized vessels)
- Rec. GFCM/30/2006/2 (Dolphin fish fisheries)
- Rec. GFCM/36/2012/1 (Red coral)

*The related transmission tools for the data as requested by other GFCM decisions will be progressively put at the disposal of CPCs on the DCRF online platform*

## GFCM ASSESSMENT OF COMPLIANCE

As an RFMO, the process of assessing compliance with existing recommendation is very formal and complex. To this end a dedicated **Compliance Committee** (CoC) works on annual basis. Non-compliance have implications at the level of national administrations: letter of identification submitted to national authorities. Countries request to have some time – Compliance is only assessed two years after recommendations are adopted

Before DCRF, compliance on data submission difficult to assess, also process slow and not useful in the context of provision of advice in support of management.

In 2016, as a part of the process to implement the DCRF, the introduction of tentative **data quality indicators** was agreed by the CoC; once consolidated, these will allow to have a comprehensive assessment of yearly submitted data

In 2017, the **41<sup>st</sup> session of the GFCM Commission** agreed to apply conformity, stability and consistency indicators for quality checks (with preliminary thresholds) to the data as communicated in 2017 by those CPCs that chose to comply with the temporary Recommendation GFCM/40/2016/2 on the progressive implementation of data submission in line with the DCRF

## DATA ON FISHING ACTIVITIES: IMPLEMENTATION OF QUALITY INDICATORS

In 2017 some preliminary quality controls (completeness and conformity) were directly embedded in the **Excel data reporting forms** on the **DCRF online platform** which were used by those CPCs that followed **Rec. GFCM/40/2016/2**.

At the beginning of 2018, a **pilot phase** on the tentative application of fisheries quality indicators such as timeliness, completeness, conformity (with preliminary thresholds for different data variables), stability (with preliminary threshold equals to 50%) and consistency was initiated by the GFCM Secretariat directly on the **DCRF online platform** by leveraging **specific R packages**.

In April 2018 **Rec. GFCM/41/2017/6** on the submission of data on fishing activities in the GFCM area of competence has entered into force thus repealing the Task 1 Statistical Matrix

At the 20<sup>th</sup> Session of the **Scientific Advisory Committee on Fisheries** (SAC), June 2018, the methodology used, including the list of thresholds, as well as the preliminary results of the pilot phase were presented, highlighting a number of issues, including inconsistencies in the data submitted by various CPCs.

## DATA ON FISHING ACTIVITIES: PILOT PHASE ON APPLICATION OF QUALITY INDICATORS

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PURPOSE:</b>    | Preliminary scientific assessment of the fisheries data                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>DATA:</b>       | Fisheries data for the reference year 2016 in line with temporary Recommendation GFCM/40/2016/2                                                                                                                                                                                                                                                                                                                                                                       |
| <b>CPCs:</b>       | CPC who transmitted their national data for the two reference years 2015 and 2016 through the DCRF online platform (Algeria, Cyprus, France, Italy, Lebanon, Malta, Romania, Slovenia, Spain, Turkey)                                                                                                                                                                                                                                                                 |
| <b>INDICATORS:</b> | <u>Timeliness</u> (number of days after the deadline),<br><u>Completeness</u> (% of issues on the selection GSA-segment, selection of species and mandatory fields),<br><u>Conformity</u> (% of data rows with anomalous values in terms of format and codifications),<br><u>Stability</u> (% of data rows with values outside the expected range for each data table over time),<br><u>Consistency</u> (number of incoherent values throughout relevant data tables) |

## DATA ON FISHING ACTIVITIES: PILOT PHASE ON APPLICATION OF QUALITY INDICATORS

### THRESHOLDS:

**Conformity**  
(the list of preliminary thresholds which were used for the preliminary analysis is reported in the threshold table by variable and data table),

**Stability**  
(for testing purposes the applied threshold is equal to 50% for all the data variables)

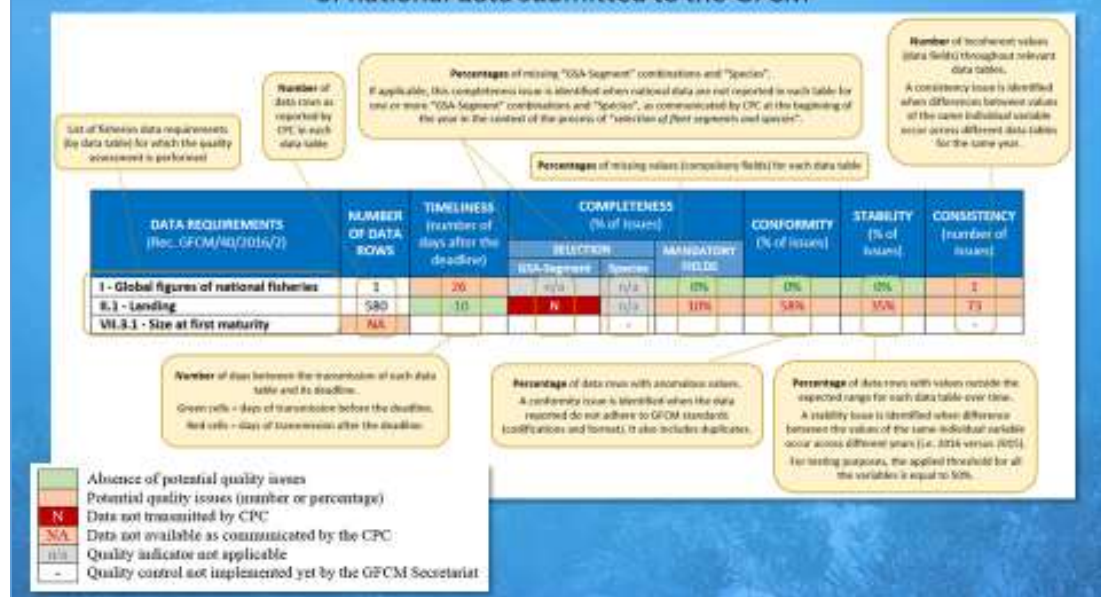
| DATA TABLE                                                    | DATA TABLE NAME                                                                 | MIN | MAX            |
|---------------------------------------------------------------|---------------------------------------------------------------------------------|-----|----------------|
| I - Global figures of national fisheries                      | Number of active vessels                                                        | 0   | 20 000         |
|                                                               | Total landing                                                                   | 0   | 400 000        |
|                                                               | Total capacity (GT)                                                             | 0   | 2 000 000      |
|                                                               | Total engine power (KW)                                                         | 0   | 1 200 000      |
| II 1 - Landing data (by GSA-Segment)                          | Number of active vessels                                                        | 0   | 5 000          |
|                                                               | Total landing (in tonnes)                                                       | 0   | 90 000         |
|                                                               | Total landing (in tonnes per species)                                           | 0   | 30 000         |
| II 2 - Catch data per species (by GSA-Segment)                | Total discards (in tonnes per species (if any))                                 | 0   | 7 000          |
|                                                               | Total catch (in tonnes per species)                                             | 0   | 10 000         |
|                                                               | Total number of individuals caught                                              | 0   | 1 000          |
|                                                               | Total weight of individuals caught (if available)                               | 0   | 300            |
| III - Incidental catch of vulnerable species (by GSA-Segment) | Number of individuals retained alive (if available)                             | 0   | 10             |
|                                                               | Number of dead individuals (if available)                                       | 0   | 200            |
|                                                               | Number of individuals retained to different sizes (if available)                | 0   | 1 000          |
| IV 1 - Effort data (by GSA-Segment)                           | Capacity - Value                                                                | 0   | 6 000 000      |
|                                                               | Activity - Value                                                                | 0   | 250 000        |
|                                                               | Number of active vessels                                                        | 0   | 5 000          |
|                                                               | Normal effort (by fleet segment capacity & activity)                            | 0   | 10 000 000 000 |
| IV 2 - Effort data per fishing gear (by GSA)                  | Fishing days (by fishing gear)                                                  | 0   | 110 000        |
|                                                               | Normal effort (capacity value)                                                  | 0   | 6 000 000      |
| IV 3 - Effort data (CPUE) (by GSA)                            | Normal effort (effort value)                                                    | 0   | 250 000        |
|                                                               | CPUE                                                                            | 0   | 0              |
|                                                               | Normal effort (capacity & activity)                                             | 0   | 10 000 000 000 |
| V 1 - Economic and social data (by GSA-Segment)               | Capacity (gross tonnage)                                                        | 0   | 100 000        |
|                                                               | Capacity (engine power)                                                         | 0   | 150 000        |
|                                                               | Number of active vessels                                                        | 0   | 5 000          |
|                                                               | Total landing value                                                             | 0   | 10 000 000 000 |
|                                                               | Total days at sea                                                               | 0   | 150 000        |
| VII 2 - Length data (by GSA)                                  | Length                                                                          | 0.5 | 2 000          |
|                                                               | Number of individuals measured (per length classes)                             | 0   | 10 000         |
|                                                               | Weight of individuals sampled (per length classes (kg))                         | 0   | 20 000         |
|                                                               | Number of individuals sampled (per length classes)                              | 0   | 7 000 000 000  |
| VII 3.1 - Sex at first maturity (by GSA)                      | Sex                                                                             | 0   | 99 999         |
|                                                               | Length                                                                          | 0.5 | 2 000          |
|                                                               | Number of individuals measured (per length classes, sex and maturity stage)     | 0   | 9 000          |
| VII 3.2 - Maturity data (by GSA)                              | Weight of individuals sampled (per length classes, sex and maturity stage (kg)) | 0   | 20 000         |
|                                                               | Number of individuals sampled (per length classes, sex and maturity stage)      | 0   | 7 000 000 000  |
|                                                               | Length data                                                                     | 0   | 1 000          |
|                                                               | Number of fisheries                                                             | 0   | 500            |
|                                                               | Fishing days                                                                    | 0   | 100            |
| VIII - Summary and                                            | Average number of "gear sets" per day per fisherman                             | 0   | 110            |
|                                                               | Total catch of silver eel                                                       | 0   | 100 000        |
|                                                               | Total catch of yellow eel                                                       | 0   | 10 000         |
|                                                               | Total catch of glass eel                                                        | 0   | 1 000          |

## WORKFLOW OF ONLINE DATA SUBMISSIONS AND QUALITY CONTROLS



# DATA ON FISHING ACTIVITIES: IMPLEMENTATION OF QUALITY INDICATORS

Structure of the summary table on preliminary quality assessments  
of national data submitted to the GFCM



## NEXT STEPS

The 20<sup>th</sup> Session of the SAC (June 2018), suggested extending the feasibility phase for the implementation of quality indicators (timeliness, completeness, conformity, stability and consistency) to data transmitted by all CPCs through the DCRF online platform, in line with Recommendation GFCM/41/2017/6, stressing the need to contact relevant CPCs in order to try to overcome potential issues in data quality.

The 42<sup>th</sup> Session of the Commission (GFCM), 22-26 October 2018, will take a final decision about the next steps to be undertaken on the data quality process with the DCRF online platform.

The DCRF online platform will be then further enhanced through the release of dedicated sections for sharing the results of the application of fisheries data quality indicators with concerned CPCs.

All the GFCM fisheries data submissions procedures which are currently not under the DCRF online platform, will be progressively standardized for their final inclusion on the platform itself and the DCRF manual, the GFCM tool in support of CPCs for data collection and submission, will be updated accordingly.



Food and Agriculture  
Organization of the  
United Nations



General Fisheries Commission  
for the Mediterranean  
Commission générale des pêches  
pour la Méditerranée

# THANKS FOR YOUR KIND ATTENTION

**Federico DE ROSSI**  
Data compliance officer  
GFCM Secretariat

**PRESENTATION 5 BY FEDERICO DE ROSSI**

**TITLE: GFCM manuals on data collection methodologies.**



Food and Agriculture  
Organization of the  
United Nations



General Fisheries Commission  
for the Mediterranean  
Commission générale des pêches  
pour la Méditerranée

# GFCM manuals on data collection methodologies

**RCG Med & BS 2018**

Kavala, Greece

17-21 September 2018

Federico DE ROSSI  
Data compliance officer  
GFCM Secretariat

## Guidelines for relevant mid-term strategy data collection activities



**Vulnerable species**



**Surveys at sea**

### Discards



### Recreational fisheries



### OBJECTIVE

Harmonized methodological framework for data collection that would be applicable to the realities of different countries (Mediterranean and Black Sea) and would enable the comparison of data at a regional level.

## Bycatch handbooks

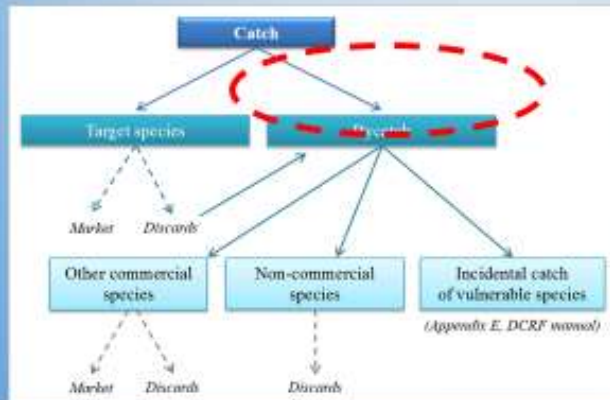


Vulnerable species

Discards

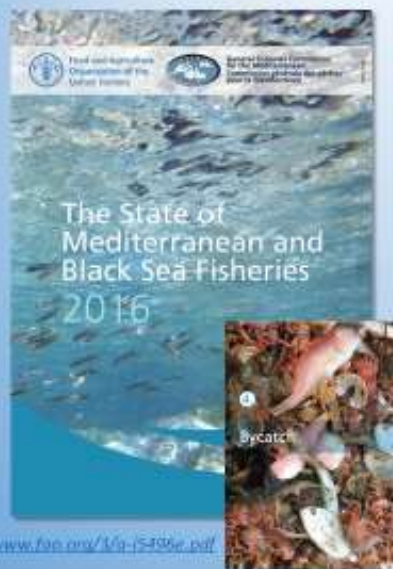


The term “bycatch” is widely used to refer that part of the catch ‘unintentionally’ captured during a fishing operation, in addition to target species, and consisting of **discards** and **incidental catches of vulnerable species** with or without commercial value.



**Bycatch** is defined as a subset of bycatch, which includes species that for some reason are considered vulnerable (i.e. long-lived vertebrates with low reproductive rates such as marine mammals, sea turtles, seabirds and elasmobranchs).

Source (DCRF, 2018) [www.fao.org/gfcm/data/dcrf](http://www.fao.org/gfcm/data/dcrf)



<http://www.fao.org/3/a-i5496e.pdf>

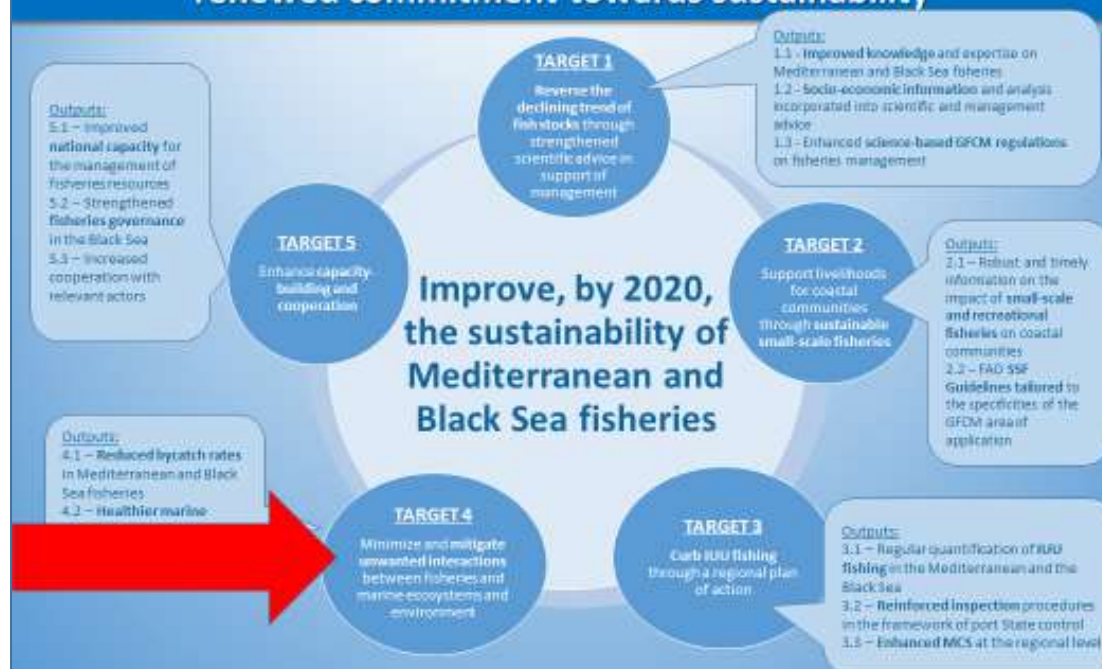
## SoMFi, 2016

Bycatch is considered one of the most important threats to the profitability and sustainability of fisheries, and as such has been recently attracting the attention of most regional fisheries management organizations (RFMOs) and other fisheries management bodies.

## The importance of collecting information on the bycatch

- As confirmed by the SoMFi 2016 and by the first draft of the Regional Review (under finalization), there are important gaps in the knowledge of the actual extent of bycatch in the Mediterranean and the Black Sea.
- Incidental captures of vulnerable species, as well as discards, are serious issues hampering the sustainability of fishery activities in the GFCM area of application.
- Data collection has never been standardised in the Mediterranean: subsequently, it is very difficult to compare quantitative data and understand impact
- Need to expand incidental catch surveys and standardize practices in order to compare fisheries, as well as test potential methods and eventual mitigation tools.

## The Mediterranean and Black Sea strategy: renewed commitment towards sustainability



## GFCM mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries

### TARGET 4: MINIMIZE AND MITIGATE UNWANTED INTERACTIONS BETWEEN FISHERIES AND MARINE ECOSYSTEMS AND ENVIRONMENT

#### Output 4.1: Reduced bycatch rates in Mediterranean and Black Sea fisheries

The implementation of a **bycatch monitoring programme**.....

This programme is expected to obtain representative data on both the **discard component** of total bycatch in Mediterranean and Black Sea fisheries, as well as information on the **incidental catch of vulnerable species** that could occur during sampled fishing operations, with a view to facilitating the adoption of required management measures towards the reduction of bycatch rates.

## Objectives



The main **objective** of both these protocols is to develop and implement an efficient and standardized data collection and monitoring system for discards and vulnerable species in the Mediterranean and Black Sea fisheries through:

- providing minimum standards for the collection of data including sampling approaches and methods (e.g. data sources, selection of vessels, species, stratification, mandatory and optional variables, etc.)
- standardizing the data to be reported, including the forms to be used to allow repeatability and comparison between fisheries in the region.

## Methodologies



Both projects intend to rely on three types of approaches to fulfill the objectives:

1. First, bycatch can be sampled through at-sea monitoring of commercial catches (**by observers on board**).
2. The second approach is to conduct direct dialogues with fishers (**by interviews/questionnaires**), collecting also perspectives on the bycatch issue, which is meant to complement the on board observations data analyses, and to provide an integrated approach toward management.
3. The third one (**by self-sampling**) was intended to test a method for fishers to sample their own bycatch in order that surveys could be made more representative of the whole fleet segment without having to have too many observers.

## Methodologies



| Vessel groups |   |                                    | Length classes (LOA) |          |         |        |
|---------------|---|------------------------------------|----------------------|----------|---------|--------|
|               |   |                                    | < 6 m                | 6 - 12 m | 12-24 m | > 24 m |
| Polyvalent    | P | Small-scale vessels without engine |                      |          |         |        |
|               |   | Small-scale vessels with engine    |                      |          |         |        |
|               |   | Polyvalent vessels                 |                      |          |         |        |
| Seiners       | S | Purse seiners                      |                      |          |         |        |
|               |   | Tuna seiners                       |                      |          |         |        |
| Dredgers      | D | Dredgers                           |                      |          |         |        |
| Trawlers      | T | Beam trawlers                      |                      |          |         |        |
|               |   | Pelagic trawlers                   |                      |          |         |        |
|               |   | Trawlers                           |                      |          |         |        |
| Longliners    | L | Longliners                         |                      |          |         |        |

## Methodologies

### Priority species by subregion

**Group 1:** Species that drive the fishery and for which assessment is regularly carried out

| GFCM subregions ▶         |                                    |                  | Western Mediterranean Sea                      | Central Mediterranean Sea            | Adriatic Sea                                                          | Eastern Mediterranean Sea                                            | Black Sea                                                          |
|---------------------------|------------------------------------|------------------|------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------|
| GSAs ▶                    |                                    |                  | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11              | 12, 13, 14, 15, 16, 18, 20, 21       | 17, 19                                                                | 22, 23, 24, 25, 26, 27                                               | 28, 29, 30                                                         |
| Countries ▶               |                                    |                  | Algeria, France, Italy, Monaco, Morocco, Spain | Italy, Greece, Libya, Malta, Tunisia | Albania, Bosnia and Herzegovina, Croatia, Italy, Montenegro, Slovenia | Cyprus, Egypt, Greece, Israel, Lebanon, Syrian Arab Republic, Turkey | Bulgaria, Georgia, Romania, Turkey, Ukraine (Russian Federation) * |
| Species                   | Scientific name                    | FAO 3-alpha code |                                                |                                      |                                                                       |                                                                      |                                                                    |
| Pelagics                  | <i>Egagrus encratis</i>            | ANE              | X                                              | X                                    | X                                                                     | X                                                                    | X                                                                  |
|                           | <i>Sardinia pilchardus</i>         | PEL              | X                                              | X                                    | X                                                                     | X                                                                    |                                                                    |
|                           | <i>Spratus spratus</i>             | SFR              |                                                |                                      |                                                                       |                                                                      | X                                                                  |
|                           | <i>Trachurus mediterraneus</i>     | TRM              |                                                |                                      |                                                                       |                                                                      | X                                                                  |
| Demersal                  | <i>Merluccius merluccius</i>       | HKE              | X                                              | X                                    | X                                                                     | X                                                                    |                                                                    |
|                           | <i>Merluccius barbatus</i>         | MUT              | X                                              | X                                    | X                                                                     | X                                                                    |                                                                    |
|                           | <i>Merluccius carinatus</i>        | MUR              | X                                              | X                                    | X                                                                     | X                                                                    |                                                                    |
|                           | <i>Nephrops norvegicus</i>         | NEP              | X                                              | X                                    | X                                                                     |                                                                      |                                                                    |
|                           | <i>Paralichthys bogaraveo</i>      | SSB              | X                                              |                                      |                                                                       |                                                                      |                                                                    |
|                           | <i>Paralichthys longipinnis</i>    | DPS              | X                                              | X                                    | X                                                                     | X                                                                    |                                                                    |
|                           | <i>Scophthalmus maximus</i>        | TUR              |                                                |                                      |                                                                       |                                                                      | X                                                                  |
|                           | <i>Squalus acanthias</i>           | DGS              |                                                |                                      |                                                                       |                                                                      | X                                                                  |
| Additional species<br>*** | <i>Sardinia sarda</i>              | BON              |                                                |                                      |                                                                       |                                                                      | X                                                                  |
|                           | <i>Scorpaenopsis scorpaenoides</i> | SRX              |                                                |                                      |                                                                       | X                                                                    |                                                                    |

GFCM  
DCRF  
2018

## Vulnerable species monitoring programme

Activities has started in September 2018



Tunisia, Morocco, Turkey Med



## Vulnerable species monitoring programme



Demersal trawl



Gillnets



Longliners



## Vulnerable species monitoring programme

| Annex IIIb) On board observation - General information by fishing trip |    |       |       |
|------------------------------------------------------------------------|----|-------|-------|
| Date                                                                   |    |       |       |
| Id. Fishing trip                                                       |    | Notes |       |
| Total number of fishing operations                                     |    |       |       |
| Bycatch of vulnerable species (Y/N)                                    |    |       |       |
| Number of fishing operations with zero catch of vulnerable species     |    |       |       |
| Description of environmental variables (e.g. sea state, wind, etc.)    |    |       |       |
| General information on the catch composition                           |    |       | Notes |
| Total landing (kg)                                                     |    |       |       |
| Main commercial species in the landing fraction                        |    |       |       |
| Discard (kg and percentage), in the catch composition                  | kg | %     | Notes |
|                                                                        |    |       |       |
| Main species in the discarded fraction                                 |    |       |       |
| Marine litter composition recorded (Y/N)                               |    |       |       |

Vulnerable species (Yes/No)



Landing (kg)



Target species



Discards (kg/%)



Litter (Yes/No)



## Vulnerable species monitoring programme

| Annex III.(c) On board observation - General information on vulnerable species |           |       |  |
|--------------------------------------------------------------------------------|-----------|-------|--|
| Date:                                                                          |           |       |  |
| Id. Fishing trip                                                               |           |       |  |
| Id. Fishing operation                                                          |           |       |  |
|                                                                                |           | Notes |  |
| Time of starting operation                                                     |           |       |  |
| Time of ending operation                                                       |           |       |  |
| Latitude (start and end) of the fishing operation*                             |           |       |  |
| Longitude (start and end) of the fishing operation*                            |           |       |  |
| Gear type                                                                      |           |       |  |
| Some details on gear configuration*                                            |           |       |  |
| Depth (in meters)                                                              |           |       |  |
| Vulnerable species caught                                                      |           | Notes |  |
| Group of vulnerable species                                                    |           |       |  |
| Family*                                                                        |           |       |  |
| Genus*                                                                         |           |       |  |
| Species                                                                        |           |       |  |
| Pictures (Y/N)*                                                                |           |       |  |
| Total number of individual(s) caught                                           |           |       |  |
| Total weight of individual(s) caught [kg]                                      |           |       |  |
| Condition at capture*                                                          |           |       |  |
| Condition at release*                                                          |           |       |  |
| Biological data collected (Y/N)                                                |           |       |  |
| Presence of vulnerable benthic species (Y/N)                                   |           |       |  |
| Presence of specimens around the vessel during fishing operation*              |           |       |  |
| Species/Family/Genus                                                           | Behaviour | Notes |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |
|                                                                                |           |       |  |




## Vulnerable species monitoring programme

| Annex IV.c) Data on Sea turtles |                               |                              |                             |                     |                             |    |              |      |                   |       |
|---------------------------------|-------------------------------|------------------------------|-----------------------------|---------------------|-----------------------------|----|--------------|------|-------------------|-------|
| Source                          | on board observers (Y/N)      |                              | Id. Fishing trip            |                     | Id. Self-sampling operation |    |              |      |                   |       |
|                                 | self-sampling operation (Y/N) |                              | Id. Fishing operation       |                     | Id. Stranding observation   |    |              |      |                   |       |
|                                 | stranding observation (Y/N)   |                              | Date                        |                     |                             |    |              |      |                   |       |
| Species                         | Id. specimen                  | Curved carapace length (cm)* | Curved carapace width (cm)* | Tail measurements * |                             |    | Weight (kg)* | Sex* | Picture (yes/no)* | Notes |
|                                 |                               |                              |                             | a)                  | b)                          | c) |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |
|                                 |                               |                              |                             |                     |                             |    |              |      |                   |       |

Comments:

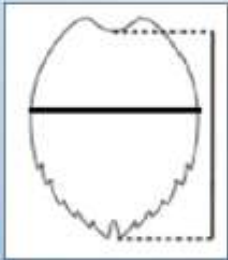




[illegible]

## Vulnerable species monitoring programme

Curved carapace width



Curved carapace length



Tail measurements



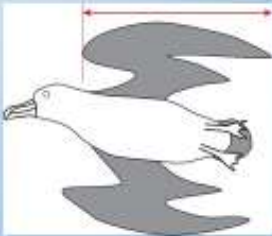
a) carapace tip to tail tip, b)  
centre of cloaca to tail tip and c)  
plastron tip to tail tip

# Vulnerable species monitoring programme

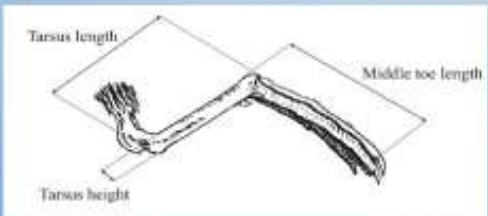
a) Bill length (mm)



b) Wing length (mm)



c) Tarsus length (mm)



Tarsus length

Middle toe length

Tarsus height

[illegible]

## Vulnerable species monitoring programme

| Annex VII(b) Questionnaire on fishing trip                                  |                      |                      |                      |                      |       |
|-----------------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|-------|
| Id. Questionnaire                                                           |                      |                      |                      |                      |       |
| Date of the fishing trip                                                    |                      |                      |                      |                      |       |
| Port of departure                                                           |                      |                      |                      |                      |       |
| Port of arrival                                                             |                      |                      |                      |                      |       |
| Total number of fishing operations                                          |                      |                      |                      |                      |       |
| Bycatch of vulnerable species (Y/N)                                         |                      |                      |                      |                      |       |
| Number of fishing operations with zero catch of vulnerable species          |                      |                      |                      |                      |       |
| Information on fishing area (e.g. depth range, position, sea bottom, etc.)  |                      |                      |                      |                      |       |
| Gear specifications                                                         |                      |                      |                      |                      |       |
|                                                                             | 1 <sup>st</sup> gear | 2 <sup>nd</sup> gear | 3 <sup>rd</sup> gear | 4 <sup>th</sup> gear | Notes |
| Gear type                                                                   |                      |                      |                      |                      |       |
| Net length                                                                  |                      |                      |                      |                      |       |
| Mesh size                                                                   |                      |                      |                      |                      |       |
| Number of hooks                                                             |                      |                      |                      |                      |       |
| Bait                                                                        |                      |                      |                      |                      |       |
| Number of lines                                                             |                      |                      |                      |                      |       |
| Number of pots/traps                                                        |                      |                      |                      |                      |       |
| Soak time (the time during which the fishing gear is actively in the water) |                      |                      |                      |                      |       |
| Other gear information                                                      |                      |                      |                      |                      |       |



## Discards monitoring programme



Activity between summer 2018 and the end of 2018  
(one year coverage)



Tunisia, Morocco, Turkey Med&BS, Lebanon,  
Montenegro, Ukraine, Algeria

## Discards monitoring programme



### Demersal trawl



Tunisia, Morocco,  
Turkey Med&BS,  
Montenegro,  
Ukraine, Algeria

### Small scale fishery



Lebanon



## Scientific surveys at sea

The need for establishing a plan for Mediterranean and Black Sea surveys derives from the consideration that comprehensive biological studies of the biological status of most of the demersal and pelagic fish stocks in some Mediterranean areas are still lacking.

To date, scientific surveys in the Mediterranean and Black Sea areas have been international surveys (mainly covering EU countries), and few national surveys with varying degrees of comparability among surveys and countries.



## Scientific surveys at sea

### PART 1

#### DEMERSAL TRAWL SURVEYS: GUIDELINES AND METHODOLOGIES

### PART 2

#### PELAGIC AND ACOUSTIC SURVEYS: GUIDELINES AND METHODOLOGIES

As decided by the Coordination meeting for the implementation of scientific surveys in the Mediterranean, endorsed by the [Scientific Advisory Committee on Fisheries](#) (SAC), and by the [Working Group on the Black Sea](#) (WGBS), the existing manuals (i.e. MEDIAS and MEDITS Handbooks) covering both the pelagic-acoustic and trawl surveys, already used by some GFCM countries, should be considered as reference.



## Objectives

In order to be able to utilize effectively survey information from all sources, the adoption of standard survey methods and stratification schemes is essential.

- more accurate estimates of life history parameters such as mortality and growth.
- valuable records to better assess the spatial occupation of the different components of the stocks (e.g. seasonal distribution, spatial segregation and community structure, reproduction and recruitment areas).
- more robust the evaluation of changes in the population indicators and of the input parameters for population and community modelling.



## Implementation of scientific surveys at sea

Activity end of September 2018 Tunisia



Spring/beginning of Summer 2019 Lebanon

Spring/Summer 2019 Morocco and Algeria

## Recreational fisheries

### Objectives

Provide methodological framework to allow Mediterranean and Black Sea countries to develop suitably harmonized sampling and survey monitoring schemes for recreational fishery.



### Proposal

Launch pilot studies for monitoring recreational fisheries in some Mediterranean and Black Sea countries as part of the GFCM Mid-term Strategy.

*Lebanon, Montenegro, Tunisia and Turkey*

## Recreational fisheries

### *Pilot study: methodologies*

The **off-site methods** could be consider by mail, by postal questionnaires, by telephone surveys, as well as by trip-record reporting surveys that utilize logbooks and/or diaries.

The **on-site methods** could include sampling trips to access points to interview fishermen directly, and to work in collaboration with cooperatives, angling associations, angling clubs.

## 20<sup>th</sup> session of the Scientific Advisory Committee on Fisheries - SAC (June 2018)

The GFCM Secretariat presented the four documents to be used as guidelines for relevant mid-term strategy data collection activities, namely the monitoring of discards and incidental catches of vulnerable species, the implementation of scientific surveys-at-sea and the collection of recreational fisheries data.

The objective of each document was a harmonized methodological framework for data collection that would be applicable to the realities of different countries and would enable the comparison of data at a regional level.

The SAC agreed that these documents would be used on a voluntary basis, as reference instruments in the execution of mid-term strategy activities.

Highlighting the need for more time to carefully review and analyse the documents, it was agreed that further comments could be integrated into these documents at a later stage.

## 20<sup>th</sup> session of the Scientific Advisory Committee on Fisheries - SAC (June 2018)

In line with the roadmap endorsed within the Working Group on Small-scale Fisheries (WGSSF), the SAC agreed that the draft handbook for data collection on recreational fisheries be tested through pilots studies and that, on the basis of these outcomes, the next meeting of the Working Group on Recreational Fisheries (WGRF) should consolidate this experience, together with comments on its application, into a revised version of the handbook.

Underlying that the specificities of recreational fisheries in each country varied widely, and noting the need to pilot the methodology in diverse geographic and economic scenarios, it was suggested that a wide range of pilot studies be carried out in order to test the applicability of the methods and ensure necessary revisions could be integrated.



Food and Agriculture  
Organization of the  
United Nations



General Fisheries Commission  
for the Mediterranean  
Commission générale des pêches  
pour la Méditerranée

# THANKS FOR YOUR KIND ATTENTION

**Federico DE ROSSI**  
Data compliance officer  
GFCM Secretariat

## PRESENTATION 6 BY MARIA TERESA FACHINI

### TITLE: WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

MARE/2016/22

#### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

##### OVERVIEW

**WP Leader:** M.T. Spedicato (COISPA) and co-chair S. Kavadas (HCMR)

**Participants:** COISPA, HCMR, CIBM, CNR-ISMAR, DFMR, FRI, IEO, IO-BAS, IOF, NIMRD, NISEA

**Objectives:**  
 WP3 aims at designing and proposing a regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers (RSP-CF), taking advantage of the experience of the previous grants (i.e. MARE/2014/19 Med&BS and FishPi)

The design will be based on the following sampling stratification criteria:

- ✓ **technical** (e.g. by métier or gear),
- ✓ **temporal** (e.g. by quarter or semester)
- ✓ **spatial** (e.g. single GSA or combined GSAs)

The sampling design will be formulated in terms of number of trips to be sampled and the number of individuals to be measured, according to simulation and optimization approaches.

Possible task **sharing of sampling effort** among MS, will be also considered.

MARE/2016/22

#### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

##### TASK – TIMING – OUTPUT

|              |             | Task                                                                                                                                                                                                  | Name                  | Responsible           | Timing (month)  |  |
|--------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------|--|
| TASKS        | T 3.1       | Data Sharing among all Member States of the regions (Med and BS)                                                                                                                                      | C. Charlaou (DFMR)    | 1 - 5                 | COMPLETED       |  |
|              | T 3.2       | Apply and/or refine reference (or code) lists to be used by Member States in the region and identify possible solution for data storage system, processing and analysis of the data at regional level | M.T. Fachini (COISPA) | 1 - 5                 | COMPLETED       |  |
|              | T 3.3       | Carry out simulations to propose a RSP-CF for 2019                                                                                                                                                    | M.T. Fachini (COISPA) | 3 - 14                | IN PROGRESS...  |  |
|              | T 3.4       | Develop rules on how to allocate tasks and costs between between Member States and evaluate costs implication for 2019                                                                                | S. Kavadas (HCMR)     | 10 - 14               | NOT STARTED YET |  |
| DELIVERABLES | Deliverable | Name                                                                                                                                                                                                  | Responsible           | Delivery date (month) |                 |  |
|              | D 3.1       | Data Sharing Agreement                                                                                                                                                                                | C. Charlaou (DFMR)    | 3                     | COMPLETED       |  |
|              | D 3.2       | Updated RCM MED&BS-IP standard format and code lists and identification of possible solution for data storage system, processing and analysis of the data at regional level                           | M.T. Fachini (COISPA) | 5                     | COMPLETED       |  |
|              | D 3.3       | Routine and on the refining of the methodological framework for sampling optimization and report from the case studies                                                                                | M.T. Fachini (COISPA) | 13                    | IN PROGRESS...  |  |
|              | D 3.4       | Guidelines with rules on how to allocate tasks and costs among Member States and Routine on the evaluation of costs implications for Member States and application to case studies                    | S. Kavadas (HCMR)     | 14                    | NOT STARTED YET |  |

## WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

### TASK – TIMING – OUTPUT

Intermediate OUTPUT ready to define the RSP-CF proposal:

- COMPLETED ✓ **Link with WP 2** for the identification of the most important stocks at regional level and relative fleets (métiers)
- COMPLETED ✓ Biological data and landings by GSA, métier and quarter in RCM MED&BS-LP standard format from Datacall (from **T 3.1**)
- COMPLETED ✓ Update of the routine for sampling optimization: Sampling Design Tool and BioSim Tool (from **T 3.3**)

IN PROGRESS...

**Link with WP 7** for the organization of the 2 workshops for the case studies implementation.  
**Eastern Mediterranean & Black Sea**      **Western and Central Mediterranean**

| Case study | Area                          | MSAs       | Countries                | Fisheries                                 | Species                                                        | Case study | Area                  | MSAs             | Countries                | Fisheries                                 | Species                                                        |
|------------|-------------------------------|------------|--------------------------|-------------------------------------------|----------------------------------------------------------------|------------|-----------------------|------------------|--------------------------|-------------------------------------------|----------------------------------------------------------------|
| 1          | Eastern Mediterranean         | 11, 12, 13 | Greece, Cyprus           | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>A. fallax (M01)<br>M. merluccius (M03)  | 1          | Western Mediterranean | 1, 2, 3, 4, 7, 8 | Spain, France            | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 2          | Black Sea                     | 20         | Bulgaria, Romania        | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | A. fallax (M01)                                                | 2          | Western Mediterranean | 4, 10, 11        | Italy                    | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 3          | WAdS MS                       | 20         | Bulgaria, Romania        | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)                                            | 3          | Western Mediterranean | 1, 2, 3, 4       | Spain                    | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 4          | Black Sea                     | 20         | Slovenia, Romania        | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | A. fallax (M01)                                                | 4          | Western Mediterranean | 9, 10, 11        | Italy                    | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 5          | Eastern Italy                 | 13, 14     | Italy, Malta             | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) | 5          | Western Mediterranean | 1, 2, 3, 4, 7    | Spain, France            | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 6          | South Adriatic and Ionian Sea | 21, 22, 23 | Italy, Romania           | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) | 6          | Western Mediterranean | 9, 10, 11        | Italy                    | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 7          | Adriatic MS                   | 15, 16     | Italy, Croatia, Slovenia | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) | 7          | Adriatic Sea          | 21, 22           | Italy, Croatia, Slovenia | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |
| 8          | North Adriatic                | 17         | Italy, Croatia, Slovenia | OTB_ZIP_1=40, 2, 3;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) | 8          | Adriatic Sea          | 21, 22           | Italy, Croatia, Slovenia | OTB_ZIP_1=40, 3, 4;<br>OTB_ZIP_2=40, 3, 4 | M. merluccius (M02)<br>P. langoustine (M04)<br>A. fallax (M03) |

## WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

### OUTCOMES

#### TASK 3.1

- ✓ A data sharing agreement (DSA) finalized in collaboration with the Institutes involved in the STREAM project. The DSA identified the type of data to be shared, the common data format and rules for the use of these data.

A frame detailing and mapping the type of data needed has been included:

- **sampling data for the optimization** of the sampling intensity in the RSP of 2019 (Task 3.3).
- **age-related data** required for fulfilling the task of agreeing on a set of regional data quality assessments (T 6.2).

The Data Sharing Agreement has been signed by most NCs (Cyprus, Italy, Slovenia, Greece, Bulgaria, Romania, Spain), while others have ensured the data delivery though they have not signed the DSA (France, Croatia, Malta).

A data call has been finally launched (with the deadline on July 19). Dedicated sections of the STREAM SharePoint have been made available to each NC in order to access and upload the data.

WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

### TASK 3.2

- ✓ Update the RCG Med&BS datacall format for the storage of primary data from commercial fisheries sampling including additional information in CS and CL tables.

CS (Commercial Sampling)

| What information do I want to collect? | What information do I have to collect to answer my question? |              |
|----------------------------------------|--------------------------------------------------------------|--------------|
| Sampling date                          | Sampling date                                                |              |
| Flag number                            | Flag number                                                  |              |
| Sex                                    | Sex                                                          |              |
| Location                               | Location                                                     | harbour      |
| Number of waterbirds collected         | Number of waterbirds collected                               |              |
| Time of day                            | Time of day                                                  |              |
| Sampling method                        | Sampling method                                              |              |
| Observation level                      | Observation level                                            |              |
| Observer                               | Observer                                                     |              |
| Duration                               | Duration                                                     | duration,    |
| Position                               | Position                                                     | position and |
| Depth                                  | Depth                                                        | depth        |
| Water temperature                      | Water temperature                                            |              |
| Water level                            | Water level                                                  |              |
| Wind speed                             | Wind speed                                                   |              |
| Wind direction                         | Wind direction                                               |              |
| Cloud cover                            | Cloud cover                                                  |              |
| Visibility                             | Visibility                                                   |              |
| Barometric pressure                    | Barometric pressure                                          |              |
| Relative humidity                      | Relative humidity                                            |              |
| Soil moisture                          | Soil moisture                                                |              |
| Soil temperature                       | Soil temperature                                             |              |
| Soil pH                                | Soil pH                                                      |              |
| Soil salinity                          | Soil salinity                                                |              |
| Soil texture                           | Soil texture                                                 |              |
| Soil color                             | Soil color                                                   |              |
| Soil density                           | Soil density                                                 |              |
| Soil porosity                          | Soil porosity                                                |              |
| Soil permeability                      | Soil permeability                                            |              |
| Soil infiltration                      | Soil infiltration                                            |              |
| Soil evaporation                       | Soil evaporation                                             |              |
| Soil respiration                       | Soil respiration                                             |              |
| Soil microbial activity                | Soil microbial activity                                      |              |
| Soil nutrient levels                   | Soil nutrient levels                                         |              |
| Soil carbon content                    | Soil carbon content                                          |              |
| Soil nitrogen content                  | Soil nitrogen content                                        |              |
| Soil phosphorus content                | Soil phosphorus content                                      |              |
| Soil potassium content                 | Soil potassium content                                       |              |
| Soil calcium content                   | Soil calcium content                                         |              |
| Soil magnesium content                 | Soil magnesium content                                       |              |
| Soil sulfur content                    | Soil sulfur content                                          |              |
| Soil zinc content                      | Soil zinc content                                            |              |
| Soil copper content                    | Soil copper content                                          |              |
| Soil iron content                      | Soil iron content                                            |              |
| Soil manganese content                 | Soil manganese content                                       |              |
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## -EL (Commercial Landings)

| NCM Methodology (F 2012) versus (F 2014)  | Final Proposal for NCM Methodology (F 2014) versus (F 2012) |
|-------------------------------------------|-------------------------------------------------------------|
| Final Indicators                          | Final Indicators                                            |
| Size                                      | Size                                                        |
| Quarter                                   | Quarter                                                     |
| Market                                    | Market                                                      |
| Season                                    | Season                                                      |
| Specific                                  | Specific                                                    |
| Ranking country categories National       | Ranking country categories using any National               |
| Ranking country categories European level | Ranking country categories European level                   |
| Officer rankings weights                  | Officer rankings weights                                    |
| Officer rankings weights                  | Officer rankings weights                                    |

WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

### TASK 3.2

- ✓ Identify solutions for a regional database for Med&BS by defining...

## Stakeholders/potential users

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| MSs (Member States)                                               | 15/10 |
| WGs (Expert Working Groups STECF, GFCM, ICES, ACOS)               | 0/0   |
| DG MARE                                                           | 1/1   |
| JRC (Joint Research Centre)                                       | 1/1   |
| STECF (Scientific Technical and Economic Committee for Fisheries) | 15/10 |
| GFCM (General Fisheries Commission for the Mediterranean)         | 15/10 |
| SAC (Scientific Advisory Committee on Fisheries)                  | 15/11 |
| RCGs (Regional Coordination Group)                                | 15/10 |
| ICES (International Council for the Exploration of the Sea)       | 1/1   |
| NGOs and other public initiatives                                 | 1/1   |

### Data type and domain

The diagram illustrates the relationship between data types and their application in the Work Plan and Annual Report. It features a central box labeled 'Data calls' with a blue arrow pointing to a box labeled 'Work Plan and Annual Report Stock assessments results'. To the left, a box lists data types: 'Primary data', 'Meta data', 'Detailed data', and 'Aggregated data'. To the right, a box lists data sources: 'Biological data from commercial sampling', 'Biological data from scientific surveys', 'Fishing activity data', 'Economic and social data', 'Aquaculture', and 'Processing industry'. A line connects the 'Aggregated data' box to the 'Data calls' box.

### Sharing and accessibility

| The data<br>explanations | Article                     | PR 2002                       | 2008 ruling (2)                        | PR 2008                   |
|--------------------------|-----------------------------|-------------------------------|----------------------------------------|---------------------------|
|                          |                             | Not allowed<br>for tax relief | Partially tax relief<br>for tax relief | Not tax<br>for tax relief |
| Yes                      | General liability           | 0                             |                                        |                           |
| Yes                      | General liability insurance | 0                             |                                        | 0                         |
| Yes                      | General liability insurance | 0                             |                                        | 0                         |
| Yes                      | General liability insurance | 0                             |                                        | 0                         |
| Yes                      | General liability insurance | 0                             |                                        | 0                         |
| Yes                      | General liability insurance | 0                             |                                        | 0                         |

### Functionalities

| OSR Name                                | OSR aggregation model | Functional by | Description                                                                | Application in existing IT systems or in new ones or context                                                                                                                                                                                                                      |
|-----------------------------------------|-----------------------|---------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System of data related data integration | Primary data          | Data stream   | Performs query by stream and relational or binary data for the application | REL: Experimental tool for data quality checking, factCheck, a knowledge discovery and functions from SQL Query language, implemented in the HADAC2014/15. Another project and functions developed under factCheck, and some are also developed a new table 3.2 of SYRIM project. |
|                                         |                       |               |                                                                            | COF: Functions for data integration                                                                                                                                                                                                                                               |



MARE/2016/22

### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.2

- ✓ Evaluate options regarding the hosting of a RDB against **three available scenarios**, taking into account the current situation, ongoing studies, developments and suggestions as well as needs from STECF, GFCM and ICES working groups.
  - ❖ **GFCM**
    - **Data Collection Reference Framework (DCRF)** for the collection and submission of fisheries-related data in the GFCM area (Med & BS)
    - providing technical support and resources to start fisheries data collection in many **non-EU countries** (e.g. Albania, Montenegro, Lebanon, Egypt, etc.) acting in close cooperation with FAO sub-regional projects (AdriaMed, MedSudmed, EastMed, CopeMedII)
  - ❖ **JRC**
    - **Data dissemination tool** allowing to access the data mainly related to the to the different Data Calls issued by DG MARE
    - Data are made freely available in **aggregated form**, after being published in official STECF reports
  - ❖ **ICES**
    - experience from a new **Regional Database and Estimation System (RDBES)** currently being developed including statistical estimation methods for the raising of sampling data
    - **new data format** based on COST format and providing a common structure to describe both the disaggregated sampling data and, most importantly, how it was sampled (i.e. **information on sampling design**)

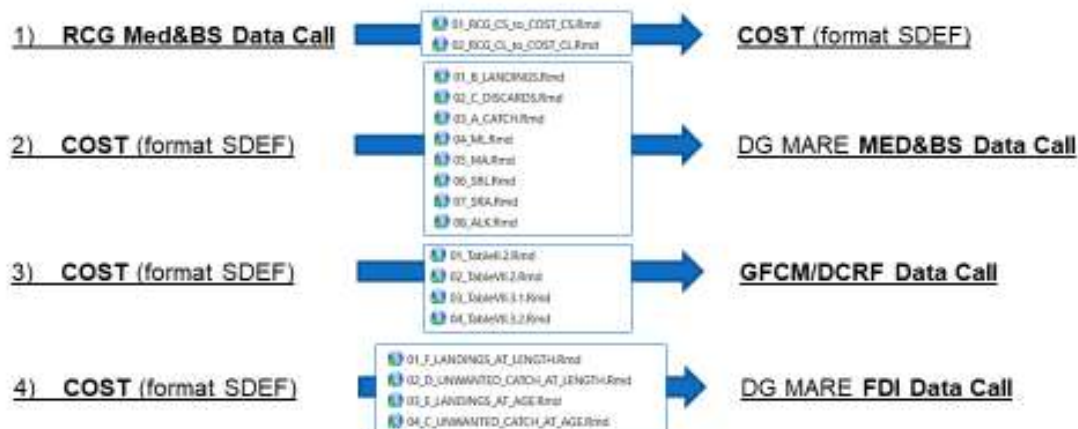


MARE/2016/22

### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.2

- ✓ Develop auxiliary tools (R-scripts) to standardize and ease the procedures for data processing and delivering to specific data calls including the following data transformations.





MARE/2016/22

### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

✓ Develop a new tool (R scripts) based on:

- **SD Tool** (MARE/2014/19 Med&BS project) allowing through bootstrap technique to resample the historical data studying the Coefficient of Variation (CV) by métier and quarter in association with the number of primary sampling units (i.e. trips) of a given species.
- **WKBIOPTIM scripts** (WKBIOPTIM, Lisbon 20-22 June, 2017; WKCOSTBEN, ICES, 2017) allowing to identify the "optimal" number of individuals to be measured "at sample level" (i.e. per trip) that is considered the minimum no. of fish to avoid oversampling and obtain a representation quite accurate of the catches. Updated scripts (WKBIOPTIM 2, Nantes 29-31 May, 2018) also allows analyses on biological variables (sex, maturity and age).

The developed tool consists of two packages: **SD Tool v.2** and **BiolSim Tool**



MARE/2016/22

### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

- ✓ Perform analyses on sampling optimization in terms of trips
- ✓ Perform analyses on sampling optimization in terms of number of individuals to be measured
- ✓ Perform analyses on sampling optimization on the number for biological measures
- ✓ Perform possible scenarios varying number of trips and measured individuals



MARE/2016/22

### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

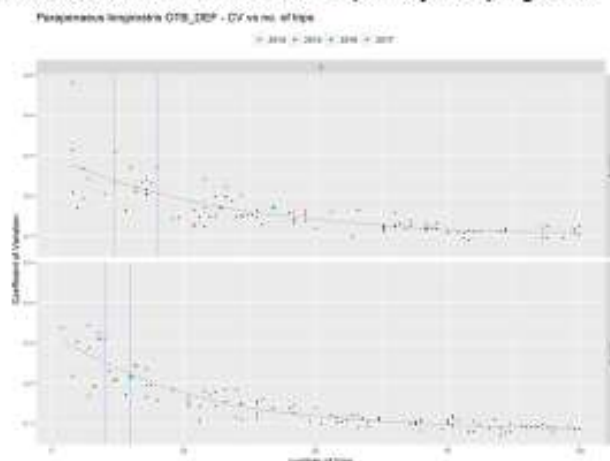
- ✓ Perform analyses on sampling optimization in terms of trips

The **SD Tool v.2** allows through bootstrap technique to resample the historical data studying the Coefficient of Variation (CV) in association with the number of primary sampling units (e.g. trips) of a given species.

##### Statistical principle:

The value of CV decreases with the increase of the number of sampling units, defining a curve.

In the SD tool the part of the curve where the tangent changes and begins to flatten (i.e. the curvature range) is considered as a suitable trade-off between the precision and the sampling effort. Then, the **sample size** (in term of sampling units) corresponding to that part of the curve is proposed as **"optimal" sample size**.



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### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

The **SD Tool v.2** generalizes the existing SD tool in order to include options allowing a flexible definition of the sampling scheme. Simulations can be carried out on:

- [different technical stratifications](#) introducing options to define the technical strata on the basis of gear (level 4) and/or métier, so grouping strata with similar characteristics;
- [different temporal aggregation](#) in order to make flexible the stratification by quarter and/or semester, depending on fisheries and target species specifications;
- data of [stocks considered shared among MS](#) in order to get results on the whole area of the stock (not only by GSA)



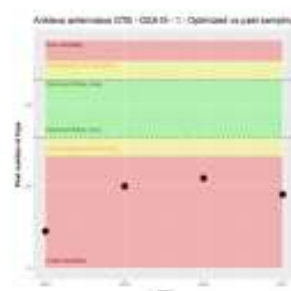
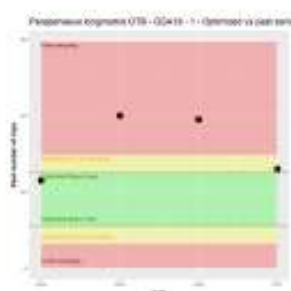
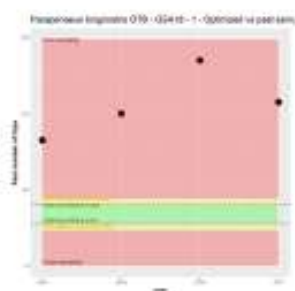
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### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

e.g. stratification process by year (aggregating quarters)  
by gear level 4 (aggregating métiers)

|                        | Var1  | Var2 | Var3 | min_trips | max_trips | mean_RR | mean_CV |
|------------------------|-------|------|------|-----------|-----------|---------|---------|
| <i>A. antennatus</i>   | GSA18 | 1    | OTB  | 18        | 26        | 0.78    | 0.14    |
| <i>P. longirostris</i> | GSA18 | 1    | OTB  | 19        | 22        | 0.07    | 0.22    |
| <i>A. antennatus</i>   | GSA19 | 1    | OTB  | 32        | 46        | 0.25    | 0.13    |
| <i>P. longirostris</i> | GSA19 | 1    | OTB  | 12        | 16        | 0.04    | 0.23    |



MARE/2016/22

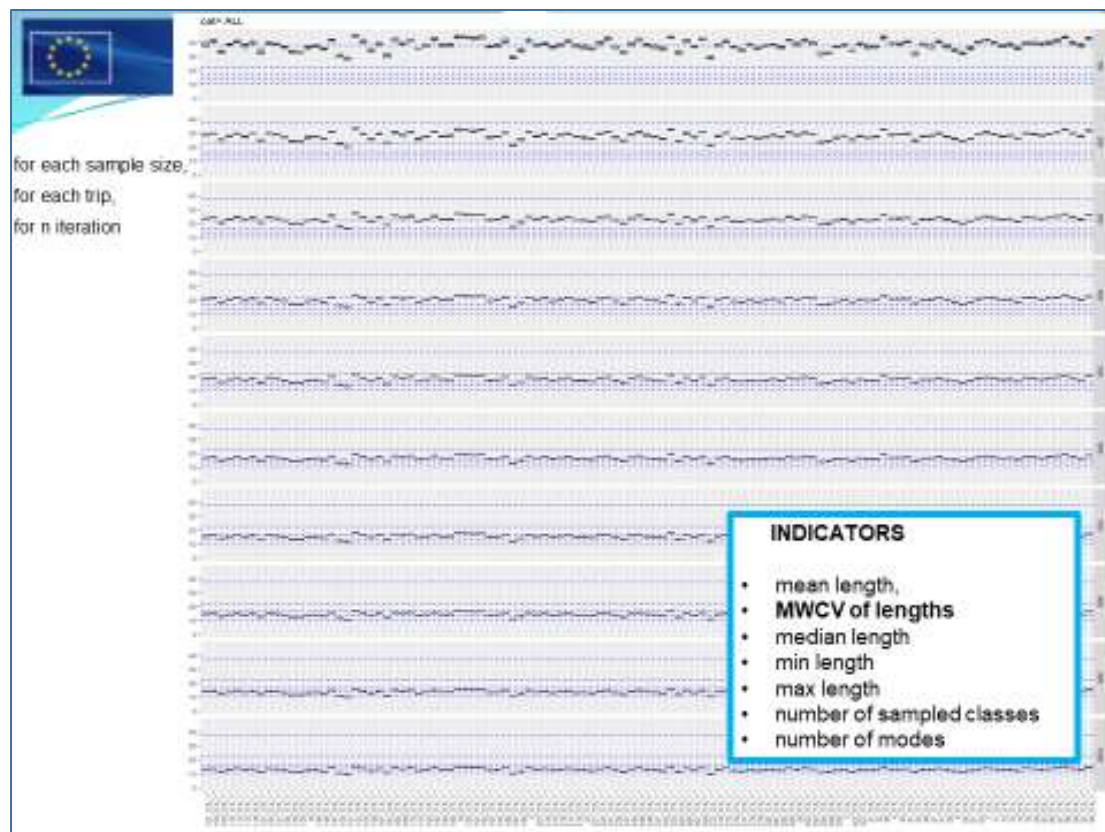
### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

- ✓ Perform analyses on sampling optimization in terms of number of individuals to be measured

**BioSim Tool** allows through bootstrap technique to resample the historical data "at sample level" (i.e. per trip) to identify the minimum no. of fish to be measured in order to avoid oversampling.

This minimum number of individuals to be sampled can be used as threshold for subsampling.



**MARE/2016/22**

**WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES**

**TASK 3.3**

It is possible to assess the impact of changes in the number of length measurements by trip (commercial category) compared to the baseline (original sample).

| sample_size | MWCV | Variation | n_class_sampled | Variation | n_modes_correct | Variation |
|-------------|------|-----------|-----------------|-----------|-----------------|-----------|
| 100         | 38.1 | 270.40%   | 18              | -25.70%   | 2               | -66.30%   |
| 200         | 28   | 172.10%   | 20              | -17.60%   | 2               | -42.50%   |
| 300         | 23.1 | 125.20%   | 21              | -13.60%   | 2               | -38.70%   |
| 400         | 20.2 | 96.50%    | 22              | -11.10%   | 2               | -33.70%   |
| 500         | 18.1 | 76.60%    | 22              | -9.20%    | 2               | -32.60%   |
| 600         | 16.6 | 61.80%    | 23              | -7.70%    | 2               | -29.90%   |
| 700         | 15.4 | 50.20%    | 23              | -6.40%    | 2               | -27.90%   |
| 800         | 14.5 | 40.80%    | 23              | -5.30%    | 2               | -24.60%   |
| 900         | 13.7 | 33%       | 24              | -4.40%    | 2               | -22%      |
| 1000        | 13   | 26.30%    | 24              | -3.50%    | 2               | -20.50%   |
| Baseline    | 10.3 | -         | 25              | -         | 3               | -         |

900 Measured individuals →

| Comm_cate | Sub_sample | Nb_over_Thr | Tot |
|-----------|------------|-------------|-----|
| ALL       | 1.9        | 119         | 170 |



MARE/2016/22

### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

- ✓ Perform analyses on sampling optimization on the number for biological measures

BioSimTool allows to resample by trip:

- the **sex** and **maturity** variables varying the number of individuals measures by trip (e.g. from 20 to 100) saving as output the sex-ratio at length, the maturity-at-length for each simulation
- the **age** variable varying the number of age readings by length class in each trip (e.g. from 2 to 10 by length class) saving as output the age-length keys (ALK) for each simulation

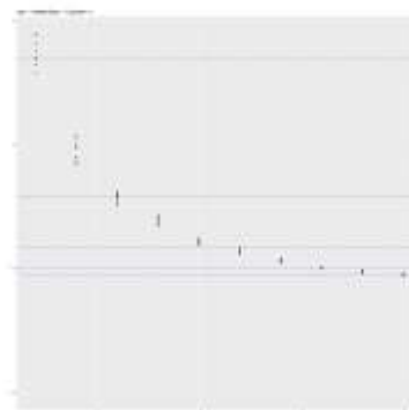
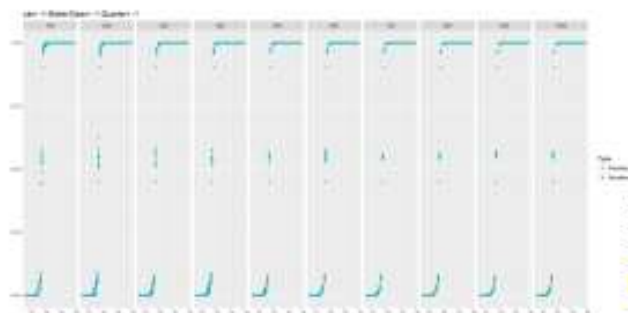


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### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

#### TASK 3.3

It is possible to assess the impact of changes in the number of measurements for biological variable compared to the baseline (historical sample data) (**MATURITY** and **SEX-RATIO**)



| Métier | Gear | quarter | samp_size | commCat | CV   | Variation | EMD    |
|--------|------|---------|-----------|---------|------|-----------|--------|
| -1     | -1   | -1      | 50        | -1      | 1.33 | 448.90%   | 0.0178 |
| -1     | -1   | -1      | 150       | -1      | 0.77 | 219%      | 0.0007 |
| -1     | -1   | -1      | 250       | -1      | 0.59 | 145.40%   | 0.0004 |
| -1     | -1   | -1      | 250       | -1      | 0.50 | 106.50%   | 0.0002 |
| -1     | -1   | -1      | 450       | -1      | 0.44 | 82.80%    | 0.0003 |
| -1     | -1   | -1      | 550       | -1      | 0.40 | 64.70%    | 0.0002 |
| -1     | -1   | -1      | 650       | -1      | 0.37 | 51.70%    | 0.0002 |
| -1     | -1   | -1      | Baseline  | -1      | 0.34 | -         | 0.0000 |

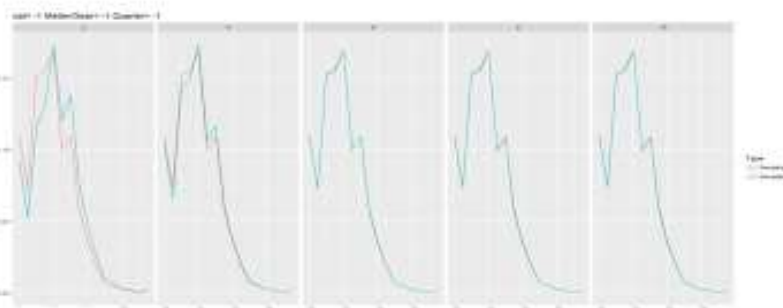


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## WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

### TASK 3.3

It is possible to assess the impact of changes in the number of measurements for biological variable compared to the baseline (historical sample data) (**AGE**)



| Métier_Gear | quarter | samp_size | commCat | CV   | Variation | EMD  |
|-------------|---------|-----------|---------|------|-----------|------|
| -1          | -1      | 2         | -1      | 2.04 | 34.40%    | 0.5  |
| -1          | -1      | 4         | -1      | 1.63 | 7.40%     | 0.32 |
| -1          | -1      | 6         | -1      | 1.52 | 0.50%     | 0.01 |
| -1          | -1      | 8         | -1      | 1.51 | 0%        | 0.03 |
| -1          | -1      | 10        | -1      | 1.51 | 0%        | 0.03 |
| -1          | -1      | Baseline  | -1      | 1.51 | -         | 0    |



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## WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

### TASK 3.3

- ✓ Perform possible scenarios varying number of trips and measured individuals

Based on the results on the sampling optimization on all the target species (implemented with **SD Tool v.2**) and simulations with different number of length measurements (implemented with **BioSim Tool**) the following **scenarios** can be simulated.

| Type of scenario | Description of scenario                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Change in stratification | Change in no. of length measures |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------|
| 1                | Simulate different number of trips taken from the "optimal" sampling size ranges (e.g. from 5 to 50 trips) allocating them in the <b>stratification scheme of the past sampling</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | N                        | N                                |
| 2                | Simulate different number of trips taken from the "optimal" sampling size ranges (e.g. from 5 to 50 trips) <b>collapsing strata by means of the aggregation of métiers</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Y                        | N                                |
| 3                | Simulate different number of trips taken from the "optimal" sampling size ranges (e.g. from 5 to 50 trips) <b>collapsing strata by means of aggregation of quarters</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Y                        | N                                |
| 4                | Simulate different number of trips taken from the "optimal" sampling size ranges (e.g. from 5 to 50 trips) allocating the trips according to the past sampling. In addition, for each number of trips the number of <b>measured individuals</b> is <b>reduced by means of subsampling</b> according the explorative analyses done at sample level through the approach "at sample level" used at the ICES WKBIOPTIM.<br>E.g. For all the selected scenarios of type 1, the scenarios of type 4, i.e. with reduction of length measures can be performed comparing for example a scenario (A), with 5 trips and all individuals measured, and scenario (B), with 15 trips sampled and reduced number of individuals measured. | N                        | Y                                |



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## WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

### TASK 3.3

The main output of a simulated scenarios for each species consists of:

- total CV
- CV per length class
- raised length distribution for the whole population.

To express the performance of each scenario the values obtained for each species of two indicators will be compared to the respective values of each species in the baseline:

- ✓ Coefficient of Variation (CV)
- ✓ Earth Mover's Distance (EMD)\*

A summary of changes to the past is done in order to have a complete overview by species and by scenario.

e.g.

| species                  | Var1   | Var2 | Var3 | CV baseline | diff CV scen1 | EMD scen1 | diff CV scen2 | EMD scen2 | diff CV scen3 | EMD scen3 |
|--------------------------|--------|------|------|-------------|---------------|-----------|---------------|-----------|---------------|-----------|
| Paraperanus longirostris | GSA 20 | 1    | 078  | 16          | 81            | 0.18      | 81            | 0.22      | 38            | 0.09      |
| Aristeus antennatus      | GSA 39 | 1    | 078  | 19          | 37            | 0.62      | 32            | 0.57      | 26            | 0.2       |
|                          |        |      |      |             | diff CV scen4 | EMD scen4 | diff CV scen5 | EMD scen5 | diff CV scen6 | EMD scen6 |
|                          |        |      |      |             | 38            | 0.07      | 19            | 0.05      | 19            | 0.02      |
|                          |        |      |      |             | 26            | 0.17      | 11            | 0.2       | 11            | 0.12      |

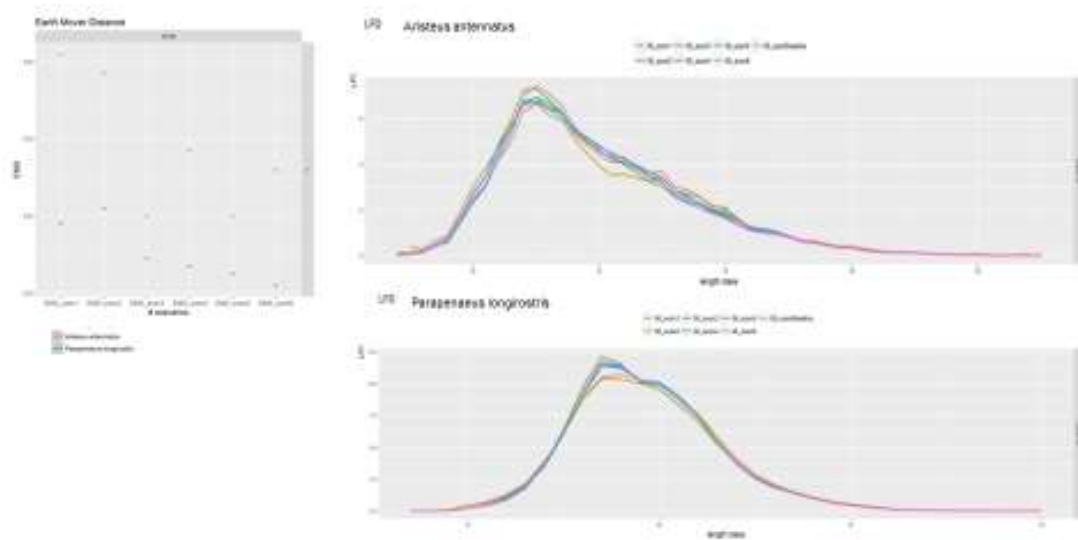
\* a measure of the distance between two probability distributions over a region  $\Omega$  (mathematically indicated as Wasserstein metric) (Rubner et al., 1998).



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## WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers OUTCOMES

### TASK 3.3





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### WP3 - A regional sampling plan (RSP) for 2019 covering commercial fisheries/stocks/métiers

#### TASK 3.4

The work related to this task has not yet started.

This task aims at developing **rules on how to allocate tasks or costs between MSs** and assessing results from simulations (Task 3.3) under the economic perspective.

The cost implications of the alternative sampling plans obtained by the sampling "optimization" will be estimated through the methodology tested in MARE2014/19Med&BS project generalizing the approach taking into account **additional fisheries** and **biological parameters**.

Considering that the biological activities realized in the frame of DCF mostly include the identification of parameters related to the growth and reproduction patterns of a set of species, it was assumed that the **Total Cost (Tc)** of such activities can be split into two components:

**Sampling Costs (Sc)** and **Processing Costs (Pc)**. A more detailed subdivision of costs or cost sources will be taken into account in the new algorithm to develop.

The outcomes will be used as reference for future regional sampling plans. In cooperation with WP8, the proposed plan will be presented and discussed in the relevant regional workshops.



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# Thank you!



### WP7 - Training of Member State experts

**Chair:** C. Charilaou (DFMR); **Co-chair:** M.T. Facchini (COISPA)

**Partners involved:** DFMR, COISPA, CIBM, CNR-ISMAR, NISEA, HCMR, FRI, IEO, IOF, IO-BAS, NIMRD, REVIVO

**Duration:** 11 months (months 4 – 14)

**Objective:** Ensure MSs experts are trained on the main outcomes resulting from the previous WPs (1-6) through the organization of relevant technical workshops.

**Work Plan:**

- Identify all relevant institutes involved in data collection activities in the region (review DCF websites, Annual Reports, National Programmes & Work Plans, circulate lists to NCs for confirmation/ possible updating)
- Collect information on available expertise in key aspects of the proposed regional sampling, as well as possible training needs (circulation of ad-hoc questionnaires)
- Organise relevant workshops for the experts in the region (the organization of two training workshops is expected).



### WP7 - Training of Member State experts

**Milestones**

- M7.1 Mapping of available expertise in the region (month 7)
- M7.2 Completion of Workshops (month 13)

**Deliverables**

- D7.1 Report of the outcomes from the training workshops related to the proposed regional sampling plan (Responsible C. Charilaou and M.T. Facchini, month 14)



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### Progress under WP7

#### ✓ Preparation of ad-hoc Questionnaire on Training Needs & Mapping of Expertise

##### Structure of ad-hoc questionnaire

Questions set at institutional level & related with planned work/deliverables under STREAM (namely WPs 3,4,5,6)

Particularly, questions involve:

- General regional sampling
- Sampling design for collection of data from commercial fisheries
- Sampling program for the collection of data on fisheries- impacts on the ecosystem
- Collection of data from recreational fisheries
- Procedures to assess the quality of biological data

**Circulation** of questionnaire during July to all institutes involved in biological data collection in the region (following review of NPs, WPs, ARs, DCF websites, and consultation with NC)



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### Progress under WP7

Feedback received from 20 institutes from all MS in the region

| MS       | Feedback received                                                  |
|----------|--------------------------------------------------------------------|
| Bulgaria | IO-BAS, IFR, IEA                                                   |
| Croatia  | IOF                                                                |
| Cyprus   | DFMR                                                               |
| France   | IFREMER (Sete), IRD                                                |
| Greece   | FRI, HCMR                                                          |
| Italy    | CIBM, CNR- IAMC, CNR ISMAR, COISPA, UNIMAR, UNIVERSITY OF CAGLIARI |
| Malta    | DFR - MESDC                                                        |
| Romania  | NIMRD                                                              |
| Slovenia | FRI, REVIVO                                                        |
| Spain    | IEO                                                                |



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### Progress under WP7

#### Analysis of questionnaires received – Mapping of expertise

|                                                                                                                                                              | YES          | PARTLY   | NO      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|---------|
| Statistical expertise in sampling design, processing and raising of data                                                                                     | 10 (50%)     | 10 (50%) |         |
| Expertise in programming in R                                                                                                                                | 7 (35%)      | 6 (30%)  | 7 (35%) |
| Availability of institutes with expertise (reply with “yes” in at least one of the above) for participating in a network to develop regional sampling design | 11/11 (100%) |          |         |
| IT expertise for the development and management of regional data storage systems                                                                             | 9 (45%)      | 6 (30%)  | 5 (25%) |
| Availability of institutes with IT expertise (reply with “yes” to the above) for participating in a network to develop a regional data storage system        | 8 /9 (89%)   |          |         |



MARE/2016/22

### Progress under WP7

#### Analysis of questionnaires received – Mapping of expertise

|                                                                                        | YES     | PARTLY  | NO      |
|----------------------------------------------------------------------------------------|---------|---------|---------|
| Expertise in recreational fisheries surveys                                            | 5 (25%) | 7 (35%) | 7 (35%) |
| Expertise for running and interpreting scripts developed in R on sampling optimisation | 8 (40%) | 7 (35%) | 5 (25%) |
| Expertise in R to run quality checks on datasets                                       | 8 (40%) | 7 (35%) | 5 (25%) |



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### Progress under WP7

#### Analysis of questionnaires received – Mapping of expertise

##### Level of experience of age readers (for institutes involved in age reading)\*

|                                        |          |
|----------------------------------------|----------|
| High (> 6000 calcified structure)      | 42 (49%) |
| Medium (2000-6000 calcified structure) | 21 (25%) |
| Low (< 2000 calcified structure)       | 22 (26%) |

\* The dedicated IFREMER sclerochronology unit in Boulogne sur Mer was not considered for this reply

|                                                                                                                                                            | YES      | PARTLY | NO       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------|----------|
| Availability of institute with expertise on ageing for providing training on age reading                                                                   | 7 (37%)  |        | 12 (63%) |
| Availability of institute with expertise on ageing for participating in task sharing on age reading, namely receiving calcified structures for age reading | 11 (58%) |        | 8 (42%)  |



MARE/2016/22

### Progress under WP7

#### Analysis of questionnaires received – Mapping of expertise

|                                                                                                                               | YES        | PARTLY  | NO      |
|-------------------------------------------------------------------------------------------------------------------------------|------------|---------|---------|
| Expertise on PETS identification on:                                                                                          |            |         |         |
| Marine mammals                                                                                                                | 7 (35%)    | 9 (45%) | 4 (20%) |
| Sea birds                                                                                                                     | 3 (15%)    | 8 (40%) | 5 (25%) |
| Sharks and rays                                                                                                               | 15 (75%)   | 4 (20%) | 1 (5%)  |
| Reptiles                                                                                                                      | 7 (35%)    | 6 (30%) | 4 (20%) |
| Expertise on stomach analysis                                                                                                 | 12 (60%)   | 5 (25%) | 3 (15%) |
| Availability of institutes with expertise (with reply "yes" for above) for <b>providing training</b>                          | 5/12 (42%) |         |         |
| Availability of institutes with expertise for participating in task sharing ( <b>receiving samples</b> ) for stomach analysis | 8/12 (67%) |         |         |



MARE/2016/22

### Progress under WP7

#### Analysis of questionnaires received – Training Needs

|                                                                              | YES                                   | PARTLY | NO         |
|------------------------------------------------------------------------------|---------------------------------------|--------|------------|
| <b>Training needs for running simulations in R for sampling optimisation</b> | 17<br>(85%)                           |        | 3<br>(15%) |
| No. persons requiring training: – 50                                         |                                       |        |            |
| Level of knowledge in R of persons requiring training                        | From none – good level, mostly basic  |        |            |
| <b>Training needs for running quality checks in R</b>                        | 15<br>(79%)                           |        | 4<br>(21%) |
| No. persons requiring training: 35-40                                        |                                       |        |            |
| Level of knowledge in R of persons requiring training                        | From basic – good level, mostly basic |        |            |



MARE/2016/22

### Progress under WP7

#### Analysis of questionnaires received – Training Needs

|                                                                                                 | YES                                                                                                                                                                | PARTLY | NO      |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|
| Training needs on age reading                                                                   | 15 (75%)                                                                                                                                                           | 0      | 5 (25%) |
| Species for which training is required                                                          | Mullus spp (MUT), HKE, sharks & rays, large pelagic, Pagellus spp., turbot, rapana, WHG, SOL, ANE, Trachurus spp., Scomber spp., PIL, DOL, SPR, WHB, SPC, SPG, BOG |        |         |
| Species for which age standardisation is required:                                              | MUT, MUR, HKE, sharks & rays, Lophius spp., SOL, Trachurus spp., Scomber spp., ANE, PIL, Pagellus spp., SPC, ELE, BOG, turbot, rapana                              |        |         |
| Interest to participate at relevant workshops and exchange exercises for the species identified | 20/20<br>(100%)                                                                                                                                                    |        |         |



MARE/2016/22

### Progress under WP7

#### Analysis of questionnaires received – Training Needs

|                                                                                                | YES                                                                                                                                                                                                                                                                              | PARTLY | NO      |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|
| <b>Training need on stomach analysis</b>                                                       | 12 (60%)                                                                                                                                                                                                                                                                         | 0      | 8 (40%) |
| No. persons requiring training: – 30-35                                                        |                                                                                                                                                                                                                                                                                  |        |         |
| Level of knowledge on stomach analysis of persons requiring training                           | None – Advanced level                                                                                                                                                                                                                                                            |        |         |
| <b>Training need on identifying PETS</b>                                                       | 14 (70%)                                                                                                                                                                                                                                                                         | 0      | 6 (30%) |
| Training required for all PETS categories (mammals, birds, sharks & rays, reptiles)            |                                                                                                                                                                                                                                                                                  |        |         |
| <b>Other training need related to the collection of data on fisheries impacts on ecosystem</b> | On analysing trophic relations in fisheries impacts on the ecosystem / Related to the evolving requirements of DC-MAP, based on regional and end-user needs/ Constant training of young experts / Collection of data related to mussel aquaculture impact on Black sea ecosystem |        |         |



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### Planned Training Workshops – Interactions with other STREAM WPs

Workshops foreseen with collaboration with WP3 (sampling optimization tool and implementation of case studies) and WP6 (ALKs and age reading):

| Milestone N. | Milestone name                   | month                           | WP/Task | Person/s in charge       |
|--------------|----------------------------------|---------------------------------|---------|--------------------------|
| M3.9         | Workshop for W&C Med             | October 2018, Bari, Italy       | 3.3     | M.T. Facchini            |
| M3.10        | Workshop for East Med&BS         | September, 2018, Kavala, Greece | 3.3     | M.T. Facchini            |
| M6.2         | Workshop on ALKs and age reading | 10                              | 6.2     | P. Carbonara/ A. Massaro |

The final workshop will take place during the Consortium Final Meeting (March 2019)

**PRESENTATION 8 BY KOSTANTINOS TOULOUMIS**

**TITLE: WKPETSAMP Joint WGBYC/WGCATCH Workshop on sampling of by-catch and PET species.**

# WKPETSAMP



## Joint WGBYC/WGCATCH Workshop on sampling of by-catch and PET species



**Chair:**

**Bram Couperus, Katja Ringdahl**

**Lysekil, Sweden, 24-26 April, 2018**

### Participants

| Name                  | Institute                                     | Country<br>(of institute) |
|-----------------------|-----------------------------------------------|---------------------------|
| Bram Couperus         | Wageningen Marine Research                    | The Netherlands           |
| Katja Ringdahl        | Swedish University of Agricultural Sciences   | Sweden                    |
| Allen Kingston        | University of St. Andrews                     | United Kingdom            |
| Sara Königson         | Swedish University of Agricultural Sciences   | Sweden                    |
| Estanis Mugerza       | AZTI - Sustainable Fisheries Management       | Spain (Basque Country)    |
| Christian von Dorrien | Thünen Institute of Baltic Sea Fisheries      | Germany                   |
| Gudjon Sigurdsson     | Marine and Freshwater Reserch Institute       | Iceland                   |
| Kostas Touloumis      | The Institute of Fisheries Research (IN.ALE.) | Greece                    |
| Anna von Wirth        | Swedish University of Agricultural Sciences   | Sweden                    |
| Sofia Carlshamre      | Swedish University of Agricultural Sciences   | Sweden                    |

## Terms of Reference

### **Tor a.**

Develop an inventory of existing sampling programmes.

### **Tor b.**

- At-sea catch sampling programmes vs directed studies – comparison of designs, advantages and limitations.
- Alternative methods to obtain data on by-catches.
- Precision and accuracy needed by end-users. What do we know?
- Criteria to evaluate if at-sea sampling programmes meet end-user needs.

### **Tor c.**

Mechanisms for storage, maintenance and dissemination of data originating from at-sea catch sampling programmes and directed studies.

### **Tor d.**

Preparation of guidelines for at-sea sampling programmes, suggestion for best practices and relevant parameters for PETS sampling.

## Tor a. Inventory of existing sampling programmes

- Compilation of an inventory of incidental by-catch sampling programmes including:
  - **Regular Data Collection Framework (DCF)** at-sea sampling programmes.
  - **Dedicated and directed national monitoring programmes** on PET species.
- The inventory stores information about the:
  - description of the programme (Country, Year, Study area etc.),
  - sampling scheme (Sampling frame, PSU, Hierarchy, Stratification etc.),
  - target population (fisheries) and target species or species group,
  - estimation of the relative importance of the sampled fisheries for the various species groups.
  - end user(s).

### Tor a. Inventory of existing sampling programmes

- Currently, the inventory contains information about 74 programmes by 7 M.S.
- It provides an opportunity to get an overview of relevant programmes and studies.
- End-users would be able to assess what data should be available and identify gaps.
- The inventory will be forwarded to the FishPI2 (MARE/2016/22) project, to the WGBYC Working Group and (*can also be forwarded*) to the RCGs, to gather information on sampling programmes in other countries.
- WKPETSAMP recommended that WGBYC should get the responsibility to gather and maintain the inventory.

### Tor b. At-sea catch sampling programmes vs directed studies

This section provides a comparison between various aspects of different types of at-sea data collection schemes, mainly between Catch sampling programmes (DCF), Dedicated by-catch monitoring programmes and Directed incidental by-catch studies.

#### **Catch sampling programmes (DCF)**

- **Strengths**
  - Already being conducted in all coastal EU member states.
  - Large spatial and temporal scale.
  - Well-funded through established mechanisms.
  - Generally target fisheries with high catches and mixed catch compositions so may already be suitably designed for assessing by-catch of protected fish and elasmobranch species.

## Tor b. At-sea catch sampling programmes vs directed studies

### Catch sampling programmes (DCF)

#### • **Limitations**

- Sampling design may omit or under-sample gears of high importance to some PET species (Birds, mammals, sea turtles).
- Sampling protocols could be suboptimal for quantifying non fish PET species (mammals, birds etc.).
- Sampling intensity is sometimes low, unlikely to observe rare event by-catches.
- Observers are not always trained in alternative sampling methodologies and species identification for PET species.
- It is difficult for observer to monitor by-catch in surveys with multiple objectives.
- Data recording practices and database storage facilities may not be able to deal with incidences of PET species by-catch.

## Tor b. At-sea catch sampling programmes vs directed studies

### Main conclusions – recommendations

- The designs of the present at-sea sampling programmes should be altered to satisfy multiple objectives (revised sampling protocols and reallocation of sampling effort).
- The amount of sampling effort needed to meet the different objectives for such a fully functional multi-purpose at-sea sampling programme should be examined closely.
- The development of multi-purpose at-sea sampling schemes requires expertise in statistics, sampling design, fisheries exploitation patterns and distribution of PET species.
- Joint efforts are most likely needed. This could be done in cooperation between WGBYC, WGCATCH and the Regional Coordination Groups for Data Collection.

## Tor b. Alternative methods to obtain relevant data

To overcome some of the aforementioned limitations, alternative auxiliary methods of recording data on incidental by-catch of PET species were proposed.

- **Remote Electronic monitoring (REM)**

Different methods of remote electronic monitoring, including Closed Circuit Television (CCTV), might be a cost-effective way to increase sampling effort.

- **Self-sampling**

Self-sampling by industry through different apps or reporting logs might be considered.

- **Questionnaire/Interviews**

Questionnaires and interviews might be considered as a way to access and ultimately utilize empirical fishermen knowledge.

## Tor b. Precision and accuracy needed by end-users. What do we know?

- WKPETSAMP referred to an overview by FishPi WP3 which summarises the relevant end-users and their use of by-catch data.
- In general the end-user needs are not clearly defined by the end-users themselves.
- An overall need to understand the level of by-catch mortality for different PET species has been expressed by many end-users.
- It is the end-users' responsibility to prioritise PET for which there is an immediate need for by-catch estimates and associated precision. The Regional Coordination Groups will be the bodies responsible for defining regional sampling objectives.

### Tor b. Criteria to evaluate if at-sea sampling programmes meet end-user needs.

- By-catch risk assessment for species in different areas/métiers to set up criteria for evaluating if at-sea sampling programmes meet end-user needs.
- Method by FishPi WP3 and WGBYC:
  - Identification of PET species with high by-catch rates by fishery/métier.
  - Assessment of the sampling coverage of these fisheries under the EU-MAP at-sea sampling National programmes.
  - Calculation of an index about areas and fishing gears that are most in need of additional sampling.
- Relevant assessments were carried out within the FishPi for most areas in the NE Atlantic, but not for the Baltic, Mediterranean or Black Sea.

### Tor c. Mechanisms for storage, maintenance and dissemination of relevant data

- Properly quantifying incidental (rare) by-catch requires specifically trained observers and sampling protocols which should be readily available for at-sea observer programs.
- Building routine elements into the sampling protocol to ensure that if a by-catch occurs it will be noticed and recorded:
  - Indicate what part of the catch has been observed “on haul level”.
  - Treat each rare catch item as incidental by-catch.
- Make appropriate changes to the database in order to be able to store incidental by-catch data.

#### Tor d. Guidelines for at-sea sampling programmes, suggestion for best practices and relevant parameters for PETS sampling

- Best practice can be defined as sampling designs and protocols, implementation and data analysis that lead to minimum bias and an accurate estimate of precision, and which make the most efficient use of sampling resources.
- WKPETSAMP think that there is a need for a specific best practice in relation to the implementation of by-catch sampling programmes, in particular regarding sampling protocols, training of observers and data capture in relation to sampling of by-catches.

#### Tor d. Guidelines for at-sea sampling programmes, suggestion for best practices and relevant parameters for PETS sampling

| Process that need to be considered and described                           | Best practice                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sampling protocol - objective                                              | Sampling protocol needs to be documented.                                                                                                                                                                                     |
| Sampling protocol – the possibility for the observer to observe by-catches | It needs to be clear if it is a priority for the observer to monitor the hauling process and how the observer should report if the hauling process is not or is partly monitored.                                             |
| Sampling protocol – species selection                                      | It needs to be clear if the observer is assumed to sample all species caught or just species from a limited list.<br>It needs to be clear from the sampling protocol how observers should handle subsamples and rare species. |
| Species identification                                                     | Observers get proper training and provided with reference guides in species identification for all species.                                                                                                                   |
| Data capture                                                               | All species that a programme/ study are supposed to monitor need to be able to enter the national database.                                                                                                                   |
| Databases                                                                  | Databases need to include information that is relevant for the by-catch species e.g 1) how much of the hauling process has been observed 2) if all species were observed or if a restricted list were used.                   |

# WKPETSAMP



Joint WGBYC/WGCATCH Workshop on  
sampling of by-catch and PET species



**Thank you for your attention!**

**PRESENTATION 9 BY MATHEW ELLIOT**

**TITLE: DCF Métier Workshop: Sub-group of the RCGs - North Sea and Eastern Arctic and North Atlantic**



**Marine  
Management  
Organisation**



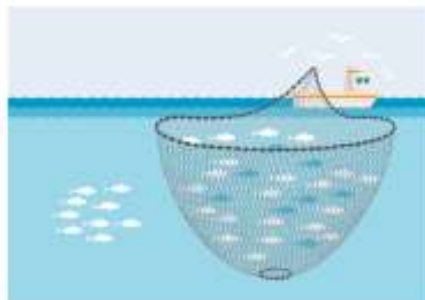
**DCF Métier Workshop: Sub-group of the RCGs -  
North Sea and Eastern Arctic and North Atlantic**

**22 January– 26 January 2018 - DTU Aqua, Lyngby, Denmark**



**Métier**

A group of fishing operations targeting a similar (assemblage of) species, using similar gear (as specified in Annex XI of Regulation (EU) No 404/2011), during the same period of the year and/or within the same area and which are characterised by a similar exploitation pattern.



## Why we need métiers



- Building blocks to describe fishing activities in both biological and economic terms;
- Provide the link between biological and economic data for bio-economic modelling;
- Mixed fisheries – *describing how mixed-fisheries aspects impact on the traditional single-stock management approach - catches of the various species are interlinked due to technical interactions between different fleets and gears;*
- Use for an ecosystem based approach; *data calls reference fishing activities of different countries that are similar within regions;*
- ICES VMS datacall – *estimating fishing pressure (swept area).*
- Use to analyse bycatch of Protected, Endangered and Threatened Species (PETS) – *important to understand how the total bycatch of PETS is attributable to different types of fishery.*

## Métier Framework

- Set out in EU MAP - Commission Implementing Decision (EU) 2016/1251 - Table 2, Fishing activity (métier) by region
- Matrix in Table 2 not as specific as in previous DCF and as set out at: <https://datacollection.jrc.ec.europa.eu/worddef/fishing-activity-metier>
- Based on a hierarchical matrix including as follows:
  - **Level 1 : Activity**
  - **Level 2 : Gear classes**
  - **Level 3 : Gear groups**
  - **Level 4 : Gear type**
  - **Level 5 : Target assemblage (target species)**
  - **Level 6 : Mesh size and other selective devices**

## Métier framework (as presented on JRC site)

Navigation: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

List of words:

- [Fishing Activity - Metier](#)
  - Fishing Area
  - Fleet Segment DCP
  - Fleet Segment ICB
  - Fleet Segment

**Fishing Activity - Metier**

Follows the aggregation of Fishing Activity at various levels (FT, LVC) for some of the regions. In the [Annexes](#) of the DMS/FAO/EC is reported the complete schema by regions.

- Baltic Sea** (ICES subdivisions 22-23)
- North Sea** (ICES areas 11L, 1R and V1R) and Eastern Arctic (ICES areas 1 and 11)
- North Atlantic** (ICES areas V-SIV and NAFO areas)
- Mediterranean Sea and Black Sea**
- Other regions where fisheries are operated by EU vessels and managed by RFMs to which the Community is contracting party or observer** (e.g. ICCAT, JOTC, ICGF, etc.)

4. **Fishing Activities for Mediterranean Sea and Black Sea**

| Level 1  | Level 2    | Level 3     | Level 4                      | Level 5                                                                                | Level 6                                |
|----------|------------|-------------|------------------------------|----------------------------------------------------------------------------------------|----------------------------------------|
| Activity | Gear/straw | Gear groups | Gear type                    | Target assemblage                                                                      | Stock size and other selection devices |
| Drifters |            | Drifters    | Small drifter (SDR)          | Molluscs                                                                               |                                        |
|          |            |             | Bottom trawl                 | Commercial species, deep water species, fixed demersal species and other water species |                                        |
|          |            |             | Multi-kg small trawl (MTT)   | Commercial species                                                                     |                                        |
|          |            |             | Bottom-pull hand trawl (BHT) | Commercial species                                                                     |                                        |
|          |            |             | Bottom trawl (BT)            | Fixed demersal and pelagic species                                                     |                                        |

<https://datacollection.jrc.ec.europa.eu/wordef/fishing-activity-metier>

## Workshop : Terms of Reference

- To **review current algorithms and processes** used for allocating a trip to a métier based on transversal data.
- To **understand and document the problems, issues and anomalies** arising from métier calculation in different Member States.
- To **provide standard guidelines** for determining or allocating a trip to a métier or multiple métiers and how to aggregate the data.
- To **provide and reference metadata** for the key inputs to métiers (gear, mesh and species/species groups) and how they are aggregated.
- Evaluate **standard format/or suggest appropriate existing format** (transversal data) for input into métier algorithm and develop a standard R /SQL/SAS/ script and pseudo code for métier calculation.
- To **define a strategy for storing and maintaining metadata** (methods and tables) that define the métiers.

## **ToR 1: Review current algorithms and processes for allocating a trip to a métier based on transversal data**

*No unified method and no common reference tables (to aggregate species into target species group or gear into métier level 4), agreed at EU level, to assign data into métiers, leaving some room for interpretation at the national level. This has slowed the development of a standard, generic EU approach, leading to continuing national differences in métier definitions within the same EU region (Ulrich et al, 2012).*

- Key aim - to improve this situation and to better achieve interoperability and compatibility between data sent by the different MSs.
- Document the approach taken by each participant nation to assign métier to transversal data in order to highlight potential differences and find a way to achieve a measure of harmonisation.

**ToRs 2 and 3: To understand and document the problems, issues and anomalies arising from métier calculation in different Member States. To provide standard guidelines for determining or allocating a trip to a métier or multiple métiers and how to aggregate the data.**

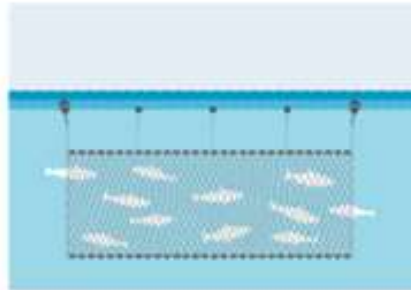
**Métier definition level (trip/fishing operation/fishing sequence)**

Three possibilities :

1. Trip,
  2. Fishing operation (i.e. haul for trawlers) or
  3. Fishing sequence (aggregation of fishing operations).
- Agreed that during a fishing trip, fishermen can practice more than one métier and that should be taken into account;
  - Assignment of more than one métier to one fishing trip must be possible (depending on the quality of data available) when a vessel changes gear or mesh size during the trip. - however:
    - Polyvalent fleet also has to be sufficiently described.
    - Raising of biological variables may depend on there being just one métier per trip;
  - Métier could be assigned at the fishing operation level (if available) but to avoid a multiplication of métiers a consolidation step could be performed at fishing sequence level e.g. - "fishing trip\*day\*gear/mesh size/dimension" .

## Fishing intention and target species assemblage

- Target assemblage, consistent with DCF level 5, is the variable used to define fisher behaviour by defining the fishers' intention (*describing fishing activity in both biological and economic terms*).
- Variety of methods used by MSs (flow chart for standardised guidance)
- System of estimation: Input versus output
- Metric: Value versus weight



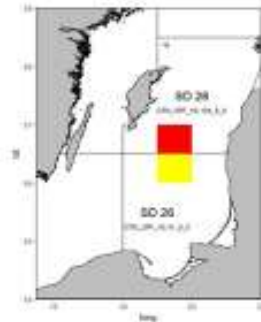
## Recommendations on defining target assemblage

- **Clear definition:** Needs to be a clear description of target species assemblage, which defines target assemblage as a fishing intention.
- **Value as a metric:** Value should be used as the metric to define métiers and fisher intention (in most cases).
- **Documentation of logic:** There is a need to document the logic applied by MS to determine the target assemblage. This will provide a road map towards harmonising data across MS, ensuring possible aggregation and analysis at a European level.
- **Input on declarative form for fisher intent:** As in the Nantes series of workshops, it is recommended that target assemblage is logged by fishermen, in the declarative form before leaving the port. And that MS continue to assess the quality of this data.
- **Testing and development:** Fisheries and fisher behaviour are in a constant state of evolution, therefore métier typologies and algorithms for allocation of these should reflect this development.



## Métier determination for trips covering more than one area

- Different but overlapping mesh size ranges may be defined by relevant regulations and frame of references associated. This may lead to duplication where a vessel fishes in two areas with different codifications within the same trip even where the gear and mesh are unchanged;
- Recommends harmonisation between areas;



*e.g. Baltic Sea, two different métier codes are in use to describe sprat fishery depending on the area of fishing, i.e. OTM\_SPF\_16-31\_0\_0 applicable in subdivisions 22-27 and OTM\_SPF\_16-104\_0\_0 applicable in subdivisions 28-32.*

## Small-scale fleet

**Small-scale fleet**, defined here as no logbook information:

- MIS\_MIS classification should be avoided.
- Métier classification can be based on auxiliary data, expert knowledge, algorithms, sampling.
- If census sales notes are available, the landings profile can be used to assign the métier. Can be combined with interviews.
- If the information is not available on the trip level, métiers could be estimated on the available level (e.g. monthly declarative forms).
- If it cannot be classified, the proportion without a métier classification should be reported when submitting data.

**Polyvalent small-scale fleet:**

- Need for classification of métier used per trip.
- In trips that use more than one gear/métier, efforts should be made to derive one main métier for that trip or, according to the expert knowledge/algorithm, to try to create two or more sequences for the same fishing trip.

## Selective device information

- The last part of the métier level 6 code. Codes available for panel and grid and the mesh size of the panel/the space between the bars of the grid.
- The selective devices affect the catch compositions - change the discards of a fishery. In some cases, part of a métier has selective devices and parts doesn't have it (e.g. Kattegat), and there can also be several different legal selective devices. In these cases, it is important to be able to distinguish the métiers because of the differences in discards.
- Not all countries have access to information on selective devices in the logbooks and even if the information exists, it is often considered unreliable and is therefore not used.
- Not possible to distinguish between a gear with no selective device and a gear with no information about selective devices - no available code to indicate that the information is missing.
- Countries that have good information on selective devices have a need for new codes to describe newly developed selective devices or combinations of more than one selective device. This can also be placed in a national métier level 7 to keep the level 6 common.

## Different criteria for defining the same métier

- Each MS has developed its own procedure to determine the target assemblage group and assign métiers to transversal data, based on their expert knowledge and available data sources. So different methods and thresholds can lead to the same métier code. Therefore it is important that the methods are documented and in some cases, there could be some harmonization within regions.
- Métiers are often merged when answering datacalls (ICES, FDI etc.). It should be transparent how the métiers are merged for the data to be comparable across nations.

**ToR 4: To provide and reference metadata for the key inputs to métiers (Gear, mesh and species/species groups) and how they are aggregated.**

- Gear list: Overview on how they are grouped by countries. Recommendation to avoid generic codes like GN, OT, TB.
- Species list: From the FAO ASFIS list, ISCAAP codes were analysed to find species groups. Additional columns showing how species have been grouped by nations. Some species are grouped differently by nations. Deep Water Species are identified in the list, according to the regulation (EU 2016/2336).
- Métier list: Using the RDB list with FAO area and métier, a script was made to turn that into a lookup table with the columns: gear, species group, minimum and maximum mesh size, and if it falls under a technical regulation. Also including métiers for Mediterranean and long distance fishery, which is used for the FDI datacall.

**ToR 5: Evaluate standard format/or suggest appropriate existing format (transversal data) for input into métier algorithm and develop a standard R/SQL/SAS/ script and pseudo code for métier calculation.**

Developing common scripts for assigning the métiers was not possible - realized that other auxiliary data and expert knowledge is used in the process, on a national level.

The workshop focused on:

- Descriptions of existing setups and general discussions on the issues and methods;
- Work on standardised reference lists that can be placed at a public repository.

Produced flowchart illustrating the process and inputs for constructing the métiers, which can be used as a template for setting up the system of assigning métiers.



## Suggested métier description template

| Métier description template                                  |                                                                              |
|--------------------------------------------------------------|------------------------------------------------------------------------------|
| EU-MAP region                                                | North Sea                                                                    |
| Fishing grounds                                              |                                                                              |
| Name of métier:                                              | DRB_MOL_0_0_0                                                                |
| Flag country:                                                | UK-ENG                                                                       |
| Harmonised with                                              | UK-Wales; UK-Scotland; UK-Northern Ireland;                                  |
| Merged with                                                  | UK - HMD_MOL 14/02/10                                                        |
| Date of update:                                              | 13/06/2015                                                                   |
| Date of next review:                                         | 12/06/2017                                                                   |
| Description of the métier                                    |                                                                              |
| Reference period                                             | 2013 - 2015                                                                  |
| Detailed gear types and selectivity devices used in métier   | Boat dredge                                                                  |
| Key target species included                                  | Scallops, clams, oysters, mussels                                            |
| Mesh size ranges included                                    | All                                                                          |
| Main by-catch species                                        | Limited by-catch (<5% of total catch)                                        |
| Number of vessels involved in métier during reference period | 1 vessel <10m, 2 vessels 10 - <12m, 10 vessels 12 - <18m, 1 vessel 24 - <40m |
| Seasonal pattern of the fishing activity of the métier       | Main fishery in Q3 and Q4                                                    |

## Recommendations from ToR 6

- The list of approved métiers should be maintained and publicly available (at the ICES website);
- Additionally a GitHub SharePoint be set up for reference lists and documentation;
- ICES happy to support a site within the ICES GitHub - needs a little expertise and dedicated pan-regional RCG effort to design and set up;
- RCG Chairs should consult with ICES as to how ICES RDB administrators might use this if the GitHub was to be the key source for the restricted lists;
- A procedure would need to be drawn up for updating the content of the GitHub.

## Tasks for the RCG's

- Decide on a repository for reference lists, documentation and métier descriptions
- Do the RCG want to encourage métier descriptions?
- Handling of overlapping métiers within FAO areas
- Procedures for managing métier list at the RDB (new métiers, overlapping métiers). Long-distance fishery and Mediterranean is currently missing (used for FDI).



## RCM Med&BS

17 – 21 September, 2018 - Kavala, Greece

# Review of outcomes of MEDIAS Working Group

Andrea De Felice  
(CNR-ISMAR Ancona, Italy)

## Main aims of MEDIAS surveys

MEDIAS is listed as a DCF mandatory survey and started in 2009 according to *Council Regulation (EC) N° 199/2008*, *Commission Regulation (EC) N° 665/2008* and *Commission Decision N° 2010/93/EU*.

The main goal of these acoustic surveys is to evaluate the abundance and spatial distribution of small pelagic stocks, independently of the data provided by commercial fisheries, and to assess the impact of the fishing activity on the environment (EC 199/2008, Article 12).

Target species are anchovy (*Engraulis encrasicolus*) and sardine (*Sardina pilchardus*) in the Mediterranean Sea.

Oceanographic data are also acquired during the surveys in order to describe environmental properties in the pelagic ecosystem and to understand the link between climate change and the variability in the abundance and spatial distribution of small pelagic fish.

## GSAs covered by MEDiterranean International Acoustic Surveys

- ✓ GSAs 1 and 6 – Northern Alboran Sea & Northern Spain
- ✓ GSA 7 – Gulf of Lion
- ✓ GSAs 9 & 10 – Ligurian Sea, North & South Tyrrhenian Sea (officially MEDIAS surveys since 2017)
- ✓ GSA 15 – Malta islands (not covered in 2017)
- ✓ GSA 16 – South of Sicily
- ✓ GSAs 17 & 18 – Northern & Southern Adriatic Sea (Eastern GSA 18 no DCF)
- ✓ GSAs 20 and 22 – Eastern Ionian and Aegean Seas (GSA 22 not covered in 2017)



The MEDIAS Steering Committee met in Ancona (Italy) in the period 17-19 April 2018, chaired by Dr. Andrea De Felice.

The 11<sup>th</sup> MEDIAS meeting was hosted by the CNR-ISMAR of Ancona at Grand Hotel Passetto.

The meeting was attended by 26 colleagues from the European Union countries involved in acoustic surveys in the Mediterranean Sea (i.e. France, Spain, Croatia, Greece, Italy) and in the Black Sea (Romania).



The main aims of the 11<sup>th</sup> MEDIAS meeting were:

- ✓ To present the results of the **MEDiterranean International Acoustic Surveys** (MEDIAS) carried out in 2017;
- ✓ To coordinate the MEDIAS to be performed in 2018;
- ✓ To improve and update the common Protocol for the MEDIAS that is incorporated in the DCF framework and reflected in the MEDIAS Handbook;
- ✓ To revise the ToRs from 2018 and to establish the ToRs for 2019.

The surveys held in 2017 in GSA 1, 6, 7, 9, 10, 16, 17 (east & west), 18, 20 and 22 were presented. A presentation concerning the survey held in GSA 29 was held by Romanian scientists. All the scheduled surveys were completed except the survey in GSA 22 (Aegean Sea) due to a late signature of the specific contract by the competent Greek Ministry and it was possible to cover only GSA 20 (eastern Ionian Sea), traditionally monitored in September.

A presentation by Dr. Angelo Bonanno showed the general concept of *GFCM Mid Term Strategy* aimed at: (1) Reverse the declining trend of fish stocks through strengthened scientific advice in support of management; (2) Support livelihoods for coastal communities through sustainable small-scale fisheries; (3) Curb illegal unreported and unregulated (IUU) fishing, through a regional plan of action; (4) Minimize and mitigate unwanted interactions between fisheries and marine ecosystems and environment, and (5) Enhance capacity-building and cooperation.

The MEDIAS group could be involved in *GFCM Mid Term Strategy* through expertise sharing towards non-EU countries in which acoustic surveys are not being held or are not yet standardized by an international protocol.

## TERMS OF REFERENCE FOR 2018

### Specific:

- ✓ Update MEDIAS handbook;
- ✓ Update the MEDIAS Website;
- ✓ Discussion on calibration procedure;
- ✓ To report each group workflow from raw data to biomass estimation in order to define a possible script for acoustic data elaboration benefitting of what is already available in EchoR;
- ✓ Discussion on plankton monitoring survey design;
- ✓ To present the last tests on CV estimation routine in R and evaluate official adoption for MEDIAS surveys;
- ✓ To work on Marine Strategy Framework Directive for ecosystem descriptors and to evaluate the contribution of MEDIAS;
- ✓ To update the common work on the tentative Special Issue of a Journal.

### Discussion on calibration procedure

Each MEDIAS group presented briefly the scientific echosounders they use, frequencies and calibration procedure applied. The outcome of the discussion was that at the moment all groups are using SIMRAD echosounders even if there is some variability with the ancillary frequencies available. All the groups have at least 38 and 120 kHz available. The calibration procedures are all in agreement with *Demer et al. (2015)*.

### CV estimation

The adoption of the script developed by Dr. Marco Barra (CNR-IAMC), for the moment, is not to be considered mandatory for the MEDIAS as a whole, but all the groups that applied it successfully with their data are going to use it officially from now on, in order to calculate CV (*Coefficient of Variation*) associated to their biomass estimations due to the fact that this issue is very important and urgent.

### Plankton monitoring synoptic with acoustic survey

A general discussion on the recent proposal to include a zooplankton monitoring along with the acoustic survey funded by DCF, took place. The conclusions were that, although most of the groups already collect plankton samples within the acoustic survey aiming to improve our knowledge on the:

- Spawning and nursery areas for anchovy and possibly gilt sardine;
- Zooplankton spatial distribution as derived from acoustic data;
- Population dynamics of small pelagics in terms of zooplankton distribution and abundance.

In order to analyze the collected data, obtain results and provide them in a systematic way to DCF, additional funding is required as these analyses need more manpower, more days at sea, specific sampling material, etc.

### Special Issue

The group continued the discussion started the previous years about the production of papers from the MEDIAS to contribute to a Special Issue of a Scientific Journal. Possible Guest Editors were identified in the MEDIAS group. Initially, certain topics were proposed for the Special Issue; these topics are of general interest or were started in past projects as AcousMed and need to be finalized. Moreover, individual papers (per research group) are expected. The group also agreed to address other groups working in the Mediterranean to contribute.

### MEDIAS Handbook updates

The group discussed some improvements to be introduced to MEDIAS Handbook. These updates have been directly put in the last version of the Handbook.

### Anchovy and sardine age determination

The MEDIAS group agrees to use otolith reading criteria for anchovy and sardine in accordance with ICES WKARA2 report (2016) and to follow the recommendation of that meeting to consider as birthdate for anchovy the 1<sup>st</sup> of January from an assessment point of view in relation to time-steps in the assessment.

### Anchovy and sardine maturity scale

For MEDIAS group it is strongly recommended the use of ICES WKSPMAT scale during the lab processing for classifying the reproductive phase for anchovy and sardine, particularly for identifying mature/immature which are very relevant to stock assessment purposes, in order to obtain the L50 estimation. This scale allows reaching a higher accuracy since it has been developed specifically for small pelagics (indeterminate spawners). Data conversion to MEDITS stages has to be adopted only if no other choices are available.

### EchoR

After the presentation of the workflows in use by the MEDIAS groups from raw data to biomass estimation, it was decided to try to translate those aspects of the workflows not contemplated in EchoR scripts through the organization of a specific session, in parallel with next MEDIAS Coordination Meeting, with the experts from each group that already worked with this software in R.

### MEDIAS website

It was decided to make some documents and maps freely available to public. In particular: MEDIAS Coordination Meeting reports, survey designs, MEDIAS Handbook, maps with spatial distribution of target species per area and a link to the principal publications from the group. The website in the future will have a more GIS oriented aspect for an easier and faster consultation of the survey results in a geographical context.

### Possible future expansions of the MEDIAS project

CNR-ISMAR and CNR-IAMC have referred their interest to cover respectively GSA 19 (western Ionian Sea) and GSA 11 (Sardinia) by acoustic survey. The MEDIAS Steering Committee agreed to ask for the inclusion in the MEDIAS of these new areas in order to fill the existing knowledge gaps in Italian seas; in the meanwhile possibilities to carry out these surveys within the framework of specific projects, until the inclusion in the MEDIAS, will be explored.

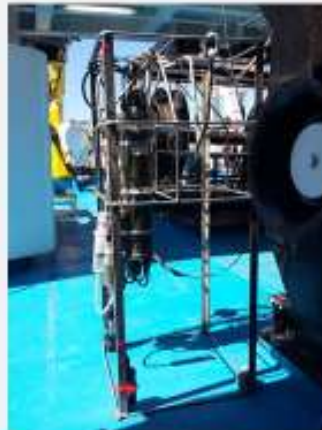
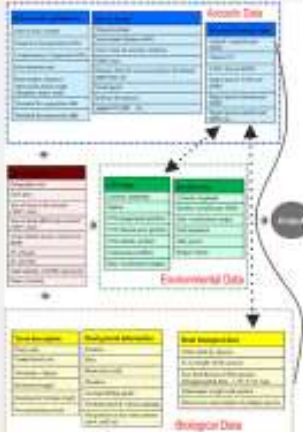
### Other studies

The possibility to gather data concerning vulnerable species, marine litter and jellyfish has been discussed. The group is available to build up proposals in case there is interest in this sense by EU or GFCM.

## MEDIAS proposals

MEDIAS group agrees to continue submitting its proposals at RCG meetings, but evaluate also the possibility to look for other ways to proceed with the proposals with specific projects at various levels or under the umbrella of GFCM activities.

MEDIAS group is proposing the building of a common database through a specific project, based on the past decisions concerning the common format of the database during AcousMed project and during some of the previous MEDIAS Coordination Meetings. Another proposal is the intercalibration exercise among the MEDIAS groups to be conducted at a unique location with all the research vessels and equipment in use during MEDIAS surveys. MEDIAS group proposes also the introduction of a plankton monitoring activity synoptically with MEDIAS acoustic surveys to be added to the DCF to improve the knowledge useful for acoustic signals discrimination (mainly fish from plankton) and to improve ecosystem knowledge by adding information on small pelagic fish preys in an ecosystem approach perspective.



## Terms of Reference for the "MEDIAS 2019"

### General:

- ✓ To join and harmonize the ongoing acoustic surveys in the Mediterranean Sea and Black Sea;
- ✓ To provide information for management decisions;
- ✓ To provide input for stock assessment purposes concerning the stocks which are managed internationally;
- ✓ To provide information for Good Environmental Status in the MSFD.

### Specific:

- ✓ Update MEDIAS handbook;
- ✓ Update the MEDIAS Website;
- ✓ Conduct a parallel session on the adaptation of the MEDIAS groups workflows to R procedures;
- ✓ To work on Marine Strategy Framework Directive for ecosystem descriptors and to evaluate the contribution of MEDIAS;
- ✓ To update the common work on the tentative Special Issue of a Journal.

**The 12<sup>th</sup> MEDIAS meeting will take place in Athens, Greece, in the period 9-11 April 2019**

## Research vessels used in MEDIAS surveys



R/V DALLAPORTA



R/V L'EUROPE



R/V BIOS DVA

**Thank you for the attention**



R/V MIGUEL OLIVER



R/V PHILIA

## Report of MEDITS Coordination meeting (Split, Croatia 19-20 April 2018)

G. Tserpes<sup>1</sup>

*RCG MED & BS  
Kavala, Greece, 17-21/9/2018*

<sup>1</sup> HCMR, PO box 2214, 71003 Heraklion, Greece

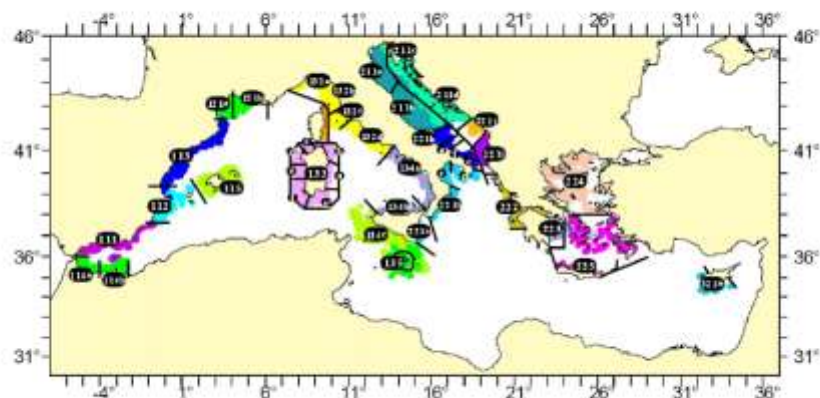


## MEDITS surveys

**Main goal: Monitor demersal resources of the Mediterranean**

- ✓ Running since 1994
- ✓ About 1300 survey stations
- ✓ Eleven countries involved

Coverage: All trawlable areas over the shelf and upper slope (10-800m)



# Meeting Agenda

**MEDITs 2018**  
19-20 April 2018  
Johannesburg, South Africa

**2018 MEDITs Coordination Meeting Draft Agenda**

The meeting will start at 09:30 on April 19, 2018 and will end on April 19 (17:00)  
Meeting place: Nala, ORCOT, Nala Park

**Wednesday 19th April 2018 (09:30-17:00)**

09:30-10:00  
• Welcome of the participants  
• Approval of the agenda

10:00-11:30  
1. Confirmation of the previous coordination meeting  
2. Feedback from other relevant meetings and working groups  
a. RCMEDS/SCM recommendations regarding MEDITs  
b. RCMEDS  
c. Report of the Workshop on Technical Environment to Support Evidence-Based Evaluation (MEDITs-TE)  
d. Workshop on Aging, Palliative and End-of-Life Care (MEDITs-ALPEC)  
e. Workshop on Global Research Impact from Knowledge of Health Interventions (MEDITs-GRIP)  
f. Workshop on Health and Society (MEDITs-HS)  
g. MEDITs - MEDITs data management  
h. MEDITs  
i. MEDITs data management  
j. MEDITs data management  
k. MEDITs data management  
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y. MEDITs data management  
z. MEDITs data management

11:30-12:00 Coffee break

12:00-13:00 Lunch break

13:00-14:00 Coffee break

14:00-15:00 Lunch break

15:00-16:00 Coffee break

16:00-17:00

• Other relevant activities and on-going projects  
a. Personal contact in the afternoon with the Board, Group Officers  
b. Use of MEDITs data for evidence-based medicine (EBM) research  
c. Indication analysis for medical research using MEDITs data  
d. The MEDITs project (MEDITs with MEDITs)

**Local dinner**

MEDITs 2018, Johannesburg, South Africa, 19-20 April 2018

**Thursday 20th April 2018 (09:30-17:00)**

09:30-10:00  
• Confirmation of agenda 4  
a. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs) (discussion among MEDITs, MEDITs, and MEDITs)  
b. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
c. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
d. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
e. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
f. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
g. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
h. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
i. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
j. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
k. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
l. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
m. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
n. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
o. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
p. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
q. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
r. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
s. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
t. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
u. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
v. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
w. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
x. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
y. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)  
z. Discussion of RCMEDS/SCM recommendations regarding MEDITs (e.g. feedback from MEDITs, MEDITs, and MEDITs)

10:00-11:30 Coffee break

11:30-12:00 Lunch break

12:00-13:00 Coffee break

13:00-14:00 Lunch break

14:00-15:00 Coffee break

15:00-16:00 Lunch break

16:00-17:00

• Planning of activities for the next twelve months, including dates and venue of the next meeting  
• Any Other Business  
• Meeting closure

MEDITs 2018, Johannesburg, South Africa, 19-20 April 2018

# Review of 2017 surveys

Due to administrative issues:

- ☞ The survey was not accomplished in Greek GSAs (20, 22 and 23)
- ☞ Accomplished with delays (autumn/winter) in several Italian regions

*No such problems are expected for 2018*

## MEDITS issues

- ✓ MEDITS Reference Taxonomic list (TM list) was updated and is available in MEDITS web-site
- ✓ A special volume of Scientia Marina including manuscripts based on MEDITS data is under preparation and it is expected to be released by the end of 2018 - beginning of 2019
- ✓ Development of guidelines regarding the use of MEDITS data
- ✓ MEDITS SharePoint



Navigation icons: back, forward, search, and other presentation controls.

G. Tserpes

MEDITS

RCG MED&BS

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## Other relevant activities

- ✓ The survey continues to contribute to the collection of data for assessing MSFD indicators
- ✓ Further to an FAO/GFCM initiative, MEDITS group will continue to provide technical support to non EU MS for the accomplishment of MEDITS-compatible surveys in non-European GSAs.
- ✓ Collaboration among MEDITS and Black Sea demersal surveys - Participation of Black Sea scientists to the MEDITS meetings
- ✓ The group offered support for the use of MEDITS data for a JRC project on ecological modelling
- ✓ Contribution to EMODnet Chemistry with information about marine litter data obtained from the MEDITS surveys
- ✓ Collaboration with ICES WG/COMEDA
- ✓ Development of synergies with the EU-funded (EASME) RECFISH project



Navigation icons: back, forward, search, and other presentation controls.

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The next coordination meeting will be held in  
France in spring 2019



PRESENTATION 12 BY VENETIA KOSTOPOULOU

TITLE: STECF EWG 18-04 Preparation for the evaluation of the list of mandatory research surveys at sea.



# ***STECF EWG 18-04***

Preparation for the evaluation of the list of  
mandatory research surveys at sea

*Venetia Kostopoulou, Unit C3, DG MARE*



## STECF EWG 18-04: background info

The meeting took place between 14 – 18 May 2018 in Varese, Italy

Chair: David Sampson (US)

Composition: 2 STECF members, 1 DG MARE representative, 3 experts from the Joint Research Centre (JRC) and 8 invited experts

The *report* was endorsed by STECF Summer Plenary 18-02 (2-6 July 2018):

<https://stecf.jrc.ec.europa.eu/reports/dcf-dcr>



## Aim of STECF EWG 18-04

To do all **preparatory work** for a **future** EWG on the **revision** of research **surveys** at sea to be included in the Data Collection Framework (DCF).

*Why now?*

- *current list in Table 10 of EU MAP\* was last revised in 2007*
- *new DCF Regulatory Framework (revised in 2017)^*
- *STECF recommendation to have frequent evaluation of surveys*

\* COMMISSION IMPLEMENTING DECISION (EU) 2016/1251 of 12 July 2016 adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019

^ REGULATION (EU) 2017/1004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

## What is the link to the RCGs?

The EWG 18-04 developed a Roadmap where RCGs have a role to play:

- *DG MARE is tasked to present the outcomes from EWG 18-04 to all RCGs*
- *RCGs to **populate** the two **databases** developed by EWG 18-04 (subgroups to be established if needed)*
- *RCGs to discuss list of stocks to be used as a starting point for the evaluation of surveys: **Table 1A and Table 1C of EU MAP or additional stocks?***
- *RCGs to **test** the evaluation tools*

## EU MAP

### Table 10

## Research surveys at sea

**43 surveys covering EU waters and NAFO**

| Name of the survey                                         | Acronym            | Area                     | Period                                      | Main targeted species                                                 |
|------------------------------------------------------------|--------------------|--------------------------|---------------------------------------------|-----------------------------------------------------------------------|
| <b>Baltic Sea</b>                                          |                    |                          |                                             |                                                                       |
| Baltic International Trawl Survey                          | IBTS-Q1<br>IBTS-Q4 | IBa, IB-d                | 1 <sup>st</sup> and 4 <sup>th</sup> Quarter | Cod and other demersal species                                        |
| Baltic International Acoustic Survey (Autumn)              | BIAS               | IBa, IB-d                | Sep-Oct                                     | Herring and sprat                                                     |
| Gulf of Riga Acoustic Herring Survey                       | GRAHS              | IBd                      | 2 <sup>nd</sup> Quarter                     | Herring                                                               |
| Sprat Acoustic Survey                                      | SPHAS              | IBd                      | May                                         | Sprat and herring                                                     |
| Rügen Herring Larvae Survey                                | RHLS               | IBd                      | March-June                                  | Herring                                                               |
| <b>North Sea and Eastern Arctic (ICES areas I and II)</b>  |                    |                          |                                             |                                                                       |
| International Bottom Trawl Survey                          | IBTS-Q1<br>IBTS-Q3 | IBa, IV                  | 1 <sup>st</sup> and 3 <sup>rd</sup> Quarter | Haddock, Cod, Saithe, Herring, Sprat, Whiting, Mackerel, Norway pout. |
| North Sea Beam Trawl Survey                                | IBTS               | IVb, IVc, Vb             | 3 <sup>rd</sup> Quarter                     | Plaice, Sole                                                          |
| Demersal Young Fish Survey                                 | DYFS               | Coasts of NG             | 2 <sup>nd</sup> and 4 <sup>th</sup> Quarter | Plaice, sole, brown shrimp                                            |
| Sole Net Survey                                            | SNS                | IVb, IVc                 | 3 <sup>rd</sup> Quarter                     | Sole, Plaice                                                          |
| North Sea Sandeels Survey                                  | NSSS               | IVa, IVb                 | 4 <sup>th</sup> Quarter                     | Sandeels                                                              |
| International Ecosystem Survey in the Nordic Seas          | IES                | IIa                      | May                                         | Herring, Blue whiting                                                 |
| Redfish Survey in the Norwegian Sea and adjacent waters    | REDNOR             | II                       | August-September                            | Redfish                                                               |
| Mackerel egg survey (Triennial)                            | NSWEGS             | IV                       | May-July                                    | Mackerel egg production                                               |
| Herring Larvae survey                                      | HL5                | IV, VIII                 | 1 <sup>st</sup> and 3 <sup>rd</sup> Quarter | Herring, sprat larvae                                                 |
| NG Herring Acoustic Survey                                 | NHAS               | IIa, IV, VIa             | June, July                                  | Herring, Sprat                                                        |
| Nephrops TV survey (FU 184)                                | NTVS84             | IIA                      | 2 <sup>nd</sup> or 3 <sup>rd</sup> Quarter  | Nephrops                                                              |
| Nephrops Trawl survey (FU 6)                               | NTV6               | IVb                      | September                                   | Nephrops                                                              |
| Nephrops Trawl survey (FU 7)                               | NTV7               | IVa                      | 2 <sup>nd</sup> or 3 <sup>rd</sup> Quarter  | Nephrops                                                              |
| Nephrops Trawl survey (FU 10)                              | NTV10              | IVb                      | 2 <sup>nd</sup> or 3 <sup>rd</sup> Quarter  | Nephrops                                                              |
| Nephrops Trawl survey (FU 9)                               | NTV9               | IVa                      | 2 <sup>nd</sup> or 3 <sup>rd</sup> Quarter  | Nephrops                                                              |
| <b>North Atlantic (ICES Areas V, VII and NAFO areas)</b>   |                    |                          |                                             |                                                                       |
| International Redfish Trawl and Acoustic Survey (Biennial) | REDTAS             | Va, XI, XIV, NAFO SA 1-3 | June/July                                   | Redfish                                                               |
| Flemish Cap Groundfish survey                              | FCGS               | 3M                       | July                                        | Demersal species                                                      |
| Greenland Groundfish survey                                | GGS                | IX, NAFO SA1             | October/November                            | Cod, redfish and other demersal species                               |
| SUNO Groundfish survey                                     | PLATUNA            | NAFO SUNO                | 2 <sup>nd</sup> and 3 <sup>rd</sup> Quarter | Demersal species                                                      |

|                                                                  |                 |                                                                        |                                             |                                                              |
|------------------------------------------------------------------|-----------------|------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------|
| Eastern IBTS 4th quarter (including Porcupine survey)            | IBTS-Q4         | VIa, VII, VII, IXa                                                     | 4 <sup>th</sup> Quarter                     | Demersal species                                             |
| Scottish Western IBTS                                            | IBTS-Q1         | VIa, VIa                                                               | March                                       | Gadoids, herring, mackerel                                   |
| ISCBTS September                                                 | ISCBTS          | VIa f g                                                                | September                                   | Sole, Plaice                                                 |
| WCRTS                                                            | VIa IBTS        | VIa                                                                    | October                                     | Sole, Plaice, Anglerfish, Lemon sole                         |
| Blue whiting survey                                              |                 | VI, VII                                                                | 1 <sup>st</sup> and 2 <sup>nd</sup> Quarter | Blue whiting                                                 |
| International Mackerel and Horse Mackerel Egg Survey (Triennial) | MEUS            | VIa, VII, VII, IXa                                                     | January-July                                | Mackerel, Horse Mackerel egg production                      |
| Sardine, Anchovy Horse Mackerel Acoustic Survey                  |                 | VII, IX                                                                | March-April-May                             | Sardine, Anchovy, Mackerel, Horse Mackerel abundance indices |
| Sardine DEPM (Triennial)                                         |                 | VIIc, IXa                                                              | 2 <sup>nd</sup> and 4 <sup>th</sup> Quarter | Sardine SSB and use of CUFES                                 |
| Spawning/Pre spawning Herring/Boarfish acoustic survey           |                 | VIa, VIa-g                                                             | July, Sept, Nov, March, Jan                 | Herring, Sprat                                               |
| Biomass of Anchovy                                               | BIOMAN          | VII                                                                    | May                                         | Anchovy SSB (DEP)                                            |
| Nephrops UWTV survey (offshore)                                  | UWTV (FU 11-13) | VIa                                                                    | 2 <sup>nd</sup> or 3 <sup>rd</sup> Quarter  | Nephrops                                                     |
| Nephrops UWTV Irish Sea                                          | UWTV (FU 15)    | VIa                                                                    | August                                      | Nephrops                                                     |
| Nephrops UWTV survey Aran Grounds                                | UWTV (FU 17)    | VIIb                                                                   | June                                        | Nephrops                                                     |
| Nephrops UWTV survey Celtic Sea                                  | UWTV (FU 20-22) | VIIg, h, j                                                             | July                                        | Nephrops                                                     |
| Nephrops Survey Offshore Portugal Rep5                           | UWTV (FU 28-29) | IXa                                                                    | June                                        | Nephrops                                                     |
| <b>Mediterranean waters and Black sea</b>                        |                 |                                                                        |                                             |                                                              |
| Pan-Mediterranean Acoustic Survey (I)                            | MEDIAS          | GSA 1, 6, 7, 9, 10, 15, 16, 17, 18, 20, 22                             | Spring-summer (stns 2-3)                    | Small pelagic species                                        |
| Bottom trawl survey in Black Sea                                 | BTSS            | GSA 29                                                                 | Spring - autumn (stns 2,3,4)                | Turbot                                                       |
| Pelagic trawl survey in Black Sea                                | PTSS            | GSA 29                                                                 | Spring-autumn (stns 2,3,4)                  | Sprat and Whiting                                            |
| International bottom trawl survey in the Mediterranean (I)       | MEDITS          | GSA 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 15, 16, 17, 18, 19, 20, 22, 23, 25 | Spring-summer (stns 2-3)                    | Demersal species                                             |



## Surveys not included in Table 10 of EU MAP

MS also carry out surveys that are not in the EU MAP list, but which are included in their adopted Work Plans for data collection, which are also co-funded under EMFF

The difference is that surveys in Table 10 of EU MAP are obligatory

MS Work Plans are uploaded on the DCF website:  
<https://datacollection.jrc.ec.europa.eu/wps>



## Historical overview: meetings

In the past, *three* meetings dealing with surveys:

- **2007**: SGRN 07-01 **revision** of 103 surveys, based on 3 criteria, which resulted in 'Table 10' of EU Data Collection
- **2009**: SGRN 09-04 **scoping meeting**, to prepare for the evaluation of surveys in a subsequent meeting. There was agreement on 6 criteria (including the 3 already used in 2007)
- **2010**: SGRN 10-03 **revision** of 92 surveys using 6 criteria, as developed by SGRN 09-04. Outcomes not taken up in DCF Regulation

## Historical overview: methodology (I)

Main components of evaluation process used in past meetings:

- **criteria:** six criteria in line with current DCF legal framework\*:
  - internationally coordinated and harmonised surveys
  - surveys designed to inform management decisions for fisheries management and ecosystem management needs
  - access of survey data to the scientific community
  - Survey coverage
  - No duplication between surveys
  - Non disruption of time series of survey data

\*REGULATION (EU) 2017/1004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

## Historical overview: methodology (II)

Main components of evaluation process used in past meetings:

- **Weighting factor:** each criterion was given a different weighting factor i.e. different importance:
  - internationally coordinated **(15%)** and harmonised surveys **(15%)**
  - surveys designed to inform management decisions for fisheries management **(35%)** and ecosystem management needs **(5%)**
  - access of survey data to the scientific community **(5%)**
  - Survey coverage **(10%)**
  - No duplication between surveys **(10%)**
  - Non disruption of time series of survey data **(5%)**

## Historical overview: methodology (III)

Main components of evaluation process used in past meetings:

- **Scoring:** each survey was given a score from 1 (best) to 3 (worst) for each criterion, to indicate the degree of meeting the criteria (example below):

| Criterion                      | Score = 1                                                                                                                                             | Score = 2                                                                                                                                                         | Score = 3                                                                                                                                                                                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Internationally coordinated | Activities for this survey and related surveys are coordinated by a specific expert group associated with an international organisation such as ICES. | The survey has some international coordination (e.g., bilateral agreements); or, the survey details are available to expert groups but are not fully coordinated. | The survey is only national in scope and is not governed by any international group; or, the survey is not coordinated with other related surveys; or, insufficient information was provided for this evaluation. |

## Summary results of SGRN 07-01

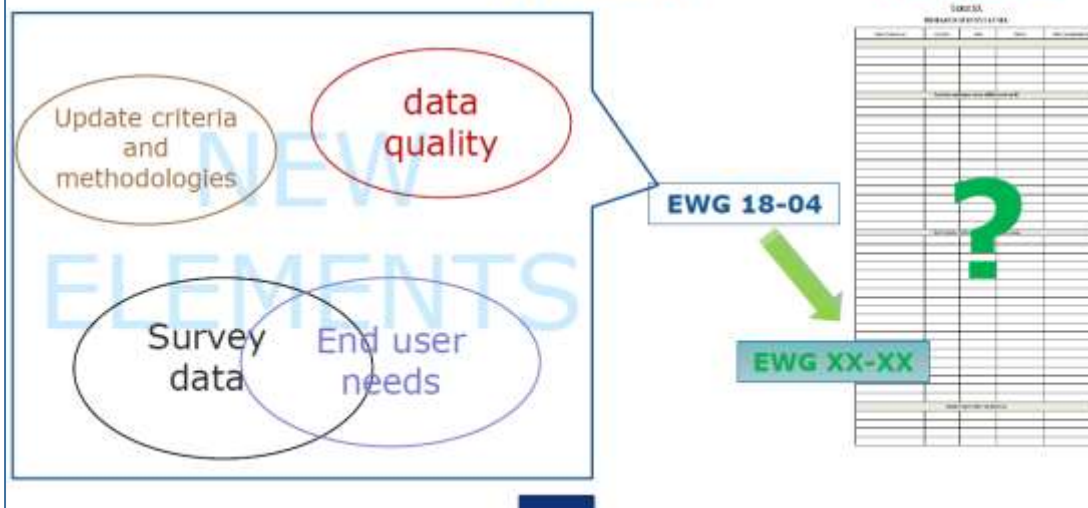
Table 2.1 Summary result of the evaluation by STECF/SGRN 07-01 of existing surveys according to the new proposed criteria to be possibly adopted and enclosed in the DCR in 2008.

| evaluation                             | All areas combined | Mediterranean Sea and Northeast Atlantic | Baltic Sea, North Sea, Northeast Arctic, Northwest Atlantic |
|----------------------------------------|--------------------|------------------------------------------|-------------------------------------------------------------|
| Fulfil the new criteria                | 45 (43.7%)         | 17 (30.4%)                               | 28 (59.6%)                                                  |
| Not in agreement with the new criteria | 49 (47.6%)         | 33 (58.9%)                               | 16 (34.0%)                                                  |
| No sufficient data available           | 9 (8.7%)           | 6 (10.7%)                                | 3 (6.4%)                                                    |
| total                                  | 103                | 56                                       | 47                                                          |

## Rationale of STECF EWG 18-04 meeting

### Present

### Future



## Evaluation process proposed by STECF EWG 18-04

New, *end-user driven*, process

Starts from *stock*, not survey

Uses the same six criteria as in previous meetings, but includes additional components, not addressed before

Binary system (Yes/No) that will produce definitive lists of:

- surveys proposed for inclusion in the mandatory list
- surveys that would benefit from modification, due to various reasons
- surveys that are not proposed for inclusion in the mandatory list

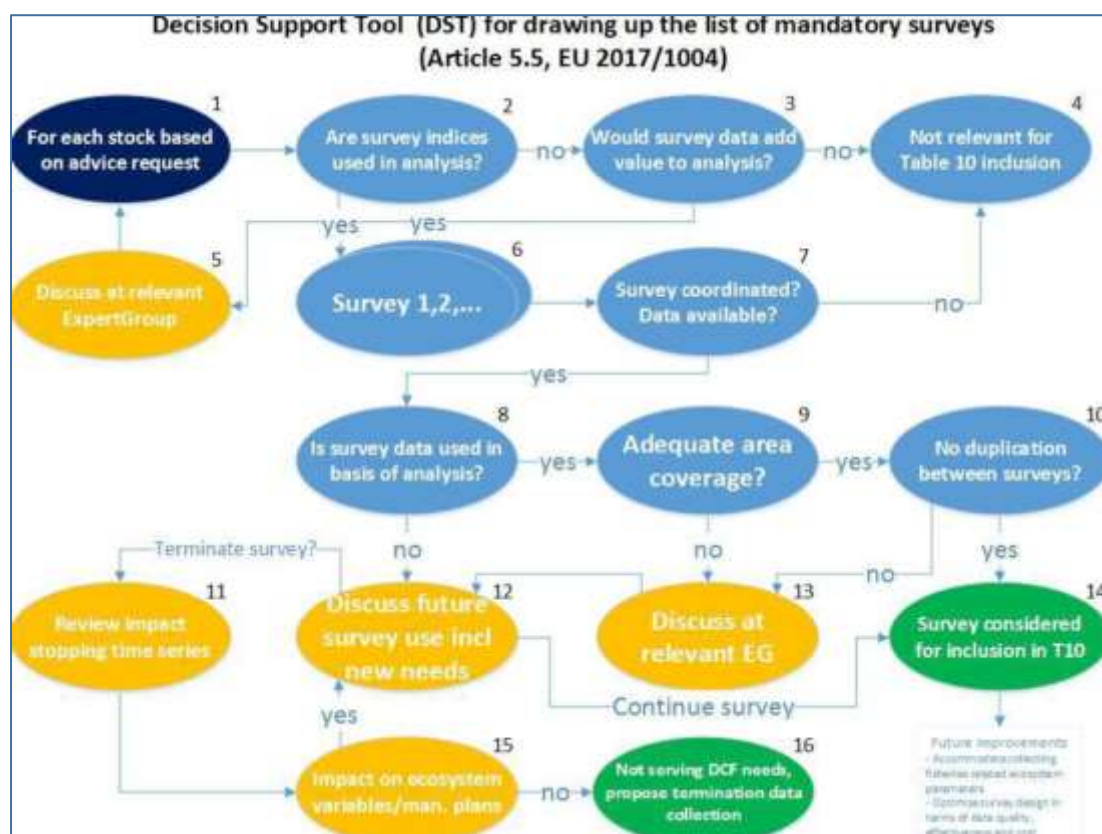
## Main outputs of STECF EWG 18-04

- Decision Support Tool (DST)
 

It is a flow chart. The entry point is the stock, intermediate steps have 'Yes/No' options, leading to the consideration for inclusion or not of a survey in the list. The tool couples each stock with the corresponding survey. The information needed to 'run' the DST can be found in the two databases below.
- Stocks database
 

Provides information on stocks. MS, **RCGs** and end users to fill in.
- Surveys database
 

Provides detailed information on surveys, including ecosystem data. MS and **RCGs** to fill in.



| Region                                     | Sub-region | BSA | Afric_body    | Assess_BD     | Stock | Afric_given | Survey  | Sub-survey | Survey_used | Assess_cat | Adviser_expert | Stock_coverage | Comments                           |
|--------------------------------------------|------------|-----|---------------|---------------|-------|-------------|---------|------------|-------------|------------|----------------|----------------|------------------------------------|
| Northwestern Sea and BI                    | 1.1.0401   |     | GRCM          | WSSGSR        | ANE   | NO          | MEDAS   | NA         | Y           | NA         | F              |                | no advice; the survey was not used |
| Northwestern Sea and BI                    | 1.1.0401   |     | GRCM          | WSSGSR        | ANE   | NO          | ECOMED  | NA         | Y           | NA         | F              |                | ECOMED survey was not used         |
| Northwestern Sea and BI                    | 1.1.0405   |     | STOCH or GRCM | EWG_MedAccess | ANE   | NO          | MEDAS   | NA         | NO          | NA         | F              |                | no advice; the survey was not used |
| Northwestern Sea and BI                    | 1.1.0504   |     | STOCH         | EWG_MedAccess | ANE   | Y           | ECOMED  | NA         | Y           | NA         | F              |                | ECOMED survey was not used         |
| Northwestern Sea and BI                    | 1.1.0504   |     | STOCH         | EWG_MedAccess | ANE   | Y           | MEDAS   | NA         | Y           | NA         | F              |                |                                    |
| Atlantic and adjacent seas (EATL & MED) NA |            |     | ICCAT         | ICCAT         | EBFT  | Y           | none    | NA         | NO          | NA         | N              |                | not a single survey                |
| Atlantic and adjacent seas (EATL & MED) NA |            |     | ICCAT         | ICCAT         | EBFT  | Y           | OMNIAFS | NA         | Y           | NA         | N              |                | the survey covers the whole area   |
| Atlantic and adjacent seas (EATL & MED) NA |            |     | ICCAT         | ICCAT         | EBFT  | Y           | TUNISAL | NA         | Y           | NA         | N              |                | the survey covers the whole area   |
| Atlantic and adjacent seas (EATL & MED) NA |            |     | ICCAT         | ICCAT         | EBFT  | Y           | ASPRL   | NA         | NO          | NA         | N              |                | the scientific survey was not used |
| Atlantic and adjacent seas (EATL & MED) NA |            |     | ICCAT         | ICCAT         | EBFT  | Y           | ASR     | NA         | Y           | NA         | N              |                | the aerial survey was not used     |
| Atlantic and adjacent seas (EATL & MED) NA |            |     | ICCAT         | ICCAT         | EBFT  | Y           | ASPRCNA | NA         | Y           | NA         | N              |                | the survey was not used            |

## Surveys database example

| Example Surveys database for support of the Decision Support Tool |             |        |                     |              |           |                |                     |                  |                |            |                        |                  |                  |                  |                  |                      |                              |  |  |
|-------------------------------------------------------------------|-------------|--------|---------------------|--------------|-----------|----------------|---------------------|------------------|----------------|------------|------------------------|------------------|------------------|------------------|------------------|----------------------|------------------------------|--|--|
| Region                                                            | Sub-region  | Survey | 10_year<br>duration | Base_Country | EU_member | Survey<br>year | Target_age<br>group | Starting<br>year | Ending<br>year | Q1         | Main<br>survey<br>type | MPSD-1<br>est_20 | MPSD-2<br>est_20 | MPSD-3<br>est_20 | MPSD-4<br>est_20 | MPSD-5<br>est_100_yr | Time_series<br>Comments      |  |  |
| Mediteranean Sea                                                  | 2.1 MEDAS   | Y      | Y                   | ITA          | Y         | CSA17          | small ps juvenile   | 2004             | 2018           | 4.3.18     | seasonal               | Y                | Y                | N                | N                | N                    |                              |  |  |
| Mediteranean Sea                                                  | 2.1 MEDAS   | Y      | Y                   | ITA          | Y         | CSA17          | small ps juvenile   | 2017             | ongoing        | 2.4.4.18   | seasonal               | Y                | Y                | N                | N                | N                    |                              |  |  |
| Mediteranean Sea                                                  | 2.1 MEDAS   | Y      | Y                   | GRC          | Y         | CSA21          | small ps juvenile   | 2004             | ongoing        | 4.3.1.18   | seasonal               | Y                | Y                | N                | N                | N                    | 2007, 2009, 2010, 2011, 2012 |  |  |
| Mediteranean Sea                                                  | 3.1 MEDAS   | Y      | Y                   | GRC          | Y         | CSA30          | small ps juvenile   | 2013             | ongoing        | 4.3.1.18   | seasonal               | Y                | Y                | N                | N                | N                    |                              |  |  |
| Mediteranean Sea                                                  | 3.2 MEDITE  | Y      | Y                   | CYP          | Y         | CSA25          | multiple juvenile   | 2005             | ongoing        | 2.3.1.6.7  | demersal               | Y                | Y                | Y                | Y                | Y                    | 2014                         |  |  |
| Mediteranean Sea                                                  | 2.1 SOLENOY | Y      | Y                   | ITA          | Y         | CSA17          | sole juvenile       | 2005             | ongoing        | 4.10.11.18 | beam tr                | Y                | Y                | Y                | Y                | Y                    |                              |  |  |
| Mediteranean Sea                                                  | 2.1 SOLENOY | Y      | Y                   | GRC          | Y         | CSA17          | sole juvenile       | 2005             | ongoing        | 4.10.11.18 | beam tr                | Y                | Y                | Y                | Y                | Y                    |                              |  |  |
| Mediteranean Sea                                                  | 2.1 SOLENOY | Y      | Y                   | SLI          | Y         | CSA17          | sole juvenile       | 2005             | ongoing        | 4.10.11.18 | beam tr                | Y                | Y                | Y                | Y                | Y                    |                              |  |  |
| Mediteranean Sea                                                  | 1.3 GRIND   | N      | N                   | ITA          | Y         | CSA9           | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 1.3 GRIND   | N      | N                   | ITA          | Y         | CSA10          | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 1.3 GRIND   | N      | N                   | ITA          | Y         | CSA11          | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 2.2 GRIND   | N      | N                   | ITA          | Y         | CSA16          | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 2.2 GRIND   | N      | N                   | ITA          | Y         | CSA18          | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 2.2 GRIND   | N      | N                   | ITA          | Y         | CSA19          | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 2.2 GRIND   | N      | N                   | ITA          | Y         | CSA10          | multiple juvenile   | 1995             | 2008           | 3.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Mediteranean Sea                                                  | 2.3 GRIND   | N      | N                   | ITA          | Y         | CSA17          | multiple juvenile   | 1995             | 2008           | 2.4.3.18.1 | demersal               | Y                | Y                | Y                | Y                | Y                    | 1998, 1999, 1999, 2007       |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |
| Adl and adjacent to EATL & MED                                    | GOVPASS-V   | Y      | Y                   | ICCAT        | Y         | ICCAT          | CEFT adults         | 2000             | ongoing        | 2          | school                 | N                | Y                | N                | N                | N                    |                              |  |  |

## Next steps

MS and RCGs have already provided most of the requested information on surveys last year, but *not* in the STECF EWG 18-04 format → MS & RCGs to populate the Stocks and Survey databases

DST: RCGs to decide whether EU MAP Table 1A and Table 1C should be the starting point, or additional stocks

RCGs to test the DST

....To prepare for actual revision of surveys, based on Roadmap as proposed by STECF EWG 18-04!

## Roadmap proposed by EWG 18-04

| Roadmap for the surveys review                                                                                    |                                                                                                                                                                                                                                                                                                                                 |                          |                    |                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Action                                                                                                            | Purpose                                                                                                                                                                                                                                                                                                                         | Responsible              | Timing             | Comments                                                                                                                                                           |
| Review outcome from EWG-18-04                                                                                     | <ol style="list-style-type: none"> <li>1. Test the DST based on existing partial databases developed by EWG-18-04 and suggested by the RCGs.</li> <li>2. To make certain the database and DST guidelines are clear and complete.</li> <li>3. To advise on improvements for the databases and guidelines for the DST.</li> </ol> | STECF<br>PLEN 18-02      | Mid-July 2018      |                                                                                                                                                                    |
| Develop guidance document with details on how to populate the databases and apply the DST                         | To provide clarity to users regarding how to input the data into the databases and how to use the data within the DST.                                                                                                                                                                                                          | RCGs or ad hoc contracts | Aug to Sep 2018    |                                                                                                                                                                    |
| Present outcome from EWG-2018-04 at RCGs                                                                          |                                                                                                                                                                                                                                                                                                                                 | DO MARE                  | Sep 2018           |                                                                                                                                                                    |
| RCG to populate the two databases                                                                                 | To make sure that the necessary data on stocks and surveys are included in the Stocks and Surveys databases                                                                                                                                                                                                                     | RCG                      | Sep 2018           | Build upon existing Excel files as a starting point, add needed information in new columns and rows. If needed, sub-groups to be established to complete the work. |
| Status of populating the databases to be reported through Liaison Meeting                                         |                                                                                                                                                                                                                                                                                                                                 | Liaison Meeting          | Oct 2018           |                                                                                                                                                                    |
| Analysis to be done applying the DST, resulting in a suggested list of surveys to be included in the new Table 10 |                                                                                                                                                                                                                                                                                                                                 | ad hoc contracts         | Nov 2018- Jan 2019 |                                                                                                                                                                    |

## Roadmap proposed by EWG 18-04 (cont.)

| Roadmap for the surveys review         |                                                    |                                  |          |                                        |
|----------------------------------------|----------------------------------------------------|----------------------------------|----------|----------------------------------------|
| Action                                 | Purpose                                            | Responsible                      | Timing   | Comments                               |
| Review of the outcome of the analysis. | See proposed ToRs for the surveys review EWG-19-XX | Review group meeting (EWG-19-XX) | Mar 2019 | End-users to be included in the group. |
| Report survey review to STECF Plenary. |                                                    | EWG-19-XX chair                  | Apr 2019 |                                        |



*Thank you*

**PRESENTATION 13 BY ARGYRIS SAPOUNIDIS**

**TITLE: Report from the Diadromous Sub Group (DSG) 'Eels' at the RCG Med & BS 2018.**

**Report from the Diadromous Sub Group (DSG) 'Eels' at the  
RCG Med & BS 2018**

**September 2018**

**Chair: Dr. Alan Walker**

12 experts on Eel, representing 10 countries, from the Baltic (6), Atlantic (5), North Sea (6) and Mediterranean (3) regions (some countries span 2-3 regions)



**Eel Data End-User**

The DSG identified the following eel-related end-users who could benefit from its application:

- WGEEL
- National bodies within the EU jurisdictions
- EU
- GFCM
- other groups (such as CITES SRG)

## Eel Distribution

- The Eel is distributed across the majority of coastal countries in Europe and North Africa, southern limit in Mauritania, its northern limit in the Barents Sea and spanning the entire Mediterranean.
- The growth stage, known as yellow eel, may take place in marine, brackish, or freshwaters. This stage may last from two to 25 years (and could exceed 50 years) prior to metamorphosis to the “silver eel” stage, maturation and migration to spawn
- Age-at-maturity varies according to temperature (latitude and longitude), ecosystem characteristics, and density-dependent processes.
- Biological traits, habitat characteristics and human impacts on the eel differ fundamentally. Mortality is by fisheries, turbines and pumps, pollution.
- Fisheries exploit all continental life phases: glass eel recruiting to continental waters, the immature growing yellow eel and the maturing silver eel.
- There are multiple commercial and recreational fisheries: with registered and non-registered vessels, without vessels, and using active or passive fishing gears. These all vary between local habitat, waterbody, country and international regions.



## Management Framework for Eel

EU Regulation for the Recovery of the Eel Stock

GFCM initiative to develop an adaptive regional management plan for eel in the Mediterranean Region

Reporting requirements of the EU Regulation – every 3 years

Biomass and mortality stock indicators for each Eel Management Unit ( $3Bs$  and  $\sum A$ )

## National Assessments

Variety of data collected on habitats, gear types, life stage

Variety of different assessment methods developed to cope with the variation in eel sub-stocks, impacts, availability of historic and time series data, expertise etc.

## International Assessments

WGEEEL Data Requirements      Direct data (recruitment time series, landings, stocking etc)

3Bs and  $\Sigma A$  Outputs from national assessments

## Proposal for Eel RCG Workplan

We propose to continue the Diadromous sub-RCG, but we would have the Eel Group, and the meeting would be organised (i) pan-regional issues, and (ii) sub-groups by region. This would ensure Regional specificity but overall coherence.



### Future Work Plan

**This work would require a concerted action, such as call for proposals MARE/2016/22.**

#### ***For fisheries data collection***

The RCG would request from Member States information on how they collect and use the data, and from end users on what data results they need.

The RCG will use this to advise on the requirement and methods for collecting fisheries data under DCF at regional scales.

#### ***For fisheries independent data collection (index river basins – water bodies)***

Examine end-user needs regarding fisheries independent data to determine minimal common requirement.

#### ***For all data, the quality assurance***

Approve Statistical Sampling and Standard Procedures

Make recommendations to countries where quality needs to be improved.

## Recommendations from 2017

The report includes the WGEEL responses to the 2017 recommendations from the Baltic RCG  
also additional notes from the Eel RCG (this meeting)

- For **commercial fisheries in Union waters, advise on the selection of stocks** for which variables (sex-ratio, maturity, fecundity) have to be collected in support of scientific advice, and the temporal frequency of data collection.
- For **commercial fisheries in freshwaters, specify stock-related variables** to be collected for individual specimens, on age, length, weight, sex, maturity and fecundity, by life stage. Noting that the requirement to collect annual catch quantities by age class or life stage is obligatory.
- For **recreational fisheries in all waters, advise on the end-user needs for age or other biological data**, noting the requirement to collect annual volume (numbers and weights or length) of catches and releases is obligatory.
- **Define the rivers to be monitored for eel at regional level**, noting that 'rivers' in the Legal Text is interpreted to represent 'water bodies' (STECF 2017).
- **Coordinate, at regional level, the selection of stocks from which variables (recruits, standing stock, silver eel) have to be collected**, and advise on temporal frequency (annual or not) of the collection of variables for eel.

## Data Call / Database

- ICES / WGEEL issued a data-call in 2017, and a further call in 2018
- WGEEL are developing a Database for Eel, along ICES guidelines
- 2018 WGEEL very much a development meeting

Not all EU Countries responded by the deadline date 19 of 21.

**Note:** by the WGEEL Meeting, 20 of 21 had responded.

Uploading, testing Dbase and designing outputs was time consuming but productive. Further development planned for 2019. Exciting!!

WGEEL has a Stock Co-ordinator and Stock Assessor appointed.

## Data Quality Assurance

- It is recommended that a Quality Assurance System be established for eel as follows:
- National Data: Statistically sound sampling scheme (4S) and Standard Operating Procedures (SOPs)
- National Assessment and Reported Stock Indicators: A full quality assessment of the national assessments of eel biomass and mortality and the reported stock indicators is lacking.
- The WGEEL end user needs to know the effect of 'data quality' on the international assessment
- The use of Index River Data for the ground truthing and validation of the national assessments

## Recommendations from 2018

*Alan asked me to ask you:*

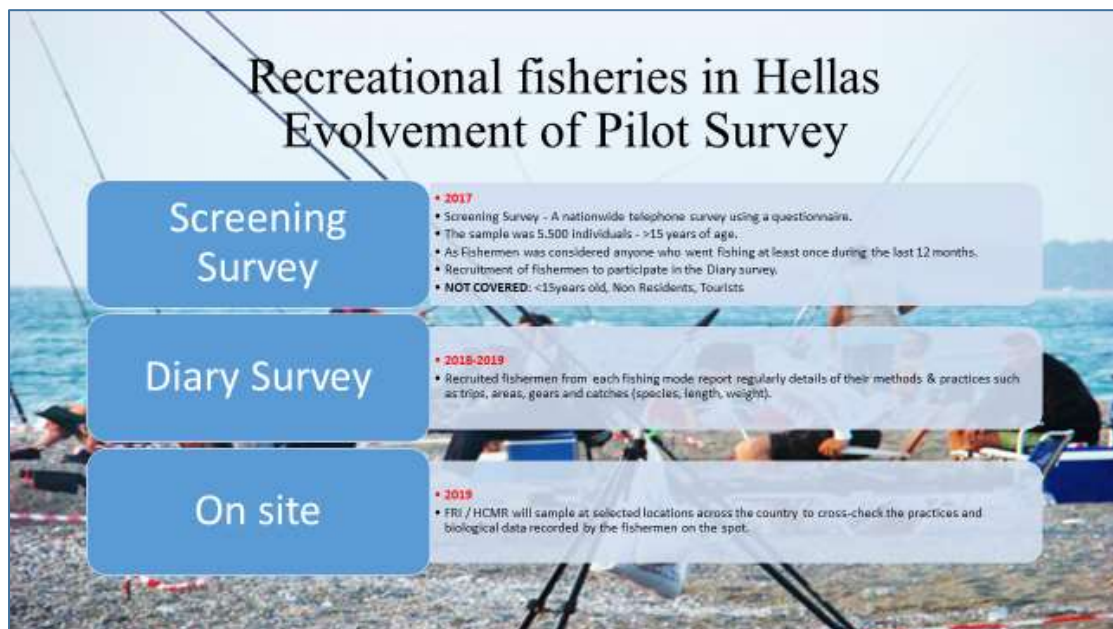
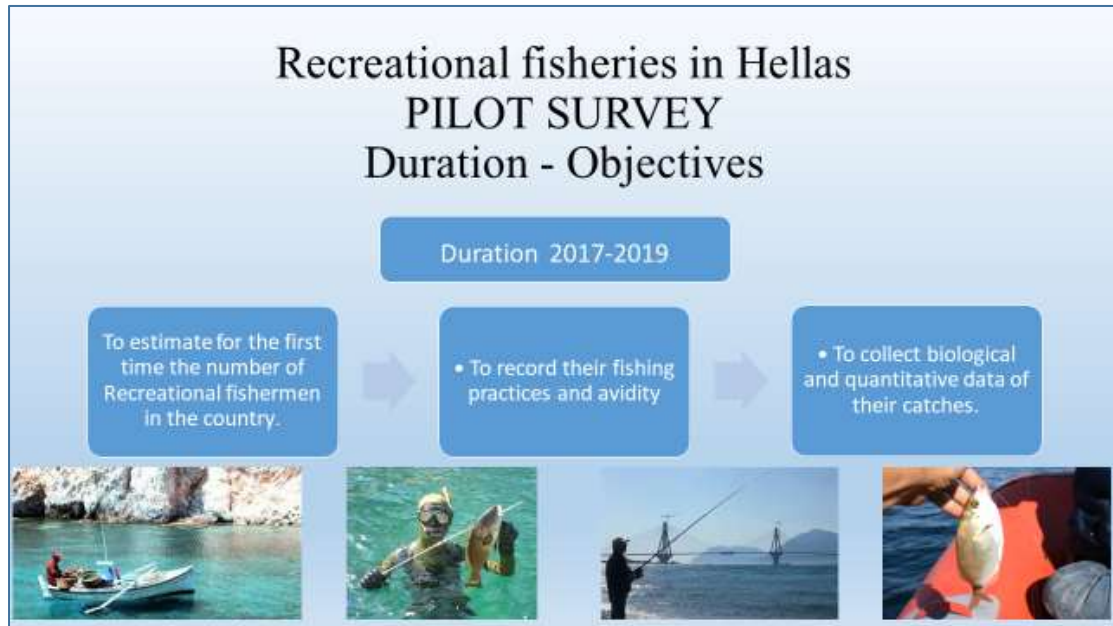
*We need some advice on our approach: are we making decisions for the Liaison Meeting to endorse, or are we making recommendations for someone else to make the decision?*

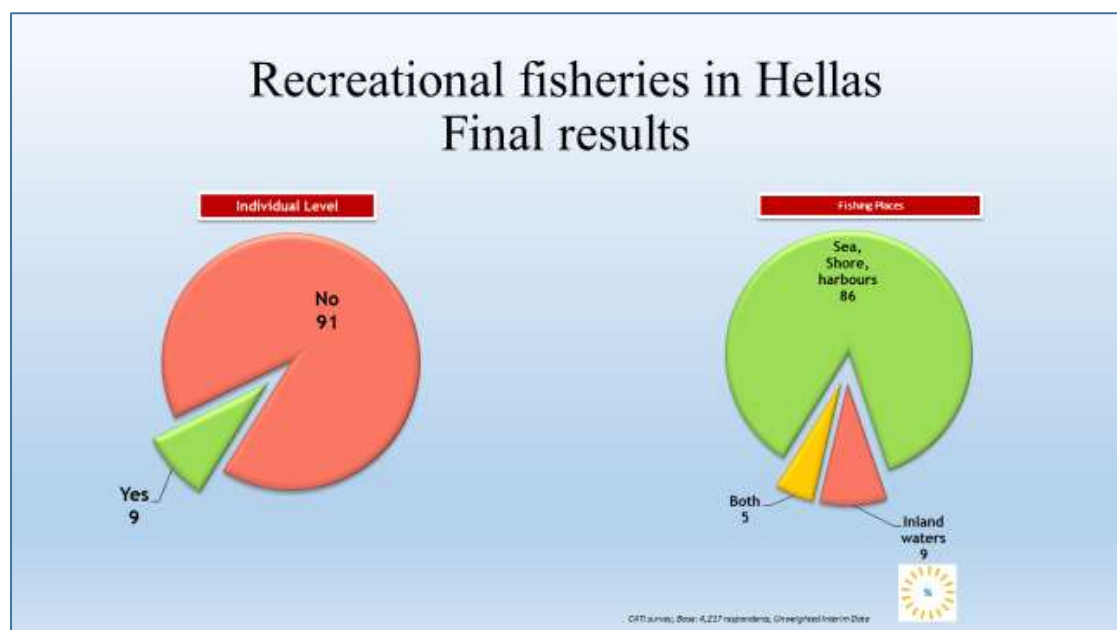
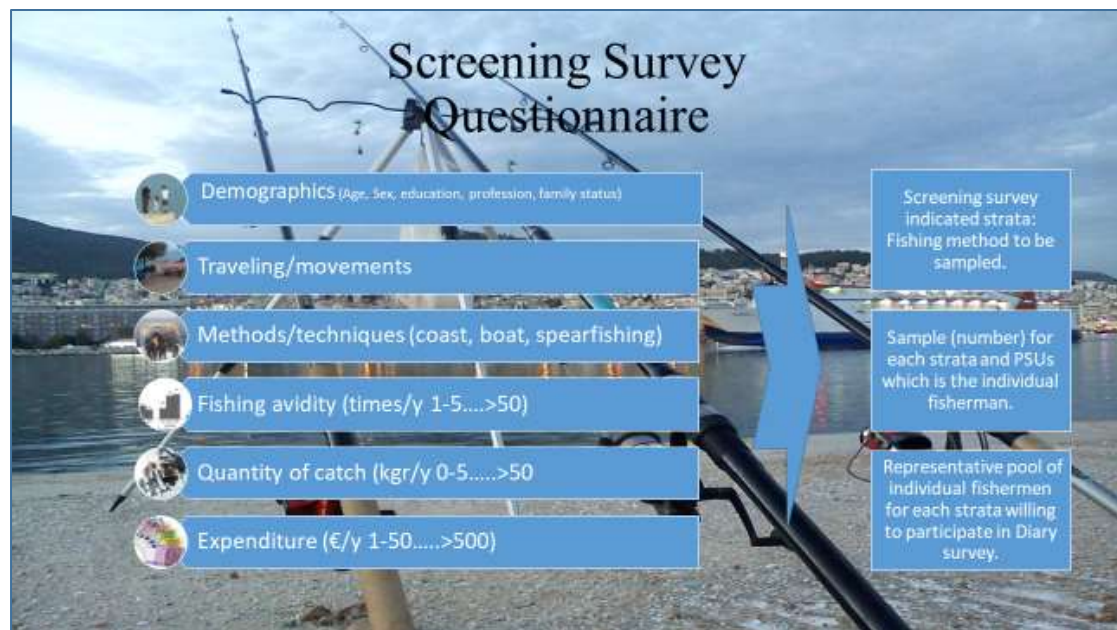
## Recommendations from 2018

There are draft recommendations / decisions in the report on:

- Biological variables to be collected: e.g. maturity stages and fecundity are not relevant for eel
- an assessment of the mortality rate of the eels released from a fishery
- Approval of sampling programmes, Statistical methods and SOPs
- Approval of Index Rivers
- Impact of data quality on the international WGEEL assessment
- Co-ordination of various datacalls
- Recommendation to the Commission that the Diadromous Fish RCG should be included directly in the COMM consultation
- Recommend: a Concerted Action to achieve the DSG/RCG Work Plan







## Recreational fisheries in Hellas Final results



CAT survey, Base: 4,227 respondents, Unweighted Interim Data



## Recreational fisheries in Hellas Final results



CAT survey, Base: 4,227 respondents, Unweighted Interim Data



## Recreational fisheries in Hellas Three Major Fishing Modes

- Fishing from the shore



### Fishing from the boat



### Spearfishing



## Diary Survey



Recruited participants from screening survey. No for each fishing practice/mode to be decided



Voluntary participation/ can leave whenever they want



A form will be provided to each individual fisherman in order to record details of their practices (trips, areas, gears, techniques etc.) and catch (species, length, weight, etc.) each time they go for fishing.



Reporting of illegal practices and catches will be encouraged. Guaranteed anonymity in the data handling expected to positively affect reporting.



Aim: Collect details of practices & catches with the purpose to calculate CPUE

## On site sampling



Onsite sampling will be carried out in parallel with the diary survey.



FRI/HCMR collaborators will record biological data



Selected periods - All year round, 24h/day.  
No of days to be decided



Ports & Beaches Randomly selected from 3 sites



Validate reliability of the data reported to diaries

Coast line length 13.676 km, ~ 3.000 islands



## END OF THE PILOT SURVEY

Upon completion of the pilot study the number of active recreational fishermen in marine waters and critical qualitative and quantitative data on recreational fishing in Hellas will be identified and evaluated for the first time.

Knowing

- 1 No of Recreational fishermen and the fishing practices
- 2 No of fishing trips and hours per year
- 3 Catch per fishing trip per person

