

**Report of the
Regional Coordination Group Meeting for the
Mediterranean and Black Sea 2020**

31/08/2020 - 2/09/2020

VIRTUAL MEETING

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Executive summary

The Regional Coordination Group for Mediterranean and Black Sea (RCG MED & BS) took place virtually from the 31st of August to 2nd of September 2020. The first day from the meeting (31st of August) was dedicated to meeting with End-users, followed by 2-day RCG meeting). The availability of SharePoint offered by ICES proved to be very efficient in organizing the work before, during and after the meeting.

The 4th 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. The RCG MED&BS meeting was attended also by the representatives of the DG MARE, GFCM Secretariat, the chairs of MEDITS and MEDIAS steering committees and the STREAM project coordinator.

In 2020 an official data call was launched by the chair of the RCM MED & BS, requesting data on landings, effort and value data for the period 2017-2019, for addressing the following:

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

The relevant Data Call was announced on 7th of July to all National Correspondents, with a deadline on the 10th of August, 2020. The data was required to be submitted in two different data files similar to previous Data Calls.

Data were submitted by all Member States in the Mediterranean Sea and the Black Sea. The available data were reviewed by Ms Simona Nicheva and Ms Charis Charilaou, and clarifications on data values and coding were received whenever requested.

A ranking system of metiers at level 6 was performed at regional level (Mediterranean Sea, Black Sea - GSA29). 26 metiers were identified for the Mediterranean Sea for the period 2017-2019, listed in Table 5.14. 11 metiers were identified for the Black Sea for the same period, listed in Table 5.5.

In overall, 12 metiers were selected through the ranking procedure in the Mediterranean and 6 in the Black Sea (see Table 5.13 and Table 5.20 accordingly). The results from the ranking system of metiers at level 6 that was performed at the regional level were reviewed by the RCG Med & BS during plenary. It was agreed that this procedure will be performed again the following year, through data that will be provided under the RCG's data call.

During the meeting 12 recommendations were made:

2 of the Recommendations could be considered horizontally important:

Establishment of RCG MED&BS data requirements registry (#2) - The registry should be completed at RCG level for common data requirements and MS level for data requirements on a national level.

Notification procedure from DTMT (#5) - We request for the possibility of establishment of a procedure for notifications to the relevant MS when a new data transmission issue is uploaded in the DTMT.

2 Recommendations directed towards the end-users:

Establishment of dedicated STECF EWG for data quality on the Mediterranean and Black Sea data call (directed to end-users) (#3) - directed to DG MARE and STECF. RCG MED & BS 2020

recommends the establishment of a dedicated STECF EWG regarding data quality on the Mediterranean and Black Sea data call, which should convene before the STECF EWG on stock assessment and after the Med&BS data call legal deadline.

Timeliness of the availability of DCRF templates on the GFCM DCRF online platform (#4) - directed to GFCM. RCG MED & BS 2020 recommends to GFCM that the DCRF templates for reporting on the DCRF online platform are made available to MS earlier, if possible.

Regional recommendations:

Agreement on sharing detailed information on data transmission issues (#1) - RCG MED&BS 2020 recommends sharing of detailed information on data transmission issues on MS level for the purpose of RCG MED&BS Subgroup on data transmission issues and data requirements.

Recreational fisheries (#6) - RCG MED&BS 2020 recommends continuation of the workshop for Recreational fisheries. The first meeting of this workshop was in 2019, but due to COVID-19, the 2020 meeting was postponed for 2021.

Speeding up the establishment of a scientific network for sampling optimization (#7) - RCG MED&BS 2020 recommends speeding up the establishment of a scientific network for sampling optimization. Med&BS NCs should nominate national experts for participating in the network on sampling optimization; the nominations should be communicated to the current moderator of the scientific network for sampling optimization (Ms Isabella Bitetto) and RCG Med&BS chairs.

Training workshop on the use of the commercial sampling optimization tools developed under STREAM project (#8)* - RCG MED&BS 2020 recommends the organization of a training workshop on the use of the sampling optimization tools developed under STREAM project.

Data quality. Application the data quality checks developed under the WP6 of the STREAM project (#9)* - RCG Med&BS 2020 recommends applying the data quality checks developed under the WP6 of the STREAM project before submitting data to the relevant Data Calls

*It should be investigated is it possible to combine the 2 WS in one week. 2021 or ASAP when the COVID-19 restrictions allow a physical meeting.

Age reading workshop - Black Sea (#10) - RCG MED&BS 2019 and 2020 recommend the organization of an Age Reading Workshop on turbot (*Scophthalmus maximus*) and piked dogfish (*Squalus acanthias*).

Training workshop on PETS identification (#11) - RCG MED&BS 2020 recommends the organization of a Training workshop on PETS identification for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).

Continuation of Setting up of a Regional Database (RDB) for the RCG MED & BS (#12) - RCG MED&BS 2020 recommends continuation of the setting up of a Regional Database.

The Agenda, Terms of References and the participants' list are in Annex I, Annex II and Annex III respectively. Recommendations are listed in Annex IV and they summarize the work, discussions and decisions of the RCG MED & BS 2019 and 2020. The official data call for 2020 is in Annex V.

In 2020 the RCG MED & BS was co-chaired by Ms Simona Nicheva and Ms Ivana Vukov and in 2021 it will be co-chaired by Ms Ivana Vukov and Mr Jurgen Mifsud. If the COVID-19 pandemic situation and restrictions allow it, the 2021 RCG MED&BS can be a physical meeting in France or Cyprus.

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TOR 1 - End-users Meeting - 31.08.2020

1.1 – Identification of end-user needs in 2020/2021 and use of data

ToR 1.1 included presentations by main end-users – EC and GFCM regarding data needs in 2020/2021 and use of data.

Mr Alessandro Mannini briefly described the management of Mediterranean and Black Sea data call from JRC's technical point of view and the data submission of data by MS in 2020. Unlike in previous years, in 2020 the operational deadline was the same for the Black Sea and Mediterranean countries. The delay in 2020 data call legal and operational deadlines was due to a technical issue in terms of security of the JRC web page during the COVID-19 lockdown. The legal deadline was postponed to 16 July and the operational deadline to 30 July 2020. Compared to previous years, all the MS answered quickly to the data call and there were no particular issues. Some MS asked DG MARE to reupload the whole time series for different reasons, there was good communication with DG MARE and MS and afterwards, JRC opened the upload facility according to the request. In 2020 the upload monitor was remade and it included also the possibility to upload raw survey data, for example for Black Sea surveys. After the legal deadline the upload facility was closed and the JRC provided the MS with a coverage report. However, no particular data quality checks were produced because the Mediterranean and Black Sea data are used for the stock assessment so the data quality checks are done during the relevant EWGs for the specific stocks and areas according to the species determined in the terms of reference.

To streamline communication between DG MARE, MS and JRC, Mr Alessandro Mannini added as a general suggestion that in case MS need to resubmit the entire time series they should inform DG MARE well in advance to allow time for DG MARE to consider the request and to communicate to JRC the request to open the upload facility.

Data submitted according to the Mediterranean and Black Sea data call are used in the second part of the year for the two stock assessment working groups. In 2020, the first working group is dedicated to the Western Mediterranean stocks and the second working group to the Adriatic, Ionian and Aegean Seas stocks.

Ms Evelina Sabatella expressed appreciation of the work done by JRC also in assisting in the upload with the new upload facility and added that it would be useful to have a specific group on data quality for the Mediterranean and Black Sea data call as MS are receiving feedback only during the stock assessment working group without prior notification on any possible issues.

Regarding a STECF EWG on methods for supporting stock assessment in the Mediterranean DG MARE clarified that a dedicated EWG was already planned for mid-2020, but was postponed due to the Covid-19 situation. This EWG was linked to the outcomes of the Regional Coordination Group Med & Black Sea Subgroup on 'Meeting with End-users of Scientific Data' (12-14 March 2019,

Rome), where discussions took place on ways to improve data quality, before the operational deadline of the Mediterranean data call.

Regarding the FDI data call, the legal deadline is 7 September and the operational deadline 11 September 2020. The Mediterranean and Black Sea and the FDI data calls were modified in 2020 to avoid the duplication of reporting of biological and effort data. Mr Alessandro Mannini explained that the management of the Mediterranean and Black Sea and the FDI data calls at the level of the JRC is different. The Fleet Economic and FDI data calls depend on Tableau data checks available also to MS and experts and it includes graphic visualization of data and possible errors. The Mediterranean and Black Sea data call relies on specific scripts implemented after data is extracted from the JRC database, and the data quality check is performed for a subset of data during the stock assessment working group.

Regarding the Mediterranean and Black Sea data call, the group discussed on the list of species included in the data call. Ms Evelina Sabatella added that this issue is linked with the revision of the EUMAP, in line with what RCG Med&BS recommended in 2019, that the list of species could be reduced according to end-users requirements to the list of priority species considered by GFCM and species included in management plans. In the context of the revision of the EUMAP an analysis of the usefulness of data collected is advisable.

DG MARE clarified that it is important to keep as much as possible information for the evaluation of management plans given that in the Mediterranean Sea we are dealing with mixed fisheries and complex ecosystems, scientific advice is needed not only for main commercial species but also other species.

EC (DG MARE/JRC) presented data needs in 2020/2021 and use of data including the following:

- Schedule of data-calls and relevant STECF working groups,
- Changes in data formats, and
- Data quality checking procedures and communication with MS - progress in 2020.

The DG MARE data needs and priorities focus mainly on the Western Mediterranean Sea, where the 2nd year of implementation of the first-ever multiannual management plan for demersal trawlers in the Mediterranean Sea has started: the western Mediterranean multiannual management plan. Thanks to the scientific data collected, STECF was able to assess in Sept 2019 most of the demersal stocks covered by the multiannual plan. In addition to the scientific advice on stock assessment, the multiannual management plan relies on scientific advice for the adoption of spatio-temporal closures to protect juveniles and spawning areas of hake, red mullets and other key demersal stocks. DG Mare wants to highlight the excellent work done by scientists from Italy, France and Spain to help determine those closure areas. In addition to 6 main target species (distributed in about 20 stocks), the multiannual management plan also covers all bycatch species from fishing activities in the western Mediterranean Sea: it is thus of the utmost importance to increase scientific data collection of all of the bycatch stocks in the west Med. The multiannual management plan also relies on scientific advice to act on recreational fishing when it has a significant impact on the stocks: initiatives from MS to develop scientific data collection of recreational fishing in the west Med are

thus urgently required. Finally, the multiannual management plan also covers other fishing gear in the west Med for which scientific data and advice need to be developed.

For 2021 and onwards, the EC is proposing to fix the fishing opportunities for certain stocks and groups of stocks in the Mediterranean and the Black Seas. The proposal reflects not only short-term concerns but also a longer-term approach whereby the level of fishing is gradually adapted to long-term sustainable levels. The quality of data collection and scientific advice is thus of paramount importance. The proposal includes 3 aspects:

- Following the adoption and entry into force of the Multiannual plan for demersal stocks in the western Mediterranean Sea, this proposal fixes the fishing opportunities, expressed in terms of maximum allowable fishing effort, for the Member States concerned (Spain, France and Italy).
- This proposal also fixes fishing opportunities pursuant to agreements reached in the framework of the General Fisheries Commission for the Mediterranean (GFCM): eel, red coral and common dolphinfish catch limitations that have been evaluated by scientific advice. Also anchovy and sardine in the Adriatic Sea.
- Finally, as regards the Black Sea, this proposal fixes quota for sprat and turbot.

On what regards Adriatic, Central and Eastern Mediterranean Sea, there is room for improvement on data reporting and monitoring: for instance declaration of the list of vessels, analyses of spatio-temporal closures in the Adriatic. For the Black Sea, there is room for improvement in data reporting and monitoring.

GFCM - Relevant data submission obligations and related data quality indicators

GFCM presented to the group the relevant data submission obligations and related data quality indicators:

- GFCM fisheries data needs in 2020/2021,
- GFCM procedures for the transmission of national data, including SAFs, by CPCs and use of data in the WGSAs of the GFCM,
- Progress on the GFCM implementation of fisheries data quality indicators on the DCRF online platform, and
- New requirements.

The GFCM Secretariat underlined the importance of comprehensive, reliable and timely fisheries data in support of the GFCM decision-making process, based on scientific advice as formulated by its relevant subsidiary bodies. The Data Collection Reference Framework (DCRF) comprises the main GFCM instrument in support of the identification and collection of fisheries-related data necessary to improve the formulation of sound scientific advice.

GFCM receives data from the Mediterranean and the Black Sea states (Contracting Parties and Cooperating non-contracting Parties - CPCs) through different channels:

- i) in reply to existing GFCM Recommendations (compulsory),
- ii) through national reports to the Scientific Advisory Committee on Fisheries (SAC) and the Working Group of the Black Sea (WGBS),

- iii) through Stock Assessment Forms - SAFs (input data for priority species being compulsory from 2018).

GFCM fisheries data needs are regularly communicated to concerned CPCs through:

- i) GFCM Data submission calendar on the GFCM website,
- ii) GFCM deadline reminders (English and French) sent to CPCs when a deadline for data submission is approaching.

In 2020 GFCM has to date totalled more than 70 data calls. In 2020, 22 new DCRF subtasks corresponding to as many new recurring fisheries data requirements were progressively incorporated into the DCRF itself in a harmonization process. For each, dedicated data-entry and check tools, the online data transmission procedures and the DCRF manual with the related tables and list of fields and definition have been progressively released and put at disposal of concerned CPCs.

Following the adoption of Rec. GFCM/41/2017/6, and according to the 21st SAC and the 9th WGBS, in order to maintain the quality of advice, assessments should be based on official data provided by countries on fishing activities (i.e. catch and effort data – number of vessels, number of days at sea, etc.), but the independence of experts to decide on scientific data and assumptions used (e.g. biological data on life-history traits) should be maintained and preserved. Thus, the use of the different data sources and analyses undertaken should be fully reported and full reproducibility should be ensured. In cases where official data were not available, expert groups should provide advice based on estimations or any other information available and the SAC or WGBS should evaluate the possibility of proposing precautionary measures on the basis of that advice. Official data calls are issued by the DCRF team both for official data and scientist data in order to afford the maximum flexibility to countries operating in different ways.

The implementation of fisheries quality indicators [timeliness, completeness, conformity, with preliminary thresholds for different data variables, stability, with preliminary threshold equals to 50%, and consistency] to assess the data submitted by CPCs through the DCRF online platform was identified by SAC, WGBS and CoC as a crucial step to consolidate the use of data for scientific advice and to assess the compliance of CPCs with existing recommendations. Thus, the data flow from data entry by CPCs to the finalization of the datasets now includes a series of steps dedicated to quality control and assurance and results in data quality reports being sent back to CPCs. The 43rd session of the GFCM agreed to continue working on the consolidation of the use of quality indicators on the DCRF online platform for fisheries data as requested through existing GFCM decisions, in line with the work programme through:

- i) an analysis of the results of the feasibility phase for the implementation of fisheries data quality indicators.
- ii) a review of the definition and thresholds for each indicator for each DCRF task (data tables),
- iii) the identification of priorities for the quality assessment, in line with the main use of the data received and the need to assess compliance,

- iv) the identification of elements for improving the representation of outputs stemming from data quality assessment procedures through dedicated reports and online dashboards, and
- v) the proposal of a roadmap for the consolidation of the data quality assessment.

With respect to this, the GFCM Secretariat interacted with the five CPCs (Cyprus, Malta, Montenegro, Slovenia and Spain) which replied to the GFCM call for feedback on the data quality dashboards and the results of the feasibility phase, while waiting for further feedback analyzed the results of the feasibility phase while waiting although relevant feedback from most of CPCs from all the GFCM subregions are still missing, and worked on visual elements for the improvement of output representation of data quality assessment. Updated data quality dashboards will be disclosed to CPCs on the DCRF online platform in course of the third quarter of 2020.

Mr Antonio Cervantes sought clarification from GFCM if it can be considered that the results of the working groups from the previous year are valid as they have not been endorsed by the GFCM SAC. GFCM clarified that it is still unknown whether the results will be used as preliminary advice by GFCM members or the results will be submitted to the next SAC. The results of the working groups can be referred to taking into account that the results are yet to be validated by the SAC.

1.2 – Evaluation of DCF 2019 annual reports and data transmission issues

Presentation on main conclusions from STECF EWG 20-08 relevant for the Med&BS Member States.

Ms Monika Sterczewska provided information on the process of the evaluation of 2019 Annual Reports and data transmission issues. At the time of the RCG Med&BS meeting, DG MARE was preparing official letters for MS regarding the follow-up needed.

As a general comment coming from the STECF EWG 20-08 evaluation, Ms Venetia Kostopoulou underlined that in a lot of cases there are inconsistencies in the Work Plans that are continued in the Annual Reports and that creates difficulty in the evaluation of the Annual Reports. The EWG 20-08 concluded that there needs to be a better flow of information regarding the templates and how they should be filled in. In addition, MS should be aware of STECF comments and try to incorporate them in the Work Plans and Annual Reports. EWG 20-08 suggested a workshop to be addressed to AR authors on how to understand the functioning and the linkages of templates. This workshop could be organized by RCGs to ensure that the guidelines are followed and that the STECF comments are taken in due consideration. Ms Angeliki Adamidou clarified that for some MS there are inconsistencies between national WorkPlans and Annual Reports. Although there were some issues noted by STECF, some MS did not update the WorkPlan but instead updated the AWP fields in the Annual Report which should not be done according to the guidelines. In case a MS has some issues it is better to update the Work Plan, because this ensures that the AWP amendments are adopted by DG MARE and facilitates the work of the evaluators when evaluating the Annual Reports.

1.3 – Review of data transmission issues in 2019

- Agreement on DTI sharing on RCG level (as confidential information)
- Overview of data transmission issues (DTI) per data call and Member State
- Identification of common issues

Ms Ivana Vukov started the presentation on data transmission issues by informing the group on the need for sharing of information on data transmission issues (DTI). Namely, National Correspondents should agree on the following:

- Detailed information on DTI shall be made available to the RCG Med&BS on Member State level.
- Detailed information on DTI per Member State is CONFIDENTIAL ie. not to be distributed to third parties or included in RCG reports which are publicly available.
- The file containing detailed information on DTI is stored in a secure web folder (which is currently the RCG Med&BS ICES SharePoint).

Following the adoption of the RCG Med&BS 2020 report where the agreement will be stipulated in the recommendations, in the following years, the chair of the RCG Med&BS subgroup on data requirements and data transmission issues will not ask for additional permission to access and use the information on data transmission issues for the purpose of the RCG Med&BS End-users Meeting.

During the meeting, Ms Ivana Vukov presented information on DTI on an aggregated level without sharing any detailed information. Information on DTI on MS level was received from DG MARE before the meeting. However, before any further analysis on these issues on a regional level, the MS should agree to share confidential information.

Overview of data transmission issues at regional level in 2019

Evaluation of DCF data transmission issues in 2019 was performed during STECF EWG 20-08 on the Evaluation of the Annual Reports for data collection and data transmission failures for 2019. In total, 54 data transmission issues for Med&BS Member States related to FDI and Med&BS data calls in 2019 were uploaded to the DTMT tool and evaluated by STECF EWG 20-08. There were 20 data transmission issues related to coverage, 33 to quality, and 1 to timeliness. Five recurring issues were reported on the Med&BS data call (ITA, FRA, ESP) with low severity, and the STECF DTF Assessment was 'SATISFACTORY'.

Overview of DTI per data call and MS in 2018 and 2019

MS	FDI data call		Med&BS data call	
	2018	2019	2018	2019
Bulgaria	1	1		
Croatia			4	3
Cyprus		4		
France	1	1	4	4
Greece	1	3		
Italy	2		20	18
Malta		4		1
Romania		2		
Slovenia	1			1
Spain	3	3	6	9
Total	9	18	34	36

Common issues

Some specific issues were highlighted including a possible issue regarding DTMT evaluation criteria. Namely, the Data Transmission Monitoring Tool guidance document (STECF EWG 19-09) contains evaluation criteria used to ensure coherent assessment in sub-groups and comparable results. However, in case an End-user marked an issue as 'HIGH' severity in terms of quality, according to STECF evaluation criteria, the assessment of the DTF is 'UNSATISFACTORY', even in cases when STECF acknowledged the MS responses as acceptable. DG MARE noted in response that the guidance document on DTMT evaluation criteria may be adjusted if necessary.

DG MARE noted that the output of the subgroup of data requirements and data transmission issues is important to provide RCG clarification on issues raised by end-users. As a principle, the MS should firstly provide clarifications on MS level, followed by RCG clarifications. The DTMT is predefined and there is no column for RCG input, therefore the RCG can provide its' input to the EWGs to try to resolve the issues in advance. Ms Venetia Kostopoulou added that it is important to maintain close communication and cooperation with end-users in order to understand what the issues are and to see if the issues can be resolved in advance as a positive way forward.

Following the agreement of the RCG MED&BS held in September 2019 in Malta, the first RCG Med&BS End-users Meeting was held in the GFCM Headquarters, Rome, from 12-14 March 2019. The second meeting was announced for 12-13 March 2020 in Brussels in DG MARE. Unfortunately, the physical meeting was postponed due to the outbreak of the COVID-19 pandemic. DG MARE pointed out the importance of continuing the work of the subgroup on data transmission issues and data requirements in the future.

Ms Simona Nicheva added that there is no need to have an additional column in the DTMT for RCG comments, the data transmission failures should be discussed within the End-users meeting and the RCG Med&BS contributions should be sent to the end-users if relevant. Ms Evelina Sabatella agreed on the use of the subgroup and added that ideally it should be held at the beginning of the year to be possible to give some feedback to the STECF evaluation before coming to the closure of the procedure.

Another common issue is regarding lack of prior notification to MS on potential DTF. Namely, it was noted that some issues were not communicated to the Member States before or during EWGs, therefore the MS did not have an opportunity to try to resolve the issue and avoid a DTF. Ms Simona Nicheva provided an example of an issue which was not noticed during data checking procedures for which a DTF was received 8 months after the EWG and which received an 'UNSATISFACTORY' assessment following the guidelines on the evaluation criteria.

1.4 – Data reporting in 2020

Bulgaria – Ms Simona Nicheva presented that despite the pandemic and the restrictions connected with COVID-19 they were no data processing or data reporting issues. She expressed the gratitude to the Bulgarian fishermen, representatives of the aquaculture enterprises and processing industry units, that they managed to provide the economic questionnaires on-time and also to the colleagues from the regional units which are receiving the questionnaires that they were very flexible. The

scientists from the research institutes also managed to fulfil their obligations regarding the reports and data from surveys, as well as their contributions for the relevant data calls. Bulgaria managed to process and report data before the deadlines for all data calls.

Croatia – Ms Ivana Vukov informed that Croatia did not have any serious data reporting issues, some issues were related to the timeliness of DCRF tasks to GFCM. No issues reported in regards to DG MARE data calls, including Fleet Economic data call and the Mediterranean and Black Sea data call. As in previous years, the main challenge is related to the deadline of reporting of data according to the Mediterranean and Black Sea data call which overlaps with other reporting obligations and MEDITS, therefore the availability of persons who are responsible to process and submit the data is limited which makes it difficult to maintain data quality.

Cyprus – Ms Myrto Ioannou informed the group that there were no significant delays, except for the GFCM reporting. The extend of the deadline for the JRC Med&BS data call was very useful and they managed to submit the data on-time. The only delays in regards to the data processing were for the age-reading.

France – Mr Norbert Billet explained that there have not been significant problems in the data preparation and data processing. People involved in data processing have had remote access to the database.

Greece - Mr Apostolos Karagiannakos informed the group that the fleet economic and Med&BS data calls, as well as the Annual Report, have been submitted on time by Greece, without any problem to be encountered. The 20 days extension for submission the Med&BS data call was helpful especially for the completeness of the elaboration of biological data. During the RCG meeting, the FDI data call was under preparation.

Italy – Ms Evelina Sabatella presented that Italy managed to answer to all data calls launched so far by DG MARE. Due to the pandemic crisis, most of the data processing has been implemented by researchers in smart working and no specific problems have occurred.

Italy considers the need to have a specific working group on data quality for the MED data call. This working group could facilitate the preparation of the EWG on stock assessment and could help in cleaning the data sets from technical mistakes.

A major concern is related to the timing of the FDI data call; it is not possible to process data during the summer break considering that the holiday periods are different for the different institutes involved in the preparation of data.

Regarding the GFCM DCRF, it would be beneficial to receive the templates of all the tasks all together at the beginning of the year and not few days before each deadline as it is the case now.

The RCG MED&BS end-user meeting is useful and important to exchange views among MS, DG MARE and GFCM. It is advisable to organize it at the beginning of the year so to give an actual contribution to the evaluation of the data transmission failures.

Malta – Mr Jurgen Mifsud presented that two optional parameters, the gear and fishery, were introduced in some tables of the EU Fleet economic 2020 data call. Malta questions the suitability of

the provision of the additional segmentation given the small-scale nature of the fleet and the variety of gears employed. The inclusion of these parameters also raises issues related to confidentiality. Therefore, Malta requests clarification on the use of these parameters in these tables.

Romania – Mr Constantin Stroie presented the data processing and data reporting in Romania. No special issues despite the challenging situation.

Slovenia – Ms Petra Bratina explained that Slovenia did not have any issues in data processing and reporting this year, all reports were submitted on time.

Spain – Mr Ricard Buxó informed the group that there have not been significant problems in the data preparation and data processing. People involved in data processing have had remote access to the database. Economic data were not affected by COVID-19 outbreak (most of the data is gathered through remote systems such as telephone call or e-mail).

We expect no major delays regarding future Data Call such as Fishery Dependent data, Aquaculture Data Call and Eel data that will be available for the WGEEL.

TOR 2 - Impact of COVID-19 pandemic

RCG MED&BS discussed the impact of COVID-19 pandemic on data collection and possible data gaps in 2021 data reporting.

For this purpose, each MS presented information on the impact of the COVID-19 pandemic on the implementation of its national data collection programme in 2020 and any possible consequences for 2021. The presentations followed the same general format of the DG MARE Corona questionnaire and included information on data collection (surveys, biological sampling, and collection of socio-economic variables for the fleet, aquaculture and processing industry) as well as data reporting and any other relevant general remarks. Also, MS highlighted possible data gaps.

Ms Simona Nicheva presented the impact of COVID-19 pandemic in **Bulgaria**: Before 8th of March, there were no cases of COVID-19 in Bulgaria. On 13th of March, after 23 reported cases in one day, Bulgaria declared a state of emergency for one month until 13 April, which was extended to 14 May, when the national emergency was lifted, and in its place was declared a state of an emergency epidemic situation, which is still ongoing.

There was a significant decrease in fishing activities compared to previous years during March, April and May. For example, the days-at-sea decreased by 36% in March, 53% in April and 33% in May, compared to 2019.

Sampling on board and sampling on land -IFR - Varna /the institute responsible for the sampling onboard/ has already performed some activities, concerning scientific observations on board of different fishing vessels during January-July. They are managing to fulfil their obligations as the monitoring programs for Rapana and the scientific observations on board of fishing vessels.

The Institute of Oceanology and the Institute for fisheries and aquaculture, which are responsible for taking samples from the ports do not expect any significant problems related to data collection, technically they were able to visit the sampling ports and to collect the necessary data. Of course, due to the ban of travelling during the lockdown, for April and May, the samples will be more from

the northern part of the Black sea, since the scientists were not allowed to travel to the southern part.

Surveys at sea - BTSBS and PTSBS - Both pelagic trawl survey and bottom trawl survey planned for the first half of the year were performed. The 2 months delay of the bottom trawl survey and the 1-month delay in the pelagic trawl survey were due to the extension of public procurement for hiring vessels during the pandemic. We do not expect these delays to have a negative effect on the results or quality of the surveys.

Transversal data collection, data processing, data reporting - At the beginning of each year, in Bulgaria are collected the questionnaires for the previous year, so the annual questionnaires, containing the data for 2019 from the 3 sectors – fleet, aquaculture and processing were received and processed on-time. There were no major issues. Some of the questionnaires came later than the legal deadline because the travelling was not allowed and not all of the people are using e-mails. There were no issues in regards to the data reporting – all the data calls and reports were prepared and reported before the deadline.

National coordination - The national coordination meeting was postponed, but a physical meeting is planned before the end of September. The meeting between Bulgaria and Romania was also postponed. If we are not able to conduct a physical meeting in October, we will organize a virtual one.

Bulgarian scientists were not able to participate in the Romanian surveys and respectively the Romanian colleagues were not able to come for the Bulgarian surveys. Hopefully, the exchange of scientists will happen during the second Bulgarian and second BTSBS and PTSBS Romanian surveys.

After the presentation, there was a question from Ms Venetia Kostopoulou if the surveys were performed. Ms Simona Nicheva confirmed that both pelagic trawl survey and bottom trawl survey planned for the first half of the year were performed with delay.

Ms Ivana Vukov and Mr Igor Isajlović presented the impact of COVID-19 pandemic on data collection in **Croatia**: On-board sampling in Croatia was suspended from the beginning of March to mid-May for all metiers and stocks. Laboratory work reduced during this period due to pandemic measures (social distancing, number of personnel in lab etc.) and fewer sampling trips. Due to lower coverage of metiers in 1st and 2nd quarter 2020, some data gaps may be expected for metiers with quarterly sampling frequency. Sampling was re-established in mid-May for all metiers.

Biological sampling on land was suspended for one month from mid-March to mid-April due to ban on intercity travel and other pandemic measures with no negative effect on landing data according to the preliminary assessment.

Fleet economic data collection for 2019 was postponed for October/November 2020. Economic data collection for the aquaculture and processing industry for 2019 was finalized in July. New Ordinance on data submission of economic forms was adopted in July (OG 79/2020) – the Ordinance takes into account all possible ways of data collection (phone interviews, e-mail submission, paper forms).

There are no disturbances in transversal data collection since the Ordinance on the submission of logbooks and fishing reports was urgently changed to allow electronic submission of paper forms via e-mail.

MEDITS survey was finalized in July with minor reduction of activities (reduced number of stations, certain activities (discard sampling, marine litter etc.) to ensure compliance with epidemiological measures (distance, fewer scientists on-board, disinfection between shifts etc.). The MEDIAS was scheduled in September. SoleMon survey is planned for November 2020, however, the execution will depend on current conditions in both Italy and Croatia since the survey is conducted with Italian research vessel and crew with the participation of Croatian scientists.

National coordination meeting scheduled in March has been postponed and the date of the physical meeting is planned for October/November. Small physical and virtual meetings are organized when needed.

Impact of COVID-19 pandemic in **Cyprus** was presented by Ms Myrto Ioannou:

- The health crisis had a negative impact on the fisheries sector, especially in relation to the market chain which had a domino effect. Cyprus government, in order to cope with the COVID 19 virus, has imposed some very restrictive measures such as the closure of restaurants and fish taverns. Consequently, this has resulted in severely restricting market access.
- The fisheries activities have been greatly reduced and some vessels have even ceased their fishing activities completely since they were operating in a loss-making situation. The economic performance of all the fleet segments was greatly worsened.
- In relation to the specific measures to mitigate the effects of the spread of the Covid_19 pandemic on the Fisheries sector, Cyprus amended its Operational program co-financed by the EMFF to add Measures for Temporary cessation of fishing activities.
- The implementation of the voluntary measure for a temporary cessation of fishing activities lasted two months (mid-April till mid-June) through a corresponding premium incentive scheme.
- The small-scale fleet and polyvalent vessels could enter this scheme.
- As already reported at the DG MARE surveys on the impact of COVID-19 pandemic on the implementation of DCF, the impacts on the implementation of the Cyprus 2020 WP are the following:
- Sampling on board was stopped from the middle of March until June, affecting sampling of trawlers fishing demersal fish, and sampling of vessels using LLD for large pelagic.
- The pilot acoustic survey was postponed for March 2021.
- Pilot studies on the distribution of biomass and deep-water red shrimps have been postponed for one year.

Mr Norbert Billet gave a presentation regarding the impact of COVID-19 in **France**. The lockdown was from 17th of March to the 11th of May. He presented a comparison between the fishing days and landings during the lockdown and the average for the same period in 2019 and 2018. Both fishing activity and landings were reduced significantly in the first 3 weeks of the lockdown. Both sampling at-sea and on-shore were stopped for the whole period of the lockdown, but after 11th of May, the sampling was continued in the same level as in 2019. At sea sampling was deeply impacted in France but not so much in the Mediterranean (GSA 07 and 08) where the programme could resume almost normally after the lockdown.

The economic data collection could not be carried out in 2020, since operating with face-to-face interviews during March to June, mostly during the lockdown. This data collection was replaced by a telephone survey on the covid-19 impact on fishing activities.

The MEDIAS survey will be performed with 2 months delay and MEDITS with 4 months.

Mr Manos Koutrakis informed the group about the impact of COVID-19 pandemic in **Greece**.

As in most countries, fishing was limited due to limited demand for fish from the markets. Regarding the implementation of the Greek 2020 WP, during the covid-19 lockdown, from 23th of March till 11th May, office work has been accomplished through teleworking, while laboratory work was limited to emergency activities. Sampling was limited to onshore sampling, mainly of the small-scale coastal fleet and when possible, collection of biological samples. During that period collection of socio-economic variables for the fleet, aquaculture and processing industry was performed with phone interviews. Recreational on-site spring survey of March was cancelled.

By the end of lockdown in Greece on 11th May, all sampling activities started again. Laboratory work resumed and most gaps were fulfilled, also sampling on-board for all stocks resumed and collection of socio-economic variables started regularly.

Surveys: MEDIAS survey was performed regularly in the Aegean Sea (Ionian is delayed), while MEDITS started at the end of June in North Aegean and end of July in South Aegean and Ionian. Recreational summer survey was also performed at the end of June.

Ms Evelina Sabatella and Mr Andrea De Felice presented the Impact of Covid-19 on **Italian** DCF National Work Plan:

The emergency measures and the lockdown in Italy started on the 8th of March 2020.

There was not a ban on fishing activities, but most of them were stopped or reduced because covid-19 has disrupted seafood supply chains. National seafood trade has slowed due to the closure of restaurants and hotels, thus drastically reducing the market demand. Even fresh fish counters in many supermarkets have been closed at least during the first weeks of the lockdown.

However, the situation has not been the same in all areas and for all types of activity. The reduction due to the emergency measures varies from 30% to 100% depending on the area (region/GSA) and fishing technique.

The emergency impacted mostly trawlers and northern regions. Tyrrhenian fleets and small-scale fishery vessels have been less impacted.

Sampling on board - Sampling on land

During the lockdown period, biological sampling activities have been limited primarily due to a decrease in fishing activities which consequently led to a reduced number of fishing trips.

Observer trips have been stopped in the lockdown period. In some areas, a great deal of effort has been put in place to collect samples by means of self-sampling approach, trying to minimize the impact on the difference between achieved and planned number of samples and to collect reliable information on discards (species composition, length and age distributions by species) despite the situation.

With regards to market sampling, an effort has been made to continue collecting the required samples in line with the data call obligations.

A number of samples have been frozen and processed at a later stage.

Limited lab processing was allowed at some institutes even after the lockdown. At the moment, activities in the laboratory are fully operational.

Surveys at sea

MEDITS have been postponed in most GSAs. In GSA 17, MEDITS already started and is ongoing. For other GSAs, we foresee a 2-3 months delay.

SOLEMON is planned in November and it will be carried out according to the provisions of the Italian WP.

MEDIAS surveys in GSA 17 and 18 were foreseen from beginning of June to mid-July (41 days as usual planning for this area). Due to Covid-19 emergency, the process for the definition of a security protocol to work on the research vessel was long and delayed the survey to July month, leaving only 30 days available. The ship calendar had to be reorganized due to this delay, taking into account all the approved projects. For this reason, also due to bad weather events, only GSA 17 could be completed while the survey in GSA 18 was just started. Moreover, due to the fact that the maximum number of researchers on-board was cut to 5 according to the protocol, all efforts were concentrated to acoustic and net samplings, while oceanographic sampling, generally held during the night in a dedicated shift, was reduced to the minimum number of stations in order to have meaningful information and performed during the day for the impossibility to have a night shift. MEDIAS survey in GSA 16 was completed in August and at present day survey in GSA 10 is taking place, after that survey in GSA 9 is planned.

Economic - social data

The impact on economic and social surveys have been limited.

Regarding the fleet economic survey, in 2020, data referred to 2019 are collected and processed. Usual protocols have been applied, even if face-to-face interviews have been shortened if possible. The economic questionnaire has been enlarged to ask for specific information on the economic impact of the COVID.

Aquaculture and processing surveys are also ongoing.

National Coordination

National coordination meeting has been postponed and the date has not been fixed yet.

Malta – Ms Miriam Gambin presented the following information: Telework arrangements were made from mid-March until early June for office personnel. Mechanisms were put in place in order to reduce the spread of the virus, and duties resumed as usual from the office from early June onwards.

The overall activity of commercial fisheries has decreased in Malta, especially between March and June. The fishery and aquaculture sectors have been particularly hard hit by the market disruption generated by a significant drop in demand, and the sector was also affected by reductions in human resources. The closure of sales venues, markets, outlets and distribution channels has seen prices and volumes drop substantially across the region. The drop in demand and prices combined with the vulnerability and complexity of the supply chain (perishable products, important need of workforce) made the operations of fishing fleets and seafood production loss-making.

Data calls and report submissions went ahead relatively unhindered. Market and on-board sampling remained ongoing; however, they were restricted given that the number of trips conducted had decreased. The MEDITS survey was delayed due to the Covid-19 outbreak but it is currently being carried out. The economics surveys were also delayed and will be carried out by phone instead of face-to-face interviews. Similarly, the probability sampling survey for the small-scale fleet (CAS) is being carried out by phone instead of in-person interviews.

Mr Constantin Stroie informed the group about the situation in **Romania**: The lockdown was between mid-March mid-May and during the RCG meeting the country was under emergency situation declared by the Romanian government. The amount of landed fish in March was 20% less than the same period in 2019. The production of aquaculture was reduced also due to the restrictions connected with the pandemic. The office arrangements were flexible – some of the people were allowed to work from the building, but most of the people worked from home offices. The main difficulties that were faced were delays in receiving the economic questionnaires, on-board sampling and at port, especially from the small scale fleet. The surveys were not affected by the lockdown and they were performed in line with the schedule without problems. The national meeting was delayed, but it was performed on 21st August and all the participants were available to participate. The bilateral meeting between Bulgaria and Romania is planned for October-November 2020, depending on the restrictions in both countries.

Ms Petra Bratina presented the impact of the COVID-19 pandemic in **Slovenia**: The pandemic in Slovenia was declared on March 12, 2020, and lasted until May 15 2020, so because of lockdown we were not able to perform samplings and participate as observers on board, but after that, we started with samplings again. Other segments of our work at that time at Institute ran smoothly with work from home. We have participated on board for MEDITS survey on 8 of August. MEDIAS was also done in Slovenia but without our member on board because of COVID-19 situation.

Ms María González from the **Spanish** Institute of Oceanography (IEO) answered to this ToR by a presentation that had been sent to RCG chairs.

This presentation included every answer according to each type of data managed by the IEO (as the National Scientific Institute) and the General Fisheries Secretariat (as the public administration and National Correspondent).

As it was requested by the chair of the RCG, all the information is included in the following lines.

First of all, the fishing activity has not stopped in the Spanish Mediterranean, since it has been considered an essential activity under the alarm state. In the first days of the lockdown, the activity decreased because of the low demand for fish (hotels and restaurants closed).

Economic – Social – Transversal data collection

In relation to the economic data, there has not been a halt in the activity: aquaculture and fishing data collections are been carried out.

Biological data collection

The on-shore and the at-sea sampling programs have been stopped, affecting all stocks.

The sampling on board started the last week of August under health and security measures (PPE, test). However, the sampling on shore has not started yet, and a restarting date cannot be given. Both programs, coordinated by the IEO, are carried out by specialized companies hired through public procurement. The call launched in 2020 was declared void, having to be re-launched again. This second launch was delayed as a result of the paralysis of public activity during the state of alarm due to the covid-19 pandemic.

The biological sampling related to the population (studies on reproduction and growth) is carried out in the IEO laboratories, which were closed and stopped completely their activity between 15th March and 21th June. To this is added that it was cut short in 2020 (from February until now) due to administrative problems. The biological sampling has not started yet.

Surveys at sea

MEDITS was planned from 27th April to 25th June, but because the Spanish lockdown it was carried out from 29th May to 25th June 2020, covering around half of the area: the Northern of GSA 06 and the all the GSA 05 (Balearic Islands).

MEDIAS and TUNIBAL surveys have been carried out as usual (dates, sampling) under health and security measures (PPE, test).

Data preparation and submission for 2020 data calls. Reporting

There have not been significant problems in data preparation and data processing. People involved in data processing have had remote access to the database, and 2020 data calls have been replied in time. We do not foresee major problems in answering other forthcoming data calls, e.g. FDI. The Annual Report 2019 has been on time.

National/Regional Coordination

Most meetings have been done by video conference (webex, skype, etc). The National Coordination meeting will be by video conference in October- November, as usual.

Data GAPS in 2021 data reporting

In 2021 Spain will not be able to report any biological data (length of landings and discards, volume of discard and variables relating to population) of the first and second quarter.

Focusing in the second part of the year, observers on board have started to work the last week of August, so it is expected to provide length data of landings and discards and volume of discards for trawlers for the third and fourth quarter.

It is unknown when the on shore sampling will start, so length data collection for other métiers (like purse seine, trammel net and others) in the third and fourth quarter is uncertain.

Regarding the variables related to the population, biological sampling has not started yet.

The gaps on biological data will be the same for the shared stocks of the GSA 07.

Regarding surveys, the only and important gap would be the non-coverage of the GSAs 1, 2 and a half of GSA 6 in MEDITS.

After the presentations by the MS there was a question to the COM regarding the future approval of the activities and would it be changed compared to the previous years considering the delays or low implementation of some of the planned activities. The answer by the COM was that this question was already raised during the NCs meeting and that in order to provide an answer to this question will be very useful to have very detailed reporting on what has been achieved and what was not achieved and that this information will also be used during the assessment of the reports. The COM is following very closely how the situation evolves, what happens to all the MS and what are the specificities and common issues for all the MS or at the regional level. That's why they are asking for information at regular intervals, so they are aware of what is going on and how they can help.

TOR 3 - Information on DCF legal framework and related legal acts

Feedback from the Commission regarding the information on DCF legal framework and related legal acts. Conclusions from 31st July 2020 National Correspondents Meeting and plan forward.

Ms Monika Sterczewska presented, on behalf of DG MARE, the relevant information in regards to this point. Since 2020, the Union multi-annual programme for data collection in fisheries sector (EU-MAP) is divided into two legal acts, as required by the DCF Regulation 2017/1004:

- COM Delegated Decision 2019/910 on biological, environmental and socio-economic data requirements (EP and Council scrutiny 2 months after adoption);
- COM Implementing Decision 2019/909 on thresholds for data collection and the list of surveys-at-sea (no scrutiny by EP and Council; comitology vote).

These two legal acts are valid for 2020-2021, while the revision of the EU-MAP for 2022 and beyond is underway. A first brainstorming on the EU-MAP revision took place in 2018 during STECF EWG 18-18. In 2019, wide stakeholder consultations took place with end-users, RCGs, PGECON, the Liaison Meeting and during National Correspondents meeting (NC). There was a dedicated EU-MAP revision meeting of the RCGs in May 2019, an STECF EWG (19-05) on the review of surveys-at-sea and the EWG 19-12 on the revision of the EU-MAP and Work Plan templates.

First drafts produced by STECF EWG 19-12 have been amended by the Commission services and after a series of internal and EC interservice consultations, presented at Expert Group of Fisheries Data Collection meeting on 1 July 2020.

The implementing act draft was discussed there and a wide consensus was reached. A written vote on this act by the Committee of Fisheries and Aquaculture is planned in 2020, followed by the adoption and publication in the Official Journal.

The draft delegated act has been discussed partly at 1 July meeting and will be further consulted at second dedicated Expert Group meeting on 22 September 2020. Afterwards, the draft will be submitted for the Commission inter-services consultation and public consultation, followed by the adoption, the EP and the Council scrutiny and publication in the Official Journal.

In parallel, work on work plans (WP) and annual reports (AR) templates will continue. In October 2020 ad-hoc contractors will prepare a first draft of the revised draft of WP/AR templates and guidelines, and early in 2021 STECF EWG 20-18 will finalise the document, to be adopted on time for October 2021 work plan submission.

Mr Antonio Cervantes and RCG chairs expressed their gratitude to DG MARE for the updates on the evolution of the file and the procedure.

TOR 4 - Surveys

Review of 2019 regional coordination (MEDITS, MEDIAS and Black Sea surveys). Next steps and actions.

Mr George Tserpes presented the following information regarding the MEDITS survey and MEDITS coordination group. The MEDITS data support various activities/initiatives (assessments, framework policies, projects, etc.). The main goal of the surveys is to monitor the demersal resources of the Mediterranean Sea. The survey involves 11 countries and it has been performed since 1994. It includes about 1300 survey stations, covering all trawlable areas over the shelf and upper slope (10-800m). The 2020 MEDITS meeting was scheduled for 28-29 April 2020 in Ljubljana (Slovenia) but it was initially postponed and later cancelled due to the pandemic.

Ms Charis Charilaou added, that it will be very useful to make a list of the databases that are used in the region for the storing and managing trawl surveys data for the Mediterranean and Black sea. Also including the information for the commercial licenses obtained for their use. In 2016 the RCM Med&BS decided to consider fishtrawl as a database, to consider as international database and Cyprus was using it during the testing phase, but after the testing, they had a problem in access the relevant data and they were not able to contact the relevant companies. After communicating this with other institutes, they were informed about another recently developed database and they have obtained a license for a certain period for it. Their concern is that following this period it will be difficult for them to renew or even to choose to move to another database if as a regional group we don't have a list of the databases that are been used at the regional level and for which they can acquire a license. Mr Tserpes answered, that he is aware of the problem and that he has contacted by other colleagues and that this problem will be raised during the annual MEDITS meeting.

Regional coordination regarding acoustic surveys made during 2019 by **MEDIAS** Steering Committee (SC) has been reviewed. MEDIAS chair, Mr Vjekoslav Tičina, informed RCG Med&BS that due to COVID-19 situation the 13th MEDIAS Steering Committee meeting, planned to be organized by Slovenia in Ljubljana (31.03.-02.04. 2020), was postponed. MEDIAS SC members are hoping to have the physical meeting next year, if COVID-19 situation permits, combining two years, but they also preliminary agreed (by correspondence) to have a one-day virtual meeting after the end of October 2020 to have a common insight in the current situation.

MEDIAS chair informed RCG Med&BS that no information on MEDIAS 2019 surveys was presented to SC, but it seems that all surveys in 2019 were carried out as planned. In addition to usual acoustic surveys, information about 1st acoustic survey carried out in GSA 11 during 2019 was provided.

RCG Med&BS was also informed that MEDIAS activities during 2020 have been affected by COVID-19 in different MS causing different problems, mainly related to bureaucratic and survey delays, funds availability, lack of skilled personnel on board, personnel overloaded with online meetings, shortage in availability of RVs, etc. Due to protocols imposed by COVID, in some MS research vessels were forbidden to enter the harbours during the survey and had to work with a few people on board keeping social distance to avoid contagion. These circumstances made survey activities very demanding for the vessel's crew and scientists on board.

Mr Violin Raykov presented the pelagic trawl surveys were accomplished with accordance with National Programs for Data Collection in Fisheries sector of Bulgaria for 2019. The first study was held during June 2019, in the area enclosed between Durankulak and Ahtopol (Bulgaria) with a total length of the coastline of 370 km. Study area encloses waters between 42° 05' and 43° 45' N and 27° 55' and 29° 55' E. During the survey, a total of 37 mid-water hauls were carried out in the Bulgarian area (June 2019). The survey undergoes during the day and the following types of data were collected:

- Coordinates and duration of each trawl
- Sprat total catch weight
- Separation of the by-catch by species
- Composition of by-catch
- Conservation of the samples.

To establish the abundance of the reference species (*Sprattus sprattus*) in front of the Bulgarian coast a standard methodology for stratified sampling was employed (Gulland, 1966;). To address the research objectives the region was divided into 3 strata according to depth – Stratum 1 (15 - 30 m) Stratum 2 (35 – 50 m), Stratum 3 (50 – 100m). The study area in Bulgarian waters was partitioned into 128 equal in size, not overlying fields, situated at a depth between 16 - 92 m. At 37 of the fields chosen at random, sampling using mid-water trawling was carried out. Each field is a rectangle with sides 5' Lat × 5' Long and area around 62.58 km² (measured by application of GIS), large enough for a standard lug extent in meridian direction to fit within the field boundaries. The fields are grouped in larger sectors – so-called strata, which geographic and depth boundaries are selected according to the density distribution of the species under study. At each of the fields only one haul with a duration between 30 - 40 min. at speed 2.7-2.9 knots was carried out. As a result of the trawling survey, a biomass index was calculated. The total number of identified species is 24, of which 16 fish (with 2 species more than the autumn survey in 2018), 2 crustaceans, 2 molluscs and 4 macrozooplankton species. The most common species in generally trawl operations (in terms of presence/absence) are (in descending order): in June 2019: *S. sprattus* (76.5%), *M. barbatus* (9.66%), and *M. merlangius* (4.86%), other species such as *A. immaculata*, *N. melanostomus*, *G. niger*, etc. have a negligible presence in the catch in June 2019. The total biomass of sprat in June 2019 was 25 903.47 tonnes for the Bulgarian Black Sea area; the total identified biomass of the bubbler was 1837.4 tonnes and the biomass of whiting in June 2019 was 1426.5 tonnes.

The second pelagic trawl research survey was held during the period of October-November 2019, in the same area as the first survey - study area encloses waters between 42° 05' and 43° 45' N and 27° 55' and 29° 55' E. During the survey, a total of 38 mid-water hauls were carried out in the Bulgarian area in October-November 2019, following the methodology explained above. The total number of identified species is 34, of which 26 are fish, crustaceans 2, molluscs - 2 and 4 macrozooplankton species. The most common species in general trawl operations (in terms of presence/absence) are (in descending order): in June 2019 they are: *S. sprattus* (82.99%), *M. merlangius* (9.44%), and *M. barbatus* - 6.54%). The other species were in small quantities or as separate individuals in the catches. The total biomass of sprat in X-XI 2019 was 46 081,4 t for the Bulgarian Black Sea; the biomass of the red mullet was 5122.056 t; the biomass of whiting was 21 174.59 tonnes.

Ms Vesselina Mihneva presented the bottom trawl surveys for turbot stock assessment in Bulgarian Black sea sector during the spring and autumn seasons of 2019

During 11-20 May 2019 and 6-20 December 2019, within the frames of the National Programme for Fisheries Data Collection, in the Bulgarian Black Sea waters were performed two demersal trawl surveys for turbot stock assessment. The field study was performed in the zone between Durankulak - Ahtopol, within the 100-meter isobath. The surveys encompassed 4 strata - stratum 1 (15 - 35 m), stratum 2 (35- 50 m), stratum 3 (50 -75 m), and stratum 4 (75 -100 m), and included the following main activities:

- Bottom trawl sampling;
- Qualitative and quantitative analysis of the catches, identification of biological diversity, biometric measurements;
- Collection of otoliths for turbot age determination;
- Sampling and analysis of stomach contents for identification of quantity and composition of the consumed food.

The study is an assessment of the relative biomass and abundance of the reference species *Scophthalmus Maximus* and analysis of the length/weight, age and sex structure of the turbot population.

Mr Constantin Stroie presented the pelagic and bottom trawl surveys in Romania.

The first pelagic trawl survey in 2019 was in the period 19 - 26 June 2019 and the autumn survey was between 05 - 12 November 2019 with the same vessel as the demersal survey (STEUA DE MARE 1). Spring - in the 30 sample trawlings made with the pelagic trawl, on an area of 15,670 Km², the average values of the catches were of about 7.687 – 9.386 t/Km². The maximum value was recorded in the Constanta-Sf. Gheorghe sectors (0-50 m). The estimated biomass for sprat crowds, in the research survey the area was about 123,350.65 tonnes. Autumn - in the 35 sample trawlings made with the pelagic trawl, on an area of 16,100 Km², the average values of the catches were of about 2.856-5.824 t/Km². The maximum value was recorded in the Sf. Gheorghe - Mangalia (30-70 m) sectors. The estimated biomass of sprat was about 71,312.58 tonnes.

The bottom trawl surveys were performed in the periods 17 - 26 May 2019 and 17 October – 02 November 2019. Type of fishing vessel - B -410; - Total length - 25.71 m; - Maximum width - 7.22 m; - Moulded depth - 3.49 m; - Maximum draft - 2.91 m; - Year of construction – 1981; - Engine power - 420 kW (570 HP); - Maximum Tonnage - 134 t; - Net Tonnage - 40 t; - Speed - 10 Nd; - Number of crew - 7 persons; - Number of researchers - 8 persons. For the surveys was used the research vessel “STEUA DE MARE 1”. The methodology and techniques that were used for the collection, verification, processing and analysis of data and the assessment of fish stocks are generally accepted for the Black Sea basin and in accordance with international methodology.

TOR 5 - Results from 2020 RCG MED&BS Data Call

MS were requested in July 2020 to submit data on effort and landings by métier for the period 2017-2019. Data were analysed to provide a regional overview to assess if any changes need to be made to national sampling plans and incorporated in the revision of national work plans for 2021.

Regional work based on results from 2020 RCG MED & BS Data Call

During the 4th RCM MED 2007, a recommendation came into force 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 2020 an official data call was launched by the chair and co-chair of the RCG MED & BS, requesting the following data:

- Data on landings for the period 2017-2019 of the stocks listed in Table 1A of Commission Implementing Decision (EU) 2016/1251, for reviewing and updating the landing template for the Mediterranean and the Black Sea
- Data on landings, effort and value by metier for the period 2017-2019, where metiers are selected from the regionally agreed list of metiers with specified coding, for using a ranking system for the Mediterranean and Black Sea.

The relevant Data Call was announced on 7th of July to all National Correspondents, with a deadline on the 10th of August, 2020. The data was required to be submitted in two different data files similar to previous Data Calls (Annex V).

Data were submitted by all Member States in the Mediterranean Sea and the Black Sea, for the requested period. For Greece, 2017 data were not available since the DCF was executed for a small period and only in a limited area; thus, 2018 & 2019 data were used in the analysis, that had full coverage of time and areas. Data submitted under the Data Call were reviewed and analysed by Simona Nicheva and Charis Charilaou.

The produced landing templates in landings value (tons) and in contribution (%) of Member States are provided separately for non-elasmobranch and elasmobranch species. Tables 5.1 and 5.2 refer to non-elasmobranch species, while Tables 5.3 and 5.4 refer to elasmobranchs. According to Table 1A of Decision (EU) 2016/1251, all commercial sharks, rays and skates should be reported at species level;

Table 5.1: Average landings by Member State (in tons) over the 2017-2019 period, for species included in Table 1A of Commission Decision 2016/1251 concerning the Mediterranean Sea and Black Sea

Species	Area	BGR	CYP	ESP	FRA	GRC	HRV	ITA	MLT	ROU	SVN	Sum
European Eel	<i>Anguilla anguilla</i>	all areas in the Med	0	0	23	856	0	1	0	0	0	880
Giant red shrimp	<i>Aristaeomorpha foliacea</i>	all areas in the Med	0	0	6	0	75	0	2498	30	0	2609
Red shrimp	<i>Aristeus antennatus</i>	all areas in the Med	0	0	986	0	5	0	1172	2	0	2165
Bogue	<i>Boops boops</i>	1.3, 2.1, 2.2, 3.1, 3.2	0	101	267	18	3422	100	1996	50	0	5954
Dolphinfish	<i>Coryphaena equiselis</i>	all areas in the Med	0	0	0	1	0	0	0	0	0	1
Dolphinfish	<i>Coryphaena hippurus</i>	all areas in the Med	0	1	135	0	64	1	549	298	0	1049
Sea bass	<i>Dicentrarchus labrax</i>	all areas in the Med	0	2	95	327	265	11	202	0	0	906
Horned octopus	<i>Eledone cirrhosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	0	0	596	0	0	32	2593	0	0	3221
Musky octopus	<i>Eledone moschata</i>	1.3, 2.1, 2.2, 3.1	0	0	173	0	225	275	2582	0	0	3270
Anchovy	<i>Engraulis encrasicolus</i>	all areas in the Med	0	0	20960	1086	13910	10708	35479	0	0	82143
Anchovy	<i>Engraulis encrasicolus</i>	Black Sea GSA 29	26	0	0	0	0	0	0	0	52	78
Grey gurnard	<i>Eutrigla gurnardus</i>	2.2, 3.1	0	0	54	0	0	0	37	0	0	91
Squid	<i>Illex spp., Todarodes s</i>	all areas in the Med	0	1	828	177	831	0	3724	4	0	5565
Billfish	<i>Istiophoridae</i>	all areas in the Med	0	0	0	0	0	0	23	2	0	25
Common squid	<i>Loligo vulgaris</i>	all areas in the Med	0	10	234	140	410	69	1501	10	0	2381
Black-bellied angler	<i>Lophius budegassa</i> *	1.1, 1.2, 1.3, 2.2, 3.1	0	1	873	464	483	0	1281	1	0	3102
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.2, 1.3, 2.2, 3.1	0	0	174	173	31	0	260	4	0	642
Whiting	<i>Merlangius merlangus</i>	Black Sea GSA 29	7	0	0	0	0	0	0	0	1	8
Hake	<i>Merluccius merluccius</i>	all areas in the Med	0	18	2447	891	4640	1017	7312	17	0	16344
Blue whiting	<i>Micromesistius pouas</i>	1.1, 3.1	0	0	803	0	1172	0	211	1	0	2187
Grey mullets	<i>Mugilidae</i>	1.3, 2.1, 2.2, 3.1	0	0	287	0	537	111	2745	0	0	3687
Red mullet	<i>Mullus barbatus</i>	all areas in the Med	0	16	1640	284	2484	863	5989	11	0	11292
Red mullet	<i>Mullus barbatus</i>	Black Sea GSA 29	508	0	0	0	0	0	0	0	4	512
Striped red mullet	<i>Mullus surmuletus</i>	all areas in the Med	0	53	620	106	1892	25	1813	37	0	4545
Common octopus	<i>Octopus vulgaris</i>	all areas in the Med	0	14	2584	600	2709	134	3228	25	0	9293
Norway lobster	<i>Nephrops norvegicus</i>	all areas in the Med	0	0	409	34	241	233	1636	1	0	2554
Pandora	<i>Pagellus erythrinus</i>	all areas in the Med	0	25	980	169	1012	65	730	9	0	2996
White shrimp	<i>Parapenaeus longirois</i>	all areas in the Med	0	2	1146	44	2049	820	9349	9	0	13420
Caramote prawn	<i>Penaeus kerathurus</i>	3.1	0	0	137	0	1211	0	1436	0	0	2784
Turbot	<i>Psetta maxima</i>	Black Sea GSA 29	51	0	0	0	0	0	0	0	46	97
Sardine	<i>Sardina pilchardus</i>	all areas in the Med	0	4	10823	708	12329	46565	24050	0	0	94482
Mackerel	<i>Scomber spp.</i>	all areas in the Med	0	6	3661	874	144	1997	2520	659	0	9861
Cuttlefish	<i>Sepia officinalis</i>	all areas in the Med	0	30	817	199	3020	96	5587	13	0	9766
Sole	<i>Solea solea</i>	1.2, 2.1, 3.1	0	0	148	167	558	215	2101	0	0	3200
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	0	0	775	1100	689	0	919	4	0	3502
Picarel's	<i>Spicara smaris</i>	2.1, 3.1, 3.2	0	72	191	0	1288	87	890	4	0	2533
Sprat	<i>Sprattus sprattus</i>	Black Sea GSA 29	3654	0	0	0	0	0	0	0	30	3684
Mantis shrimp	<i>Squilla mantis</i>	1.3, 2.1, 2.2	0	0	824	0	405	11	4389	0	0	5630
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	All areas in the Med	0	3	1766	238	893	1223	761	9	0	4894
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	Black Sea GSA 29	151	0	0	0	0	0	0	0	28	179
Horse mackerel	<i>Trachurus trachurus</i>	all areas in the Med	0	0	1747	215	1822	97	2177	5	0	6064
Horse mackerel	<i>Trachurus trachurus</i>	Black Sea GSA 29	0	0	0	0	0	0	0	0	0	0
Tub gurnard	<i>Chelidonichthys lucerna</i>	1.3, 2.2, 3.1	0	0	70	0	58	0	1169	1	0	1299
Clam	<i>Veneridae</i>	2.1, 2.2	0	0	72	0	0	118	15104	0	0	15294
Transparent gobiid	<i>Aphia minuta</i>	GSA 9, 10, 16 and 19	0	0	18	0	0	0	57	0	0	75
Sand smelt	<i>Atherina spp</i>	GSA 9, 10, 16 and 19	0	0	45	0	0	0	319	0	0	365
Poor cod	<i>Trisopterus minutus</i>	All Regions	0	0	568	513	63	0	672	0	0	1816

Table 5.2: Contribution (%) of Member States to the average landings over the period 2017-2019, for species included in Table 1A of Commission Decision 2016/1251 concerning the Mediterranean Sea and Black Sea.

	Species	Area	BGR	CYP	ESP	FRA	GRC	HRV	ITA	MLT	ROU	SVN	Sum
European Eel	<i>Anguilla anguilla</i>	all areas in the Med	0	0	0.03	0.97	0	0	0	0	0	0	1
Giant red shrimp	<i>Aristaeomorpha foliacea</i>	all areas in the Med	0	0	0	0	0.03	0	0.96	0.01	0	0	1
Red shrimp	<i>Aristeus antennatus</i>	all areas in the Med	0	0	0.46	0	0	0	0.54	0	0	0	1
Bogue	<i>Boops boops</i>	1.3, 2.1, 2.2, 3.1, 3.2	0	0.02	0.04	0	0.57	0.02	0.34	0.01	0	0	1
Dolphinfish	<i>Coryphaena equiselis</i>	all areas in the Med	0	0	0	1.00	0	0	0	0	0	0	1
Dolphinfish	<i>Coryphaena hippurus</i>	all areas in the Med	0	0	0.13	0	0.06	0	0.52	0.28	0	0	1
Sea bass	<i>Dicentrarchus labrax</i>	all areas in the Med	0	0	0.10	0.36	0.29	0.01	0.22	0	0	0	1
Horned octopus	<i>Eledone cirrhosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	0	0	0.19	0	0	0.01	0.81	0	0	0	1
Musky octopus	<i>Eledone moschata</i>	1.3, 2.1, 2.2, 3.1	0	0	0.05	0	0.07	0.08	0.79	0	0	0	1
Anchovy	<i>Engraulis encrasicolus</i>	all areas in the Med	0	0	0.26	0.01	0.17	0.13	0.43	0	0	0	1
Anchovy	<i>Engraulis encrasicolus</i>	Black Sea GSA 29	0.34	0	0	0	0	0	0	0	0.66	0	1
Grey gurnard	<i>Eutrigla gurnardus</i>	2.2, 3.1	0	0	0.59	0	0	0	0.41	0	0	0	1
Squid	<i>Illex spp.</i> , <i>Todarodes spp.</i>	all areas in the Med	0	0	0.15	0.03	0	0	0.67	0	0	0	1
Billfish	<i>Istiophoridae</i>	all areas in the Med	0	0	0	0	0	0	0.91	0.09	0	0	1
Common squid	<i>Loligo vulgaris</i>	all areas in the Med	0	0	0.10	0.06	0.17	0.03	0.63	0	0	0	1
Black-bellied angler	<i>Lophius budegassa*</i>	1.1, 1.2, 1.3, 2.2, 3.1	0	0	0.28	0.15	0.16	0	0.41	0	0	0	1
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.2, 1.3, 2.2, 3.1	0	0	0.27	0.27	0.05	0	0.41	0.01	0	0	1
Whiting	<i>Merlangius merlangus</i>	Black Sea GSA 29	0.94	0	0	0	0	0	0	0	0.06	0	1
Hake	<i>Merluccius merluccius</i>	all areas in the Med	0	0	0.15	0.05	0.28	0.06	0.45	0	0	0	1
Blue whiting	<i>Micromesistius poutassou</i>	1.1, 3.1	0	0	0.37	0	0.54	0	0.10	0	0	0	1
Grey mullets	<i>Mugilidae</i>	1.3, 2.1, 2.2, 3.1	0	0	0.08	0	0.15	0.03	0.74	0	0	0	1
Red mullet	<i>Mullus barbatus</i>	all areas in the Med	0	0	0.15	0.03	0.22	0.08	0.53	0	0	0	1
Red mullet	<i>Mullus barbatus</i>	Black Sea GSA 29	0.99	0	0	0	0	0	0	0	0.01	0	1
Striped red mullet	<i>Mullus surmuletus</i>	all areas in the Med	0	0.01	0.14	0.02	0.42	0.01	0.40	0.01	0	0	1
Common octopus	<i>Octopus vulgaris</i>	all areas in the Med	0	0	0.28	0.06	0.29	0.01	0.35	0	0	0	1
Norway lobster	<i>Nephrops norvegicus</i>	all areas in the Med	0	0	0.16	0.01	0.09	0.09	0.64	0	0	0	1
Pandora	<i>Pagellus erythrinus</i>	all areas in the Med	0	0.01	0.33	0.06	0.34	0.02	0.24	0	0	0	1
White shrimp	<i>Parapenaeus longirostris</i>	all areas in the Med	0	0	0.09	0	0.15	0.06	0.70	0	0	0	1
Caramote prawn	<i>Penaeus kerathurus</i>	3.1	0	0	0.05	0	0.44	0	0.52	0	0	0	1
Turbot	<i>Psetta maxima</i>	Black Sea GSA 29	0.52	0	0	0	0	0	0	0	0.48	0	1
Sardine	<i>Sardina pilchardus</i>	all areas in the Med	0	0	0.11	0.01	0.13	0.49	0.25	0	0	0	1
Mackerel	<i>Scomber spp.</i>	all areas in the Med	0	0	0.37	0.09	0.01	0.20	0.26	0.07	0	0	1
Cuttlefish	<i>Sepia officinalis</i>	all areas in the Med	0	0	0.08	0.02	0.31	0.01	0.57	0	0	0	1
Sole	<i>Solea solea</i>	1.2, 2.1, 3.1	0	0	0.05	0.05	0.17	0.07	0.66	0	0	0	1
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	0	0	0.22	0.31	0.20	0	0.26	0	0	0	1
Picarel	<i>Spicara smaris</i>	2.1, 3.1, 3.2	0	0.03	0.08	0	0.51	0.03	0.35	0	0	0	1
Sprat	<i>Sprattus sprattus</i>	Black Sea GSA 29	0.99	0	0	0	0	0	0	0	0.01	0	1
Mantis shrimp	<i>Squilla mantis</i>	1.3, 2.1, 2.2	0	0	0.15	0	0.07	0	0.78	0	0	0	1
Mediterranean hoi	<i>Trachurus mediterraneus</i>	All areas in the Med	0	0	0.36	0.05	0.18	0.25	0.16	0	0	0	1
Mediterranean hoi	<i>Trachurus mediterraneus</i>	Black Sea GSA 29	0.84	0	0	0	0	0	0	0	0.16	0	1
Horse mackerel	<i>Trachurus trachurus</i>	all areas in the Med	0	0	0.29	0.04	0.30	0.02	0.36	0	0	0	1
Horse mackerel	<i>Trachurus trachurus</i>	Black Sea GSA 29	0	0	0	0	0	0	0	0	0	0	0
Tub gurnard	<i>Chelidonichthys lucerna</i>	1.3, 2.2, 3.1	0	0	0.05	0	0.04	0	0.90	0	0	0	1
Clam	<i>Veneridae</i>	2.1, 2.2	0	0	0	0	0	0.01	0.99	0	0	0	1
Transparent gobiid	<i>Aphia minuta</i>	GSA 9,10,16 and 19	0	0	0.24	0	0	0	0.76	0	0	0	1
Sand smelt	<i>Atherina spp</i>	GSA 9,10,16 and 19	0	0	0.12	0	0	0	0.87	0	0	0	1
Poor cod	<i>Trisopterus minutus</i>	All Regions	0	0	0.31	0.28	0	0	0.37	0	0	0	1

Table 5.3: Average landings by MS (in tons) over the 2017-2019 period for sharks, rays and skates in the Mediterranean Sea and Black Sea.

Species	Area	BGR	CYP	ESP	FRA	GRC	HRV	ITA	MLT	ROU	SVN	Sum
<i>Centrophorus granulosus</i>	All Regions	0	0	5	0	0	0	0	1	0	0	6
<i>Centrophorus uyato</i>	All Regions	0	0	0	0	0	0	0	1	0	0	1
<i>Cetorhinus maximus</i>	All Regions	0	0	0.05	0	0	0	0	0	0	0	0.05
<i>Dalatias licha</i>	All Regions	0	0	1	0	0	0	0	0	0	0	1
Dasyatidae	All Regions	0	0	0	0	0	0	1	0	0	0	1
<i>Dasyatis pastinaca</i>	All Regions	2	7	0	0	96	0	0	0	2	0	107
<i>Dasyatis violacea</i>	All Regions	0	0	0	0	0	0	0.26	0.03	0	0	0.29
Elasmobranchii	All Regions	0	0	5	0	0	0	0	0	0	0	5
<i>Etmopterus spinax</i>	All Regions	0	0	4	0	0	0	3	0	0	0	7
<i>Galeus melastomus</i>	All Regions	0	0	98	0	32	0	12	0	0	0	142
<i>Heptranchias perlo</i>	All Regions	0	0	2	0	0	0	0	0	0	0	2
<i>Hexanchus griseus</i>	All Regions	0	0	0	0	0	0	0	3	0	0	4
<i>Isurus oxyrinchus</i>	All Regions	0	0	0.18	0	0	0	0	0	0	0	0.18
<i>Mustelus asterias</i>	All Regions	0	0	0	0	0	0	14	0	0	0	14
<i>Mustelus mustelus</i>	All Regions	0	0	27	0	11	27	341	12	0	2	419
<i>Mustelus punctulatus</i>	All Regions	0	0	0	0	0	0	135	1	0	0	136
<i>Mustelus spp.</i>	All Regions	0	0	0	0	45	0	0	0	0	0	45
<i>Myliobatis aquila</i>	All Regions	0	0	9	0	11	13	3	0	0	0	36
<i>Oxynotus centrina</i>	All Regions	0	0	0.16	0	0	0	0.09	0	0	0	0.25
<i>Prionace glauca</i>	All Regions	0	0	23	0	0	0	38	3	0	0	64
<i>Raja alba</i>	All Regions	0	0	0	0	0	0	66	0	0	0	67
<i>Raja asterias</i>	All Regions	0	0	36	31	0	0	214	0	0	0	282
<i>Raja brachyura</i>	All Regions	0	0	0	0	0	0	60	0	0	0	60
<i>Raja circularis</i>	All Regions	0	0	0	0	0	0	2	0	0	0	2
<i>Raja clavata</i>	All Regions	24	0	134	37	3	0	736	13	0	0	948
<i>Raja miraletus</i>	All Regions	0	0	0	0	0	0	137	0	0	0	137
<i>Raja montagui</i>	All Regions	0	0	0	0	0	0	8	7	0	0	15
<i>Raja oxyrinchus</i>	All Regions	0	0	0	0	0	0	21	0	0	0	21
<i>Raja polystigma</i>	All Regions	0	0	0	0	0	0	13	0	0	0	13
<i>Raja radula</i>	All Regions	0	0	0	0	0	0	9	0	0	0	9
<i>Raja spp (R. clavata, R. miraletus)</i>	All Regions	0	2	0	0	293	95	2	1	0	0	394
<i>Raja undulata</i>	All Regions	0	0	0	0	0	0	1	0	0	0	1
Rajidae	All Regions	0	2	304	0	0	0	1	0	0	0	307
<i>Scyliorhinus canicula</i>	All Regions	0	0	248	30	19	0	216	1	0	0	514
<i>Scyliorhinus spp (S. canicula, S. stellaris)</i>	All Regions	0	0	0	0	0	13	0	0	0	0	13
<i>Scyliorhinus stellaris</i>	All Regions	0	0	0	0	0	0	2	0	0	0	3
Squalidae	All Regions	0	0	0	0	0	43	0	0	0	0	43
<i>Squalus acanthias</i>	All Regions	26	0	0	1	0	24	80	8	1	0	139
<i>Squalus blainville</i>	All Regions	0	0	0	0	10	0	10	11	0	0	31
<i>Squalus spp.</i>	All Regions	0	0	0	0	0	0	0	1	0	0	1
<i>Squatina squatina</i>	All Regions	0	0	0	0	0	0	0.05	0	0	0	0.05
Triakidae	All Regions	0	2	0	0	0	0	0	0	0	0	2

Table 5.4: Contribution (%) of Member States to the average landings over the 2017-2019 period for sharks, rays and skates in the Mediterranean Sea and Black Sea.

Species	Area	BGR	CYP	ESP	FRA	GRC	HRV	ITA	MLT	ROU	SVN	Sum
<i>Centrophorus granulosus</i>	All Regions	0	0	0.75	0	0	0	0.05	0.20	0	0	1
<i>Centrophorus uyato</i>	All Regions	0	0	0	0	0	0	0	0.74	0	0	1
<i>Cetorhinus maximus</i>	All Regions	0	0	1.00	0	0	0	0	0	0	0	1
<i>Dalatias licha</i>	All Regions	0	0	0.82	0	0	0	0.18	0	0	0	1
Dasyatidae	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
<i>Dasyatis pastinaca</i>	All Regions	0.02	0.07	0	0	0.90	0	0	0	0.02	0	1
<i>Dasyatis violacea</i>	All Regions	0	0	0	0	0	0	0.88	0.12	0	0	1
Elasmobranchii	All Regions	0	0	1.00	0	0	0	0	0	0	0	1
<i>Etmopterus spinax</i>	All Regions	0	0	0.60	0	0	0	0.40	0	0	0	1
<i>Galeus melastomus</i>	All Regions	0	0	0.69	0	0.22	0	0.08	0	0	0	1
<i>Heptranchias perlo</i>	All Regions	0	0	0.98	0	0	0	0	0.02	0	0	1
<i>Hexanchus griseus</i>	All Regions	0	0	0.05	0	0	0	0	0.95	0	0	1
<i>Isurus oxyrinchus</i>	All Regions	0	0	1.00	0	0	0	0	0	0	0	1
<i>Mustelus asterias</i>	All Regions	0	0	0	0	0	0	0.98	0.02	0	0	1
<i>Mustelus mustelus</i>	All Regions	0	0	0.06	0	0.03	0.06	0.81	0.03	0	0	1
<i>Mustelus punctulatus</i>	All Regions	0	0	0	0	0	0	0.99	0.01	0	0	1
<i>Mustelus spp.</i>	All Regions	0	0	0	0	1.00	0	0	0	0	0	1
<i>Myliobatis aquila</i>	All Regions	0	0	0.24	0	0.31	0.35	0.09	0	0	0	1
<i>Oxynotus centrina</i>	All Regions	0	0	0.65	0	0	0	0.35	0	0	0	1
<i>Prionace glauca</i>	All Regions	0	0.01	0.35	0	0	0	0.60	0.04	0	0	1
<i>Raja alba</i>	All Regions	0	0	0	0	0	0	0.99	0.01	0	0	1
<i>Raja asterias</i>	All Regions	0	0	0.13	0.11	0	0	0.76	0	0	0	1
<i>Raja brachyura</i>	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
<i>Raja circularis</i>	All Regions	0	0	0	0	0	0	0.99	0.01	0	0	1
<i>Raja clavata</i>	All Regions	0.03	0	0.14	0.04	0	0	0.78	0.01	0	0	1
<i>Raja miraletus</i>	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
<i>Raja montagui</i>	All Regions	0	0	0	0	0	0	0.55	0.45	0	0	1
<i>Raja oxyrinchus</i>	All Regions	0	0	0	0	0	0	0.98	0.02	0	0	1
<i>Raja polystigma</i>	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
<i>Raja radula</i>	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
<i>Raja spp (R. clavata, R. miraletus)</i>	All Regions	0	0.01	0	0	0.74	0.24	0.01	0	0	0	1
<i>Raja undulata</i>	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
Rajidae	All Regions	0	0.01	0.99	0	0	0	0	0	0	0	1
<i>Scyliorhinus canicula</i>	All Regions	0	0	0.48	0.06	0.04	0	0.42	0	0	0	1
<i>Scyliorhinus spp (S. canicula, S. stellari)</i>	All Regions	0	0	0	0	0	1.00	0	0	0	0	1
<i>Scyliorhinus stellaris</i>	All Regions	0	0	0	0	0	0	0.84	0.16	0	0	1
Squalidae	All Regions	0	0	0	0	0	1.00	0	0	0	0	1
<i>Squalus acanthias</i>	All Regions	0.18	0	0	0.01	0	0.17	0.57	0.05	0.01	0	1
<i>Squalus blainville</i>	All Regions	0	0	0	0	0.32	0	0.31	0.36	0	0	1
<i>Squalus spp.</i>	All Regions	0	0.08	0	0	0	0	0	0.92	0	0	1
<i>Squatina squatina</i>	All Regions	0	0	0	0	0	0	1.00	0	0	0	1
Triakidae	All Regions	0	1.00	0	0	0	0	0	0	0	0	1

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 2017-2019 were used, which were received under the 2020 RCG Med&BS Data Call. For Greece, 2017 data were not available since the DCF was executed for a small period and only in a limited area; thus, 2018 & 2019 data were used in the analysis because for these years there was a full coverage of time and areas.

Results

Black Sea (GSA29)

11 métiers were identified for the Black Sea for the period 2017-2019, listed in Table 5.5. Specifications provided on miscellaneous (MISC) métiers are shown in Table 5.6.

Table 5.5: List of identified métiers at level 6 in the Black Sea for the period 2017-2019.

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 (including TBB_MOL_0_0_0)

Table 5.6: Specifications provided by MS on the use of MISC métiers.

MS	MISC
BGR	LHM_SPF_0_0_0
BGR	LHP_DEF_0_0_0
BGR	NO - without gear
BGR	SB_SPF_0_0_0

Table 5.7: Results of the ranking system at a cut-off level of 90% based on average landings (tons) over the period 2017-2019 for the Black Sea.

Metiers at lvl 6	Average Landings	%	CumSum
TBB_DEF_0_0_0	24602541	50.5%	50.5%
OTM_MPD_>=13_19_0_0	12557349	25.8%	76.3%
MISC	10704894	22.0%	98.3%

Since MISC métiers were selected through the ranking system, the ranking system was performed again, disaggregating the MISC métiers based on the information provided. However, because information on MISC metiers was not available for both MS, MISC remained in the ranking list.

Table 5.8: Results of the ranking system at a cut-off level of 90% based on average landings (tons) over the period 2017-2019 for the Black Sea (with MISC disaggregated).

Metiers at lvl 6	Average Landings	%	CumSum
TBB_DEF_0_0_0	24602541	50.5%	50.5%
OTM_MPD_>=13_19_0_0	12557348.95	25.8%	76.3%
NO - without gear	5472585	11.2%	87.6%
MISC	5207945	10.7%	98.3%

Table 5.9: Results of the ranking system at a cut-off level of 90% based on the average value of landings (euro) over the period 2017-2019 for the Black Sea.

Metiers at lvl 6	Average Value	%	CumSum
TBB_DEF_0_0_0	11145496	43.6%	43.6%
OTM_MPD_>=13_19_0_0	7188986	28.1%	71.8%
MISC	4403169	17.2%	89.0%
GNS_DEF_360-400_0_0	2208975	8.6%	97.6%

Since MISC métiers were selected through the ranking system, the ranking system was performed again, disaggregating the MISC métiers based on the information provided.

Table 5.10: Results of the ranking system at a cut-off level of 90% based on the average value of landings (euro) over the period 2017-2019 for the Black Sea.

Metiers at lvl 6	Average Value	%	CumSum
TBB_DEF_0_0_0	11145496	43.6%	43.6%
OTM_MPD_>=13_19_0_0	7188986	28.1%	71.8%
NO - without gear	2919852	11.4%	83.2%
GNS_DEF_360-400_0_0	2208975	8.6%	91.8%

Table 5.11: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2017-2019 for the Black Sea.

Metiers at lvl 6	Average Effort	%	CumSum
MISC	15758	23.5%	23.5%
OTM_MPD_>=13_19_0_0	14390	21.5%	45.0%
GNS_DEF_>=16_0_0	12658	18.9%	63.9%
TBB_DEF_0_0_0	12655	18.9%	82.8%
GNS_DEF_360-400_0_0	7721	11.5%	94.3%

Since MISC métiers were selected through the ranking system, the ranking system was performed again, disaggregating the MISC métiers based on the information provided. However, because information on MISC metiers was not available for both MS, MISC remained in the ranking list (see Table 5.12).

Table 5.12: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2017-2019 for the Black Sea (with MISC disaggregated).

Metiers at lvl 6	Average Effort	%	CumSum
OTM_MPD_>=13_19_0_0	14390	21.5%	21.5%
GNS_DEF_>=16_0_0	12658	18.9%	40.4%
TBB_DEF_0_0_0	12655	18.9%	59.3%
NO - without gear	10634	15.9%	75.1%
GNS_DEF_360-400_0_0	7721	11.5%	86.7%
MISC	2626	3.9%	90.6%

In overall, 6 metiers were selected through the ranking procedure in the Black Sea (see Table 5.13). Considering that MISC has been selected through the ranking procedure, it is suggested that all MS concerned give the effort to provide information on MISC metiers.

Table 5.13: Métiers selected through the ranking procedure over the period 2017-2019 for the Black Sea

Metiers at lvl 6	Selected based on landings	Selected based on value	Selected based on effort
GNS_DEF_>=16_0_0			X
GNS_DEF_360-400_0_0		X	X
MISC	X		X
NO - without gear	X	X	X
OTM_MPD_>=13_19_0_0	X	X	X
TBB_DEF_0_0_0	X	X	X

Mediterranean Sea

26 metiers were identified for the Mediterranean Sea for the period 2017-2019, listed in Table 5.14. Specifications provided on miscellaneous (MISC) metiers are provided in Table 5.15.

The following comments were provided by MS concerning metier data submitted.

MS	Fishing activity (metier) category Level 6	Comments
HRV	PS_LPF_14_0_0	Landing corresponds to catch. There is no landing or landing value per se as all catch is transferred to cages for farming. Landing value is excluding BFT.
HRV	all 2019 metiers	Preliminary data

Also, it was noticed in the data submitted that data on metiers related with large pelagic fisheries were not provided by all Mediterranean MS involved in such fisheries; therefore, the contribution of LLD_LPF_0_0_0 in the ranking of metiers is higher than the one provided in the analysis.

Table 5.14: List of identified metiers at level 6 in the Mediterranean Sea for the period 2017-2019.

DRB_MOL_0_0_0	MISC
FPO_DEF_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	
LTL_LPF_0_0_0	

Table 5.15: Specifications provided by Mediterranean MS on the use of MISC metiers.

MS	MISC	Notes
ESP	Misc_LHP**	Pole and line fishing is used to catch naturally schooling fish which can be attracted to the surface throwing over the board live bait.
ESP	Misc_LLS*	Deep water longline traditionally used in commercial fishing of the black spot seabream (<i>Pagellus bogaraveo</i>)
HRV	FPO_DEMSP_>=40_0_0	

	0	
HRV	HAR_DEF_0_0_0	
HRV	MIS_DEF_0_0_0	
HRV	MIS_MIS_0_0_0	
MLT	Combined gillnets-trammel nets	
MLT	Hooks and lines	
MLT	Miscellaneous metier (defined at national level)	
MLT	Set surface longlines	
SVN	GTN_DEF_>16_0_0	

Table 5.16: Results of the ranking system at a cut-off level of 90% based on average landings (tons) over the period 2017-2019 for the whole Mediterranean Sea (with MISC aggregated).

Metiers at lvl 6	Average Landings	%	CumSum
PS_SPF_>=14_0_0	157095578	36.8%	36.8%
OTB_DEF_>=40_0_0	97048196	22.7%	59.6%
PTM_SPF_>=20_0_0	39421486	9.2%	68.8%
PS_LPF_14_0_0	27196047	6.4%	75.2%
GTR_DEF_>=16_0_0	22159788	5.2%	80.4%
DRB_MOL_0_0_0	16290152	3.8%	84.2%
GNS_DEF_>=16_0_0	13423232	3.1%	87.3%
LLD_LPF_0_0_0	8898557	2.1%	89.4%
OTB_MDD_>=40_0_0	8480919	2.0%	91.4%

Table 5.17: Results of the ranking system at a cut-off level of 90% based on average value of landings (euro) over the period 2017-2019 for the Mediterranean Sea (with MISC aggregated).

Metiers at lvl 6	Average Value	%	CumSum
OTB_DEF_>=40_0_0	580419663.3	33.3%	33.3%
PS_SPF_>=14_0_0	236072158.3	13.5%	46.8%
GTR_DEF_>=16_0_0	188705941.6	10.8%	57.7%
GNS_DEF_>=16_0_0	110910375.9	6.4%	64.0%
OTB_DWS_>=40_0_0	107611121.3	6.2%	70.2%
OTB_MDD_>=40_0_0	78273066.15	4.5%	74.7%
LLD_LPF_0_0_0	64535251.81	3.7%	78.4%
PTM_SPF_>=20_0_0	58906224.31	3.4%	81.8%
PS_LPF_14_0_0	57434367.03	3.3%	85.1%
FPO_DEF_0_0_0	48010051.6	2.8%	87.8%
DRB_MOL_0_0_0	47169256.1	2.7%	90.5%

Table 5.18: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2017-2019 for the Mediterranean Sea (with MISC aggregated).

Metiers at lvl 6	Average Effort	%	CumSum
GTR_DEF_>=16_0_0	1524275	37.8%	37.8%
GNS_DEF_>=16_0_0	813362	20.2%	57.9%
OTB_DEF_>=40_0_0	422305	10.5%	68.4%
LLS_DEF_0_0_0	406801	10.1%	78.5%
FPO_DEF_0_0_0	198660	4.9%	83.4%
PS_SPF_>=14_0_0	120050	3.0%	86.4%
MISC	75667	1.9%	88.3%
DRB_MOL_0_0_0	61956	1.5%	89.8%
LLD_LPF_0_0_0	61805	1.5%	91.3%

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 Table 5.19.

Table 5.19: Results of the ranking system at a cut-off level of 90% based on average effort (days at sea) over the period 2017-2019 for the Mediterranean Sea (with MISC disaggregated).

Metiers at lvl 6	Average Effort	%	CumSum
GTR_DEF_>=16_0_0	1524275	37.8%	37.8%
GNS_DEF_>=16_0_0	813362	20.2%	57.9%
OTB_DEF_>=40_0_0	422305	10.5%	68.4%
LLS_DEF_0_0_0	406801	10.1%	78.5%
FPO_DEF_0_0_0	198660	4.9%	83.4%
PS_SPF_>=14_0_0	120050	3.0%	86.4%
DRB_MOL_0_0_0	61956	1.5%	87.9%
LLD_LPF_0_0_0	61805	1.5%	89.5%
OTB_DWS_>=40_0_0	48223	1.2%	90.7%

In overall, 12 métiers were selected through the ranking procedure in the Mediterranean Sea (see Table 5.20).

Table 5.20: Overall métiers selected through ranking procedure over the period 2017-2019 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	X	X	X
FPO_DEF_0_0_0		X	X
GNS_DEF_>=16_0_0	X	X	X
GTR_DEF_>=16_0_0	X	X	X
LLD_LPF_0_0_0	X	X	X
LLS_DEF_0_0_0			X
OTB_DEF_>=40_0_0	X	X	X
OTB_DWS_>=40_0_0		X	X
OTB_MDD_>=40_0_0	X	X	
PS_LPF_14_0_0	X		X
PS_SPF_>=14_0_0	X	X	X
PTM_SPF_>=20_0_0	X	X	

Finally, Table 5.21 below provides a list of métiers submitted by the MS during the 2020 RCG Med&BS Data Call in formats that are not in accordance with the regionally agreed format. MS are invited to review the wrong codes submitted and make efforts to strictly follow the regionally agreed codes.

Table 5.21: Metiers submitted during the 2020 RCG Med&BS Data Call with codes not in agreement with the regionally agreed format.

Errors in regional metier coding	Agreed regional metier coding
DRB_MOL__0_0	DRB_MOL_0_0_0
GNS_DEF_>=16_0	GNS_DEF_>=16_0_0
GNS_SLP_>=16_0	GNS_SLP_>=16_0_0
OTB_DEF_>=40_0	OTB_DEF_>=40_0_0
PS_SPF_>=14_0	PS_SPF_>=14_0_0
GNS_DEF_>=16_0_0_0	GNS_DEF_>=16_0_0
GNS_SLP_>=16_0_0_0	GNS_SLP_>=16_0_0
GTR_DEF_>=16_0_0_0	GTR_DEF_>=16_0_0
FPO_DES_0_0_0	FPO_DEF_0_0_0
FYK_DES_0_0_0	FYK_DEF_0_0_0
GTR_DES_>=16_0_0	GTR_DEF_>=16_0_0
OTB_DES_>=40_0_0	OTB_DEF_>=40_0_0
SB_SV_DES_0_0_0	SB-SV_DEF_0_0_0
TBB_DES_0_0_0	TBB_DEF_0_0_0
LHP_LHM_CEP_0_0_0	LHP-LHM_CEP_0_0_0
LHP_LHM_FIF_0_0_0	LHP-LHM_FIF_0_0_0
SB_SV_DEF_0_0_0	SB-SV_DEF_0_0_0
MIS	MISC
PS_LPF_0_0_0	PS_LPF_14_0_0

After the results from the RCG Med&BS data call were presented, MS Charis Charilaou proposed that the analysis of data should be done by different people, on rotation principle and during each year the scientists from the countries that are chairing the meeting should be involved. The RCG Med&BS chairs and the other participants supported this proposal. It was also commented on the possibility that the tenders which were launched this year by DG MARE may give support to the RCG and the future secretariat can also be part of this exercise. Ms Venetia Kostopoulou asked how much these analyses are changing the sampling from year to year in the MS. Are there a lot of differences in the results of the ranking métiers system compared to the past years? Ms Charis Charilaou clarified, that the selection of métiers that will be sampled is done at a national level. This exercise at the regional level is not used at the national level for the preparation of the work plans. The aim of these analyses is to be used for comparison proposes and may be used in the future regional plans. At this stage, it is only up to the MS to decide which métiers should be sampled. All the MS from the Med&BS are using the landings template to fill Table 1A in the WP. The possible publication of the aggregated tables as an annex to the report and as a separate file was also discussed. RCG Med&BS agreed to examine the possibility to publish the tables in a kind of a booklet, complemented with additional data to give more prominence and more recognition to the RCG and the work that is done at the regional.

TOR 6 - Data quality (assurance and control)

BULGARIA

Data quality assurance and control in the Bulgarian data collection was presented by Bulgarian experts. In regards to the Biological sampling of landings was mentioned that monitoring program is in place for Turbot, sprat, red mullet, whiting, anchovy, piked dogfish, horse mackerel and rapa whelk. Biological sampling by observers on board is also in place for fishing vessels with gillnets, beam trawls, on the vessels using polyvalent active and passive gears, and on the vessels with pelagic trawls. The sampling design for the surveys at sea is documented in protocols, available in the responsible research institutes, and the annual report for the implementation of the Work Plan and in the reports for each survey.

Methodologies for the socio-economic and transversal variables for the fleet, aquaculture and processing data collection also were presented. The same quality assurance framework is applied to all sectors and all data collection schemes since each sector (Fishing fleet, Aquaculture, Fish processing) is with census data collection scheme.

A number of data quality checks were explained. As a major advantage was pointed out that the responsible authority for the socio-economic data collection, and DCF at all, in Bulgaria, is the same and for control activities which make possible easier cross-checks.

All documents as methodologies and sampling protocols are available at Bulgarian DCF web page <http://dcf-bulgaria.bg>.

Ms Venetia Kostopoulou asked for the effort spent and how much time was needed for all the documents to be produced. The answer was that in the last five years with common effort and cooperation between DCF experts and scientists provision of all documents were possible.

CROATIA

Data quality framework was presented by Ms Ivana Vukov regarding transversal data and Mr Igor Isajlović for the biological part.

Methodological documents are published on the national DCF web site: <https://podaci.ribarstvo.hr/metodologija/>.

The national database is maintained by two institutions in charge for data collection, Ministry of Agriculture – Directorate of Fisheries (DoF) and Institute of Oceanography and Fisheries (IOF). The DoF database, so called Fisheries Geoinformation System (FIS) is an MS SQL which contains the fleet register, transversal data, recreational fisheries, socio-economic data on fisheries, VMS, aquaculture etc. IOF maintains an ORACLE database which contains biological data (commercial fisheries sampling data), while survey data are stored in dedicated databases. Procedures are established to input fleet register and transversal data from FIS to the IOF DB.

The national DCF database is fully in line with the Master Data Register, FAO, DCF (separate for economic and effort) and GFCM DCRF with established mapping procedures to ensure compliance to all coding lists. The General directory contains documents related to the Data Collection System and includes the most recent DCF-GFCM specification. The specification gives detailed descriptions of variables, their names, codes, units, data sources, calculations, related raising factors, estimation calculations, methods of aggregation etc., per data call and end-user.

Before retrieval of data from FIS to the national DCF DB, quality control procedures are performed to ensure the quality of collected data before its use. Such procedures include validation and verification of primary data from logbooks, fishing reports, sales notes, economic questionnaires etc. Although Control data, used as transversal variables, is continuously validated during the year, separate quality reports are used to accomplish this task after data has been collected and stored in the data base. Basic data is aggregated and displayed at the level of the obtained segments and sampling units (metiers) - the list of reports and the definitions of certain variables for each report are specified within the national DCF GFCM specification documentation.

CYPRUS

Biological data: For all available documentation, the relevant links are provided in Table 5A of the 2019 AR. As at the moment the 2019 AR is not available at the JRC Data Collection website, we provide the relevant table below. What is still not available, is the documentation on editing and imputation.

Concerning editing and imputation, tools developed under STREAM MARE/16/22 are being tested. Based on the latest developments and the future evolution proposed by STREAM project, Cyprus follows the buildout process of RDBES (Regional Database and Estimation System) lead by ICES. RDBES will screen raw data entries with a number of check routines and will accomplish to accompany all produced data set with a quality indicator based on the sampling design used.

The first round of development was delivered with the establishment of the RDBES data model and Cyprus participated in the two workshops that aimed to introduce the conceptual aspect of populating the data model and the creation of basic estimation routines. A second round started in 2020 with the RDBES-POP2 (2-5 June 2020) workshop, in which Cyprus participated; data submitters were introduced to the platform and were assisted in the creation of conversion routines from national formats to RDBES environment. All the above aim to secure the fulfilment of a dedicated data call, ending 30 of September. Post data call, a dedicated workshop is scheduled (WKRDBES-EST2) for comprehensive testing of the platform. We expect that relevant documentation on the imputation used within the RDBES will soon be available.

Socioeconomic data: A relevant manual is still not available, due to time constraints. It is expected to have available by end of 2021.

FRANCE

Ifremer is developing a full scale quality assurance (qualified ISO 9001). Well described informations are available in the French “Annual Report (AR) for data collection” in Text Box 3A and 5A.

Biological data :

- Sampling design

In the Mediterranean (no French fisheries in the Black Sea), the fisheries directorate (DPMA) is project manager for on-shore (ObsVentes) and at-sea (ObsMer) data collection programmes. These programmes are implemented in the field by sub-contractors. Ifremer acts

as Assistant to project manager for on-shore (ObsVentes) and at-sea (ObsMer) programmes, and is project manager for small scale catch assessment survey (ObsDeb). Ifremer runs the scientific surveys (MEDITS and MEDIAS). All guidelines, protocols and guidelines were developed and made available on a website (see table 5A of the AR). Survey protocols are available at the following hyperlink: <http://www.ifremer.fr/SIH-indices-campagnes/survey.action>

- Sampling implementation

For commercial catch sampling schemes, a web application (WAO) was developed in order to monitor closely the sub-contractors work, register refusals and reasons for cancelling an observation (bad weather, shift in metier activity, lack of room on board, security issues, ...). This web application has developed outputs to quantify the work achieved (realised vs planned, number of days between observation and population into the database, ...) and is used on a real-time basis to adjust the sampling allocation and as a communication tool between involved parties.

- Data capture and storage

Ifremer has developed a central database (Harmonie) for all fishery-dependent and fishery-independent data. The central system integrates the main sources of data for the "Fisheries Information System" (SIH), like: fishery statistics and activity of the fleets; collection of economic data; observations at sea and on shore; biological parameters for stock assessment; data from the sea surveys. This system is designed to :

- setting up a common reference system for the various sources of data,
- ensuring their integration, safeguard, quality control and dissemination,
- facilitate integration of additional data from other Ifremer systems (environment, ...),
- and facilitate the export to various format, including the COST format for data processing.

Ifremer has developed a fully-fledged software (Allegro) for capturing the fisheries sampling data, named Allegro. This software offers the complete palette of forms for the entry of all types of data to be collected as part of EU-MAP and during fieldwork in general, from economic surveys to biological sampling (at-sea and on-shore) sampling and scientific surveys. In order to ensure high quality for the data prior to their transfer to the Ifremer's Harmonie central database, the data are pre-validated automatically by applying plausibility criteria consistent with the reference criteria of Ifremer's Information System (SIH) and Harmonie (active vessels, taxonomic references, reference lists of metiers, and so on).

- Data processing and providing

An application (SACROIS) was developed for reporting fisheries statistics and quantify population indicators for raising the sampled data by strata. This application crosses all information issued from the control regulation (logbooks, dales notes, VMS) and also fleet activities to provide a complete and quality controlled information on the fishing activities and catches. Up to 2019, small scale dedicated estimations (OBSDEB) of catches and effort were done through a dedicated programme.

The exploratory analysis and raising procedures for landings and discards, length and age structures and biological parameters are done with the COST library. For each stock, each year, a repository is created on a common drive to store all the supporting information and scripts used, and a document describing all exploratory analysis and outputs.

A dedicated team (CREDO standing for “Cellule de REponse aux appels à Données”) has been put in place to process all data calls. The CREDO team prepares the data formatted as demanded by end-users based on the information provided by SACROIS and information from the sampling prepared with the COST library. A monitoring tool is used to track all demands and taking care of the work progress and dedication to the deadlines for submitting the data.

Economic and social data:

- Sampling frame and allocation scheme:

Data are produced by the Ministry of Agriculture statistical service. The procedure relies on two partners who carry out different but complementary methodologies:

- The Laboratoire d'Economie et de Management de l'Université de Nantes (LEMNA) collects economic data for vessels belonging to firms.
- IFREMER carries out field surveys each year to collect data for ships that do not belong to firms.

Sampling frames include all active ships that have not changed owner during the year. Monthly activity data (fishing gears, target species, fishing areas) make it possible to build fleet segmentation. A sampling target (number of ships to survey) for each fleet segment is computed in two steps. First, a precision target, correlated to turnover, is set for each fleet segment. Second, Neyman allocations are used to compute optimal sampling targets. A list of target ships is then obtained by a random draw within each sampling frame.

- Methodologies used for estimation procedures

We expect some of the target ships to be impossible to survey. We estimate social and economic variables for these ships using logistic regressions. Explanatory variables in these regressions include data collection scheme (field survey or accounting data), place of registration, ship length, number of active months, and main type of fishing gear.

Cost variables and gross value of landing are then extrapolated, using weights adjusted to take into account the number of target ships that could not be surveyed and the total number of ships in each fleet segment.

Economic data about subsidies, investments, financial position, and other income are only available through accounts (and not through surveys). These variables can therefore only be estimated for some fleet segments.

Capital cost and capital value variables are computed using the PIM methodology, which cross-checks data from different data sources.

Employment variables are computed using economic and activity surveys.

Quota or other fishing rights cannot be leased or rented by individual fishermen in France, so the associated variables (income, cost, value) are therefore not applicable to France, unpaid labour either.

Social variables are computed using administrative files at national level.

- Data quality:

Consistency checks on individual data are routinely carried out by both Ifremer and LEMNA. Summary indicators are computed, and individual ship data is compared to mean values in the fleet segment and to values obtained in former years. Abnormal values are then corrected.

GREECE

The Data quality assurance framework in Greece was described by Ms Irini Tzouramani and Mr Kostas Touloumis.

Biological data

Greece, within the last few years, has revised and updated the protocols and tools that are used to assure and assess the quality of the provided data. The outcome of this process is the formulation of an integrated system of data management which monitors the information flow, minimizes the errors, and assess the quality of the various outcomes.

This task works in various levels; it includes the assessment and revision of the applied sampling scheme, the design of the protocols used in the fieldwork as well as the instructions and the training of the observers to assure the collection and provision high-quality data. A central role to this data management system plays the database that we use to store data, which is designed in a such a way that it restricts the errors on data upload, through specialized masks, as well as it provides detail reporting on the progress of the programme in real-time.

Two times per year, the raw data are compared and contrasted with the handpaper protocols by experienced colleagues for possible mistakes. Afterwards, various specialized test and tools developed in R environment are applied on the raw data to check for additional mistakes (a priori tests). Additional tests are performed a posteriori when the data are processed to produce a data call or to provide information to the end-users.

A detailed description of this process is documented and is publicly available at:

http://inale.gr/wp-content/uploads/2019/10/Sampling_scheme_data_quality.pdf

http://www.alieia.minagric.gr/sites/default/files/basicPageFiles/Sampling%20scheme%20%26%20Data%20Quality%20Assurance%20Framework_2019.pdf

This document, which is under continuous development, contains a detailed description of the sampling scheme that Greece applies as well as the general guidelines of the data quality assurance and assessment framework. To ensure the continuous revision and update of the applied data management system, a specialized Working Group, dedicated to data quality assurance is operating, participated by experts from Fisheries Research Institute, the Hellenic Centre for Marine Research Hellenic and the Ministry of Rural Development and Food.

Socio-Economic data for the fisheries sector

Greece has organised a report which presents the methodological framework developed for the collection and analysis of socio-economic variables, in the context of the National Fisheries Data Collection Programme for the periods 2017-2019 and 2020-2021. It explains the data frame and describes the probability sampling survey for data collection. Also, it presents the target and frame population as well as the primary sources of information utilized. Also, the report explains the ways used to determine the sample size and how the sample is selected. The fishing gears, the vessel length, the importance of each fleet segment as well as the geographical location of the vessels are used to determine the sample size and the sample distribution. In the majority of cases where the statistical inference about the population cannot be derived by census data, it is based on an inference to the active population of the fishing vessels. Afterwards, the report describes the methods that ensure the quality of both the raw data and the statistical analysis, such as the unbiased indicator (coverage rate) and the indicators of variability (coefficient of variation and confidence intervals). Finally, it presents information on the availability, cohesion and comparability of data, along with the procedures applied to ensure confidentiality of data. The report is publicly available at <http://www.agreri.gr/en/node/93>, and at <http://www.alieia.minagric.gr/node/20>.

Aquaculture and fisheries processing sector

Greece implements an integrated framework for data quality assurance in aquaculture in order to tackle with accuracy, transparency and reliability issues. Apart from the required economic data provided by financial records and questionnaires, on-site visits and interviews are conducted as well to ensure the consistency of the relevant data. A significant aspect of the data management framework is the Integrated Monitoring System of Fisheries Activities (OSPA), which is the national database for monitoring fisheries activities.

The relevant collected datasheets from all sources are uploaded regularly on OSPA to update older records and to assure the collection and provision of high-quality data. Furthermore, for variables which need further segmentation, a non-probability sample survey is applied based on the information provided by the large enterprises that cover adequately the species and the techniques in the aquaculture section. To check for possible mistakes, all the data are compared and cross-checked by experienced colleagues with the following sources; i) Prefectural Chambers of Commerce, Industry and Trade, ii) Hellenic Ministry of Rural Development and Food several Prefectural bodies, iii) Integrated Monitoring System of Fisheries Activities (OSPA) and iv) business and professional online databases.

The estimation of variables regarding the Greek fisheries processing industry sector is limited since the main methodological framework for the data collection is census. All variables gathered from different sources are compared and cross-checked for credibility issues as described above, while for smaller companies with no published balance sheets the relevant data is compared to the corresponding Prefectural National Authorities records. A detailed description of the Data Quality Assurance Framework process is documented and is publicly available at: https://inale.gr/wp-content/uploads/2019/12/Data_Quality_Aquaculture.pdf

and at

http://www.alieia.minagric.gr/sites/default/files/basicPageFiles/Data_Quality_Aquaculture.pdf

ITALY

Description of national data quality framework including methodologies:

All protocols and methodological reports are available at:

<http://dcf-italia.cnr.it/reserved/lineeguida/1>

Additional description and references are also reported in the AR.

The documents available on the web site are:

- Quality checks for biological variables (in Italian)
- Methodologies for transversal variables
- Ecosystem indicators (in Italian)
- Protocols for biological data collection (in Italian)
- Surveys protocols: MEDIT, MEDIAS, SOLEMON, DRES
- Methodological report for the processing sector
- Methodological report for Fleet survey economic variables
- Templates for technical reports. These templates are used by the institutes involved in the implementation of the Italian National Work Plan to ensure technical reports have the same structure and contents.

Economic methodological reports are in line with PGECON guidelines that suggest including the following sections:

- Data sources
- Target population
- Techniques for sample selection and estimation of totals
- Sample's selection
- Primary data mining
- Preliminary treatment of primary data
- Estimation of totals
- Treatment of missing data
- Quality assessment of estimates

During the 2019 National Coordination Meeting, the following workshops were organized to discuss the issues in quality assurance and best practices:

Workshop n. 1: Production and effort data: estimates, effects on biological sampling and socio-economic survey

Workshop n. 2: Harmonization of small pelagic survey techniques (scientific surveys and biological sampling)

Workshop n. 3: Optimization of biological sampling and data quality verification tools (presentation and actual implementation of the tools developed within MARE19 and STREAM grants)

Workshop No. 4: State of the art and methodological approaches in surveys on artisanal fishing

Regarding the progress made in the last 2 years, a considerable effort has been devoted to the development of a new information system for the management of the Italian DCF Work Plan.

It covers a revision of the web site, a completely new database and specific tools for the management of AR and WP tables.

The first step of development has been finalized, the database structure is almost ready and it has been tested. The database has been populated with data referred to the period 2017-2019.

The second step of the development will integrate quality checks and statistical tools in the new database to allow a centralized validation of DCF data.

Ms Venetia Kostopoulou asked if they foresee that this automatic production of reports will ease the reporting, where the database is hosted and when will the project be finalized. Ms Evelina Sabatella explained that this is exactly the aim because they tried to integrate into the system even the production of the tables from the annual report and the WP tables. The aim is to facilitate the production of the tables and to prevent from using wrong codes or naming of variables. They will avoid working with excel and exchange through e-mail the files. Every institute, which is working for DCF should upload the tables in the system and in at ministry level the tables will be put together.

The system will give the possibility for automatic checks between the content of the AR and WP tables with the database. These kinds of criteria are already applied, but it is very heavy to do them without a kind of a database system. The database is hosted at the National research council because the council is the leading team of the project, so they are in charge of developing the new platform, together with the input of all the other institutes, which are in charge of the data collection and the project. The first step of the project is already finished and the second step is under implementation is the development of some quality and data validation tools.

MALTA

The Fisheries Research Unit within the Department of Fisheries and Aquaculture of the Ministry for Agriculture, Fisheries and Animal Rights is responsible for the implementation of the DCF and for undertaking the modules of the programme. Malta follows the publicly available national Work Plan in order to conform with all our reporting obligations. We are currently using a local server which enables us to share the Departmental data with each respective section where every Departmental section has different access rights. We are currently moving to a cloud server and online database to facilitate data transmission between different sections within the Department. Moreover, we are currently developing data validation tools to target any data input errors and mitigate any reporting issues. Concerning socio-economic data collection, the data collection methodologies follow the PGECON recommendations and the proposals of STECF EWGs.

ROMANIA

The data quality framework and procedures in Romania are still under development. The public procurement was done in the summer of 2019 and the contract was signed in December. The data coming under the control regulation is stored in the headquarters of NAFA. In November-December 2020 the special section for data collection will be created in the database. The scientific data is stored in the research institute.

SLOVENIA

Quality assurance framework for biological data

Slovenian approaches are described in detail in the National Programs and Annual Reports that are publicly available on the DCF web pages. The document that will cover the methodology and the overall data quality assurance framework for the data collection is still under preparation and will be published later on.

Samples in Slovenia are acquired for the various fishing tools that are used by fishermen (purse seines – not any more in the last 2 years, gillnets, three-layered nets, demersal otter trawls, a special type of demersal otter trawls "volantina"). Sampling design is documented. All necessary documentation concerning the sampling design is kept by the Fisheries Research Institute of Slovenia. Every data capture is documented via administrative sources or sampling. With the acquisition of data via administrative sources, data quality is assured with a census that captures the entire population and is subject to professional control and automated information system control before registration in the information system. For sampling, the quality of data is assured based on selecting the sample and the professional work of the sampling provider. All procedures are documented via administrative sources, background records which are automatically recorded by the information system and with the help of protocol lists that are kept by the ZZRS. No common documentation for verifying the quality of data collection has been available so far. Procedures have been described in each annual report for data collection and in national data collection programs. Now, and in the future, documentation will be available within the NWP and in annual reports on the websites: http://www.ribiski-sklad.si/lzvajanje_skupne_ribiske_politike/Zbiranje_podatkov/. Data are kept in the BIOS database at ZZRS and in the InfoRib information system (data from logbooks). International databases only keep data which Slovenia sends in reply to requests for data and other reporting obligations (EC, JRC, GFCM, ICES etc.). Procedures for evaluating data accuracy are documented. Documentation in relation to data accuracy evaluation procedures is kept by the ZZRS. Data editing is limited to correcting wrongly entered data. Wrong entries are discovered during data analyses and cross-checks. An accurate piece of data is sought in the archives of protocol lists where data are recorded in the field or the laboratory. Every correction (UPDATE, DELETE) in production tables is documented. The ID of the person that made the last modification and the time of the modification are independently written in the table. The record before the modification is independently transferred to the table with historical data. The table with historical data archives all modifications. The supplementation of missing data is documented in SQL scripts that create tables for accessing data from production tables. Most entered data refer to evaluating the weights of specimens. Specimen mass is evaluated by using the length and mass ratios that are calculated based on ZZRS data and are accessible on <http://www.biosweb.org>. Data are also entered in the supplementation of sub-sampling data. The number of specimens in the sub-sample is calculated with the COUNT function, which counts biometrically processed specimens. The sub-sampling factor is also calculated to increase the number of specimens in the sub-sample to the level of the entire sorting fraction (the sorting fraction is the fraction of the same biological type, e.g. large

specimen, small specimen etc.). There is no documentation on data editing (correction). Data entry is documented in SQL scripts, which can be obtained from the ZZRS.

Quality assurance framework for socio-economic

Slovenia does not implement sampling and the research is implemented for the entire population. The following data sources are used for economic and social data in the Republic of Slovenia: financial statements (AJPES), survey questionnaires, administrative data, logbooks, business register (AJPES) and notifications about the first sale. The sources and methods are statistically reliable because official national records are used as a source. AJPES is the leading national institution collecting and providing data and information for a transparent national and European business environment. Errors discovered in published data should be corrected and published as soon as possible. Data are automatically and manually checked every time before data is submitting for data requests. Access to InfoRib database is protected with user name and password. The processed data and metadata do not contain the names of natural or legal entities or their addresses. To assure confidentiality of data, we combine economic entities, so that their identity is not disclosed. The cooperation between DCF partners is implemented based on legal provisions and contracts. External users do not have direct access to data. Data are sent to external users on the basis of requests or on the basis of obligations or demands for data. Legislation on the protection of personal and business data is respected. The sound methodology is documented in the National Work Plan and the Annual Report. The reliable methodology is following the international standards, guidelines and best practices documented in the National Work Plan and the Annual Report. Procedures to ensure the conformity of standards, definitions, determinations and distributions among partners on the MS level, regional level and the EU level have been introduced. All procedures are documented in the National Work Plan and the Annual Report. Procedures for assuring the consistency of definitions in connection with administrative and other statistical data have been introduced. Appropriate agreements for access to appropriate administrative data and their quality have been concluded. The verification of collection, entry and coding of data is implemented regularly every year, and all data in the database are checked, including the program code, calculations and protocols. This is checked before the preparation of data which are then sent to the end-user, during preparation and after. Editing and imputation methods are verified, revised or updated regularly or as needed. Before each submission of data to end-users or before the preparation of data for data calls. Revisions in the database are automatically recorded and available in the information system. All procedures in the processing and entry of data in the database are recorded. It is assured at the national level that the data collection is implemented only based on the NWP and that the MKGP is responsible for it and duplication is avoided. Independent techniques that are included in the InfoRib information system exist for data capture, data coding and validation. No list of end-users is managed at the national level. There is a list of all data calls and demands by data from end-users and sent data. Data and their outputs are regularly reviewed and validated annually. Most data are cross-checked, e.g. the value of landings at InfoRib is compared with revenue indicated in annual financial statements, landings indicated in logbooks are compared with the sale in kg, indicated in reports etc. No need has arisen to document errors so far, and each year the STECF and other end users provide recommendations on how to improve accuracy

and reliability. After the receipt of a request for data, the appropriate holder is contacted and prepares the data and sends them to the end-user.

The national coordinator for data collection, who is also responsible for the timely preparation and provision of data, has been notified of all demands for data. Those implementing individual tasks for data collection must report to the national coordinator. Statistical data for various periods are comparable, and consistency, as well as methodological comparability of data, is assured during data collection. The system may also not have any missing data periods.

The methodology for collecting data is included in the National Work Plan and Annual Reports. Data are stored in two databases: InfoRib and BIOS. Documentation is available at the Fisheries Research Institute in Slovenia and the MKGP. All annual reports on the implementation of data collection and NWP are available on the internet.

SPAIN

Description of the Spanish data quality control system.

According to the European Regulation on Data Collection, MS must gather data concerning biological data, socio-economical and transversal.

Spain, through a central database, compiles all this data. The development of this database involves the coordination of different units, and each one of it includes a process of data validation. After those individual data validation process for each type of data, it takes place another data quality process when combining the different data types to build the central database.

The fishing activity data are stored in a centralized database currently subject to some improvements such as consistency filters and queries with data matching to better detect errors or inconsistencies. Automatic filters are also being implemented in the database.

Concerning the biological data from sampling at sea and on shore for obtaining length distributions of target species and discards, are introduced in the IEO database (SIRENO), which has some build-in quality checks such as Compulsory fields ensuring that no crucial data is missing, indication of whether sampling weights are estimated or measured and a limited list of values for ports, metiers, species, vessels, areas, etc. Quality checks include outliers detection, cross-checking of sampled trips with logbook/sales notes and review of the number of samples against commercial landings and effort by strata.

The estimation of the biological parameters and their uncertainties is carried out using the tool INBIO 2.0 “Estimation of biological parameters and their uncertainties through simulation techniques”), developed in R environment by the IEO. INBIO makes it possible to fit the most usual models and to estimate the coefficient of variation for parameters by using the non-parametric bootstrap methodology.

Concerning surveys at sea, the current international surveys being implemented in the Mediterranean Sea (MEDITS and MEDIAS) have been running for a number of years and their

well-elaborated plans constitute already a consistent ex-ante quality framework. Moreover, the data collected in the surveys are subject to a daily double-check process by crossing the computerized and the paper information in order to detect transmission errors.

Quality related documents (methodologies, sampling guidance, observers' protocols) to be made publicly available soon (probably IEO website). In the meantime, Spain is working in the implementation of further quality indicators for at sea and on shore sampling (sampling coverage, comparative analysis of observer's reports, proper identification of species of the same genus) and further developing ex-post quality checks in order to ensure the robustness of the abundance indices obtained in the surveys.

Regarding socioeconomic data, the data source is the Economical Statistics of Marine Fisheries developed by the Ministry of Agriculture, Fisheries and Food. Those are official statistics, governed by principles that seek to ensure the quality and credibility of the data. These principles are included in the Code of Good Practice for European Statistics (EUROSTAT) and refer, among other aspects, to professional independence, the protection of confidentiality, the reliability of the results, their precision, timeliness, punctuality, accessibility, clarity, comparability and consistency.

In this statistical operation, both in the information gathering process and in the subsequent data processing processes, quality controls are established in continuous improvement.

Ms Isabella Bitetto made a presentation on **Optimization tools for biological sampling and possible further developments within RCG**. In the call for proposal MARE/2020/08 Annex I has reminded the key role of RCG for preparing the Regional Work plans and the absence, so far, of a final decision taken by RCG about formalizing and implementing regional sampling plans, despite the substantial work done through grants and pilot studies (MARE/2014/19 and STREAM).

During the RCG meeting held in September 2019, an overview of the statistical methods and R tools developed in the above mentioned projects was presented. In particular, the optimization packages, SD Tool v.2 and BioSim Tool were described, as well as their application to 5 case studies in Mediterranean and Black Sea: *E. encrasicolus* and *S. pilchardus* in GSAs 1-5-6-7; *A. foliacea* and *A. antennatus* in GSAs 9-10-11; *E. encrasicolus* and *S. pilchardus* in GSAs 17-18; *M. barbatus* in GSA 29; *M. merluccius*, *M. barbatus* and *A. foliacea* in GSAs 22-23 and 25. During the same RCG the idea of an ad hoc working group on sampling optimization aimed at easing the drafting of the RWP was also launched, even if no action was made so far.

Ms Bitetto gave an overview of SDTool and BioSim Tool that allow performing analyses, based on a bootstrap technique to resample historical data, optimizing the sampling in terms of trips, of length measurements and biological measurements (sex, maturity, age) and allowing to evaluate the impact on relevant statistics. These tools allow to: identify situations with under/oversampling in terms of trips; identify possible sub-samples to be applied to length (and biological) measurements, against a comparable level of precision; evaluate the impact of different sub-samples to length-frequency distributions, as well as on sex ratio at length,

maturity at length, age-length key through appropriate indicators (Mean Weighted Coefficient of Variation, Earth Moving Distance).

However, some insights are still needed: it is of paramount importance to run the R codes using the consolidated dataset, being the tools based on resampling of historical data; the tools take into account the performance of sampling design in terms of precision, thus the current sampling design has to be always taken into account when comparing the results with the new sampling designs; the assumptions under the explored sampling designs should be carefully evaluated against the characteristics of the current sampling design; despite the test of a wide range of alternative sampling strategies within each case study developed in STREAM, further applications of the tool are recommended to simulate additional sampling strategies and/or options.

Some suggestions are given to RCG for the application of these tools towards the Regional Work Plans: the organization of training workshops on the use of R environment in general and more specifically on the developed methodology and R tools facilitating the interpretation and use of the results; to avoid problems arising from data limitations and availability for the application of the sampling optimization tools, the RCG may plan specific working sessions on the data preparation and formats, providing specific guidelines; specific working sessions and/or workshops to discuss the results of the case studies can be useful to give further insights and progress on the Sampling design issues. The RCG can play a pivotal role in proposing a calendar/plan of such working sessions.

As a further contribution to the ToR 6 of data quality, Ms Bitetto gave a quick overview on the data quality check tool developed within STREAM project for a priori quality checks (working directly on RCG sampling data format) and a posteriori quality checks (to be applied on DG MARE data call formats). The use of these tools eases the detection of errors listed in an automatic report containing qualitative and quantitative outputs, allowing the errors prompt correction and reducing the possibility of data issues.

Ms Venetia Kostopoulou asked if the STREAM outcomes and protocols were used in the Italian DCF. Ms Bitetto confirmed that a lot of the STREAM outcomes and tools were already incorporated in the Italian data collection. During the last national coordination, there was a specific workshop on the usage of the tools. The WS was focused mainly on the optimization of the sampling strategy.

TOR 7 - Regional plans

Establishment of regional sampling plan for small pelagic fish in the Adriatic Sea

Ms Ivana Vukov recalled on RCG Med&BS 2019 Recommendation 1 on the Establishment of regional sampling plan for small pelagic fish in the Adriatic Sea involving the relevant countries (ITA, HRV, and SVN) and presented the progress made in 2019 and 2020.

The first meeting of the working group for the coordination of data collection for small pelagic fish in the Adriatic Sea (WG SPF-AS) scheduled for the end of 2019 in Split, Croatia, was postponed with no further progress. In order to successfully establish the working group that will develop the RSP and RWP it is necessary to strengthen official communication between Member States and to coordinate more with GFCM and FAO AdriaMed as well as to ensure the involvement of third countries relevant for GSAs 17 and 18 (Albania and Montenegro).

Med&BS Regional project (MARE/2020/08 Annex 1)

Mr Alessandro Ligas presented general information about the call for proposal MARE/2020/08 and the proposal that was submitted to DG MARE: Streamlining the establishment of regional work plans in the Mediterranean and Black Sea regarding Annex 1.

Building on the results of the Call for Proposals launched in 2014 and 2016 (MARE/2014/19 and MARE/2016/22) and other relevant existing work, the Call for Proposals MARE/2020/08 (launched in May 2020) aims to provide further support and enable RCGs and MSs to strengthen regional or EU-wide cooperation on data collection. In particular, the Call MARE/2020/08 is aimed at addressing the main challenges to the current operation of the RCGs:

- Regional work plans: one of the primary purposes of the RCGs is to prepare regional work plans, which should include sampling designs/plans, procedures, methods, quality assurance and quality control for collecting and processing data, and conditions for the delivery of data;
- Administration and coordination: RCGs meetings and ISSGs involve administrative and coordination tasks (e.g., venues and accommodation, travel arrangements, side events, production and distribution of documents, written consultations, etc.); the need for the creation of a dedicated website to share information and increase the visibility of the RCGs' work was also pointed out;
- Regional databases (RDBs): RDBs allow having available data at low aggregation level concentrated in one place and facilitate the work of MSs, RCGs and end-users. Together with the corresponding RCGs, the Commission, MSs and end-users are entrusted to cooperate on the creation of RDBs. No RDB has been established for the Med&BS, and DCF data of different aggregation levels are still placed in different databases (e.g., JRC, GFCM).

The Call MARE/2020/08 intends to address these challenges by launching three different Annexes:

Annex 1: Establishing regional work plans for the following regions covered by the work of RCGs: Baltic / North Atlantic, North Sea, Eastern Arctic / Med & BS / long-distance fisheries / large pelagics;

Annex 2: Actions in support of the work of RCGs (administrative support, website, future structure and financing);

Annex 3: Development of the Regional Database for the Mediterranean and Black Seas.

As concerns Annex 1, a proposal has been submitted to DG MARE: Streamlining the establishment of regional work plans in the Mediterranean and Black Sea. The objective of the proposal is to draft Regional Work Plans (RWPs) for the Mediterranean and Black Sea related to specific topics through a co-creative work process with the RCG Med&BS and the Member States.

As clearly stated in the Call MARE/2020/08, “...the applicants should develop, in a co-creative work process with the relevant RCG, a draft regional work plan on the topic(s) that were identified as relevant. This draft regional work plan should bring together the existing knowledge from earlier grants and MS pilot studies, as well as the additional work carried out under this grant, and must be endorsed by the relevant RCG”.

The specific topics that will be considered by this proposal for the drafting of RWPs in the Mediterranean and Black Sea are the following:

- commercial fisheries (including small-scale fisheries) with optimized sampling strategies;
- recreational fisheries sampling strategy;
- fish stomach contents data collection;
- monitoring of vulnerable species incidental bycatch.

Other topics may be identified during the implementation of the project, and will then be included in the draft RWPs.

Furthermore, the following outputs are expected:

- A detailed map of expertise and available knowledge at Med&BS level on the main aspects and tools for the data collection; the map will also address the possible gaps and identify suitable case studies to the draft regional work plans;
- Workshops to train national experts on the available tools and procedures;
- Meetings to work on case studies and design draft regional work plans;
- A permanent decision-making structure for the design and implementation of regional work plans;
- Draft regional work plans to be fed into the EU-MAP 2022-2024 starting from 2023.

TOR 8 - Progress of the RCG Med&BS intersessional subgroups

Results by subgroup and discussion on a possible timetable for the RCG subgroups in 2021.

8.1 - End-user interactions and identification of end-user needs

Feedback from the intersessional subgroup on data transmission issues and data requirements (covered in TOR 1 – End-users Meeting on 31st August).

In addition to the summary of recommendations from the End-users meeting held on 31st August, the group discussed the establishment of a regional registry of data reporting requirements. In the past DG MARE provided to MS a list of data requirements which was available on the Repository on the DCF website, the last update was done in 2015 for the planning of DCF data calls in 2015. This list contained DG MARE data calls, ICES meetings with the potential use of DCF data as a basis of scientific advice and GFCM deadlines for data submission, in total 67 „data needs/data calls” are listed for 2015. In 2019 the RCG Med&BS Subgroup on data requirements and data transmission issues reviewed information on data calls in 2014-2018 by MS received from DG MARE. The group considered that currently there is no complete list of requirements on EU or regional level which is needed in order to avoid overlapping data calls and deadlines for submission of data as much as possible, taking into account data availability on MS and regional level. The group discussed the format of a Data requirements registry on a regional level. RCG Med&BS agreed to establish and maintain the regional registry as a “live” document starting in 2021 for 2020 data requirements.

8.2 - Feedback from the RDB steering Committee

Mr Stefanos Kavadas presented the current state of play of the RDB.

The SC had been established by the MED-BS Regional Coordination Group (RCG) during the 2018 Annual Meeting, following the 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”.

The Med&BS RDB Steering Committee (SC) met on January 2019 in Rome to discuss the development of the Regional Database (RDB) for the Mediterranean and Black Sea (MED&BS) Region and to investigate possible funding sources.

The results of the 2019 SC meeting and the proposals to the RCG were presented during the MED- BS RCG held in Malta on September 2019.

In the framework of the project MARE/2020/08 “Strengthening regional cooperation in the area of fisheries data collection”, a Regional Database (RDB) for the Mediterranean and Black Seas will be constructed containing fisheries data, to enable reliable scientific advice. The RCG, the Commission, Member States and end-users will cooperate on the creation of RDB.

The RDB will cover the fisheries of the defined region(s) and will be focused on addressing the fishery management needs related to the European Union Common Fisheries Policy. It is considered as an important tool to enable regional overviews of fishing activities, to optimize

data collection and facilitate task/cost-sharing and sampling at the regional level. In this sense, the benefit of the RDB is that it increases harmonization and transparency, and it enhances data quality. Ultimately, RDBs are expected to increase the use of DCF data.

TOR 9 - Recreational Fisheries

Ms Elisabetta Morello from GFCM presented the updates on activities concerning the recreational fisheries.

The GFCM “Handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea” comprises the main methodological framework for a suitably harmonized sampling and survey monitoring schemes for recreational fisheries in the Mediterranean and Black Sea. In the absence of the Working Group on Recreational Fisheries (WGRF) in 2020, postponed due to COVID-19, an online consultation was launched between March and May 2020. Comments on the handbook were consolidated into a revised version which was circulated in August 2020. The Handbook is currently under publication and a draft is present on the GFCM website. Pilot studies on the collection of recreational fisheries data, in line with the handbook, are currently underway in five CPCs: Algeria, Lebanon, Italy (Adriatic, GSA 17), Tunisia and Turkey (Black Sea, GSA 29). Each pilot has gone through a preparatory phase which has informed the development of the handbook, ensuring it accounts for specificities and challenges faced in the different subregions.

Ms Anne-Cecile Dragon asked if there are more pilot studies planned, especially in the Western Mediterranean. Mr Fabio Grati answered that there are no future planned studies at this stage.

BULGARIA

Following the recommendation by RCG MED & BS and the requirements under multi-annual Union programme, Bulgaria has planned a pilot study to allow assessment of the share of catches from recreational fisheries in relation to commercial catches by Bulgarian fleet in the Black sea. The aim of the study is also to estimate the number of recreational fishermen in the marine waters in the country, to record their fishing practices, and to collect data for the species and quantitative data of their catches.

The screening survey will be performed through a telephone and/or online survey by a commercial company, which used an ad hoc questionnaire addressed to the households from its database. The questionnaire will be short and simple. The data from the survey will be used for the estimation of the average number of fishermen in each household for one year. These estimates will be used in combination with the available data of national census to assess the total number of inhabitants of the country engaged in recreational fishing. The expected outcome of the pilot project is to understand better the current situation of the recreational fishery in Bulgaria by getting answers to questions like where people have gone fishing during the last year and what equipment was used, how many trips/days/hours were performed, so to determine the level of fishing activity, how many individuals by species were caught and their weight.

The pilot study was planned to start in 2020 but due to Covid-19 and administrative burdens is not started yet and it may be postponed for 2021.

CROATIA

Considering the large number of participants in sport and recreational fisheries in Croatia (in 2018 over 70 000 licences has been issued) and the problem of direct (on-board) data collection, the data collection has been carried out through a simple online questionnaire distributed to fishers through the recreational fisheries associations and social networks targeting the participants in sports and recreational fisheries in 2018. During the Pilot study performed in the period 2017-2019 using available information, a questionnaire was designed and distributed among recreational fisherman and fisheries associations in early 2019. Results of the pilot study will be published on the national DCF web site by the end of 2020: <https://podaci.ribarstvo.hr/metodologija/studije>.

There are several big game fishing competitions held yearly in Croatia. Sampling and data processing is done as in other biological samplings regarding large pelagic fish.

CYPRUS

The pilot survey on recreational fisheries carried out by Cyprus was finalised in 2018. Summarised results are available in the 2019 AR. Detailed information is available in a recent publication, with the following link:

Nikolas Michailidis et al., 2020. Recreational fisheries can be of the same magnitude as commercial fisheries: The case of Cyprus. Fisheries Research, Volume [231, 2020, 105711](#), ISSN 0165-7836, <https://doi.org/10.1016/j.fishres.2020.105711>.

FRANCE

The pilot study started in autumn 2017 and last until end of December 2019, with the objectives to estimate the size of the population of French recreational fishermen and to estimate catches for specific species.

But results from pilot study were disappointing, with too few panelists to be able to derive reasonable catch estimate. Actions have been identified to try and encourage more people to participate in the panel:

1. Contacting people via social networks
2. Putting up posters encouraging people to participate in the panel
3. Changing the log book so that it is easier to fill in
4. Teaching the contractor about marine biology so that they can interact more easily with the panelists
5. Contacting more people during the first phase of the study to come. This means planning to spend more money on it.
6. Asking for guarantees about the number of panelists in the call for tender.

Actions 1 to 3 are being taken in 2020. In the meantime, a new call for tender for setting up a new survey is being written, so that a new phone study can take place in 2020 with a new panel starting in 2021. Actions 4 to 6 should be included in the new call for tender.

GREECE

Mr Anastasios Papadopoulos presented Results from the Greek pilot study (telephone, diary and on site surveys), suggest that 8% of the population, approximately 700.000 residents in the country engage in marine recreational fishing. On average Greek fishermen fish 16 times/year (median 5 times/year).

Three modes of fishing were identified a) fishing from the shore, b) fishing from a boat and c) spearfishing. The most common way of fishing is from the shore 63%, 37% is fishing by boat, both using line or rod, 21% is practicing spearfishing and 11% fishing with longlines. Obviously, many of the fishermen are practicing fishing in more than one ways.

Regarding annual catch the average total annual catch per fisherman is 13 kg (median 3 kg/year).

Regarding annual expenses the average fishermen spend 181€/year (Median 38€/year).

Sparidae are the most commonly recorded catches in all three faces of the pilot study, and in all three areas of on-site sampling namely north Aegean Sea, Ionian Sea and Saronikos Gulf.

After the presentation Mr Fabio Grati asked if the catch data was from the onside survey to validate or to integrate the diary, Mr Papadopoulos explained that they are currently doing this and that's why the conclusions are not finalized.

ITALY

Ms Evelina Sabatella presented the Pilot study regarding the relative share of recreational fishing catches compared to commercial fishing catches from the Italian Work Plan.

The pilot study, originally planned for the period 2017-2019, was subsequently postponed and reduced to the year 2018 until June 2019.

The analysis of the Ministerial DB, in which the total of marine recreational fishermen were supposed to be registered, was carried out in 2018, as well as the field phase: therefore, the semester of 2019 was exclusively dedicated to feedback on the data received and to the analysis of data from the field survey.

The study involved the following phases:

- Analysis of the Ministerial DB
- Preliminary fact-finding interviews with experts
- Sample survey in 2 regional case studies, Marche and Tuscany
- National survey in all Italian coastal regions.

Data analysis of the field survey concerned the following estimates:

- Recreational fishing catches of some species in common with the species also considered in the "Data collection" of professional fishing:
- The percentage that the catch of these species by recreational fisheries represents with respect to the total catches (professional and recreational):
- Catches of other species, important for recreational fishing but not included in the data collection of professional catches:
- Some macroeconomic reference parameters.

Based on these estimates, a list of species was finally proposed to be considered for any future continuation of surveys on marine recreational fishing, estimating a reference percentage threshold of the recreational catches compared to the total catches (professional and recreational) and on an estimate of the relevance of other species not included in the surveys of professional data collection.

After this first part of the study, a series of constraints, mainly related to the impossibility to use the Ministerial DB as a reference for the estimation of number and distribution of the fishermen, indicate the need to continue this survey for the better estimates of the following parameters:

- Number and distribution of fishermen, to be estimated in another way respect to Ministerial DB. The condition of this DB does not permit to consider it as a tool for future estimates, and therefore, an alternative method must be found out for the estimation of this key-data.
- One more year of field survey is necessary to better statistically validate and tune the results of the first year of the survey.

According to what established by the Italian Ministry, up to now the activity was funded for the second half of 2020, and a survey to estimate number and distribution of fishermen will be carried out during this period.

Only after this phase, and a future second year of field survey, it will be hopefully possible to propose a routine data collection.

MALTA

Ms Miriam Gambin informed the group that Malta has conducted a pilot study between 2017 and 2018. The study consisted of two phases, with phase one (held in 2017) being used to plan phase two (held in 2018) which was a trial run of the actual data collection procedure. The study was based on fishing vessels having licenses to carry out recreational fisheries since the species listed in the Commission Implementing Decision (EU) 2016/1251 are not caught from shore. Data, which included a number of heads, weight by species and information on seasonality, was collected through in-person interviews with recreational fishers.

ROMANIA

Mr Constantin Stroie informed the group that there is a pilot study for the period 2020-2021 for estimation of the impact of the recreational fishery.

As the recreational fishing activity in Romania is seasonal, it usually starts at the beginning of the second quarter and ends at the middle of the fourth quarter, being largely conditioned by the hydroclimatic state and the migration of the fish species that reach the Romanian coast for feeding and reproduction, a situation that requires the temporary use of certain categories of gears and suitable fishing techniques, we consider that the time required for the operation of the pilot study should be two calendar years (2020-2021), and the results will be available in 2022. It must be taken into account that for each new information people become suspicious, difficult to convince and involve many field surveys both at sea and on land, therefore, a lot of clarification work.

The fishing is done from sunrise to sunset and the total catch should not exceed 5 kg per person/day, all detained fish must be within the legal limit length- minimum conservation side. The recreational fishing at sea has a seasonal character, practically the activity starts from the end of March and ends towards the end of November with the decrease in temperatures.

The main sources of data collection are the following documents: the questionnaire sent by each fisherman online, periodic field surveys and interviews with fishermen having fishing permits.

a. The questionnaire is the source where information is found regarding all the data needed to carry out an assessment (number of vessels, no fishing months, no fishing days, no fishing hours, no tools used and fishing technique, fishing area, total catch by species, respectively retained and discarded, etc.).

SLOVENIA

Ms Petra Bratina presented that in 2008 Slovenia adopted the rule (Official Gazette of RS, no. 64/08 from 27. 6. 2008 – Rules on leisure sea Fishing) where every non-commercial fisherman (except the ones fishing from the shore) has to report the retained catch and effort separated by species.

Since 2017 a statistical methodology for estimating catch data from recreational fisheries was developed in cooperation between the Statistical Office of the Republic of Slovenia and the Ministry of Agriculture, Forestry and Food (MAFF).

Data on recreational fisheries at sea are composed of the following data sources:

- data received on the basis of annual licenses for sport fishing;
- data received on the basis of annual licenses for the recreational fishing with spear gun;
- data received on the basis of daily and weekly licenses for recreational fisheries;
- data received from the organized sports competitions.

The Republic of Slovenia conferred a public mandate to the Sea Sport Fishing Federation of Slovenia for issuing the licenses and permits for sport fisheries at sea. Sea Sport Fishing Federation of Slovenia is also responsible for collecting data on sport fisheries at sea and dissemination of the data to the MAFF.

Fishermen which are holders of the annual sport fishing licenses are after the end of the season (31. December) obliged to return the completed fishing permits with recorded dates of the fishing days, fish species caught, the number of fish, weight of fish, and fishing time, to the MAFF.

The developed methodology enables to perform calculations for the data that were not received from the returned licenses and to get reliable data. All editing and imputation methods are documented and identified.

SPAIN

Mr Ricard Buxó presented that Spain is currently developing a Pilot Study on Recreational Fisheries.

The main objectives of this study are:

1. Characterize and estimate catches and discards made by recreational fishery and the impact on the species identified as targets, taking special account of the species that are also targeted by the commercial fishery.
2. Comparison between catches from recreational fishery and commercial fisheries.
3. Development of a proposal of a survey for the recreational fishery to comply with DCF.

This study will cover all the national waters, from the Mediterranean Sea to the Atlantic Ocean (including the Canary Islands).

To obtain information and gather data to respond to the objectives above described, this study will be carried out through telephone surveys.

Those telephone surveys are aimed at collecting data for the following variables:

1. Catches and discards.
2. Fishing techniques.
3. Effort.
4. Main season and area.
5. Interactions with other species.

The results of this study will be expected by the end of the first quarter of 2021.

TOR 10 - Diadromous species

Ms Elisabetta Morello from GFCM presented the work of the GFCM on diadromous species, which is centred around European eel. In response to Rec. GFCM/42/2018/1, the GFCM “Research programme on European eel: towards coordination of European eel stock management and recovery in the Mediterranean” was launched online in June 2020 involving nine scientific partners and administration focal points from as many CPCs (Albania, Algeria, Egypt, France, Greece, Italy, Spain, Tunisia and Turkey). The programme is envisioned as a concerted action aimed at pooling existing information and efforts and with four main aims, corresponding to as many work packages: i) identify and appraise management and protection measures for the recovery of the eel stock relevant to the Mediterranean, ii) establish a common framework for long-term monitoring of eel in the Mediterranean, iii) collect and update data concerning eel stock and eel habitats in the Mediterranean Region, and iv) establish a common framework for eel stock assessment. A fifth work package foresees a strong coordination, networking and training framework. The work done in WP2, supported by a detailed analysis, in collaboration with all partners, of current frameworks for fishery data collection and eel monitoring (EU Regulation 199/2008 and following, EU-Map, DCRF -GFCM framework for the collection and transmission of fisheries-related data in the GFCM area of application), will result in the revision of the European eel-related sections of the GFCM DCRF based on the requirements identified and data collected through the programme.

Dr Sapounidis Argyrios from the Fisheries Research Institute, Hellenic Agricultural Organization, Nea Peramos, Kavala, Greece presented the project “Towards coordination of European eel (*Anguilla anguilla*) stock management and recovery in the Mediterranean”

The critical status of the European eel stock has been acknowledged by GFCM for the Mediterranean since 2010. A proposal for a management plan for European eel was brought forward at the 41st session of the GFCM Commission in 2018, and it was decided to be based on the findings summarized within the framework of a dedicated working group on European eel.

The elements for such a plan were prepared at WKMEASURES-EEL 2018 and presented to the 42nd Commission. The Commission approved the Recommendation GFCM/42/2018/1 on a multiannual management plan for European eel in the Mediterranean Sea. Recommendation GFCM/42/2018/1 and the discussion held at the Working Group on the management of European eel (WGMEASURES – EEL; Rome, Italy, 2019), led to the drafting of a proposal, which was submitted to GFCM and approved during the 21st session of the Scientific Advisory

Committee on Fisheries (SAC), under the title “Towards coordination of European eel (*Anguilla anguilla*) stock management and recovery in the Mediterranean”.

This programme has four specific goals, corresponding to four main work packages, within which methodologies, data and expertise will be shared among the participant countries, as follows:

1. identify and appraise management and protection measures for the recovery of the eel stock relevant to the Mediterranean
2. establish a common framework for long-term monitoring of eel in the Mediterranean
3. collect and update data concerning eel stock and eel habitats in the Mediterranean Region
4. establish a common framework for eel stock assessment

The programme, which was foreseen to be carried out as a concerted action between scientific partners and relevant administrations of interested countries, involves nine (9) Countries in the Mediterranean area, Greece (Scientific coordinator), Italy, Spain, France, Tunisia, Algeria, Egypt, Turkey and Albania.

The project is funded and supervised by GFCM Secretariat and will provide central coordination, with the technical assistance where and if needed

Dr Sapounidis Argyrios from the Fisheries Research Institute, Hellenic Agricultural Organization Nea Peramos, Kavala, Greece presented the progress review for Greece:

During 2020, Fisheries Research Institute tested various methodologies for the assessment of the glass eels' recruitment, the standing population (yellow eels) and the migrating population (silver eels).

For the recruitment, there was an effort to answer the question raised during RCG MED&BS 2019, “which is the most appropriate methodology for the assessment of the glass eels' recruitment in the Mediterranean Countries”. Various types of glass eels' traps (habitat imitation, fyke nets etc.) were tested, but without any success. This probably is due to the very low abundance of glass eels; thus, it is not possible to be detected with the gears used. As a consequence, and following the example of other EU countries the task to estimate the recruitment of glass eels was removed from NWP.

On the other hand, as it concerns the standing population (yellow eels), a pilot monitoring system in an estuarine system in one EMU was established. For 8 months fyke nets were used to capture yellow eels in sampling stations with different habitat characteristics, like depth and substrate. All data collected during this period will be used to calibrate the “Eel Population Dynamics Model”, for assessing the vital rates of the population, i.e. stock and recruitment of eel populations.

Finally, regarding the migrating population (silver eels), its monitoring continues in one out of the 3 EMUs. For the rest two EMUs, the monitoring was not initiated due to administrative problems.

TOR 11 - Incidental by-catch of birds, mammals, reptiles and fish

Ms Elisabetta Morello from GFCM informed the group, that the methodology for multi-taxa bycatch data collection, previously presented to the RCG, has been published and is being applied throughout the Mediterranean.

The Medbycatch project (<http://www.fao.org/gfcm/activities/environment-and-conservation/med-bycatch-project/en/>) is the main ongoing project on incidental catches that the GFCM is involved in. It covers Morocco, Tunisia and Turkey, mainly, but its methodology and findings are relevant for the whole Mediterranean Sea and the approach is being replicated in other case studies (e.g. Cyprus led by BirdLife International and a new one is starting in Greece led by WWF). GFCM is also part of the Advisory Board of the CeNoBS project in the Black Sea (through its partnership with ACCOBAMS). The main aim of all these projects is to collect bycatch data and possibly identify and test mitigation measures. Within the context of the Med bycatch project, GFCM and partners developed an identification guide for vulnerable species incidentally caught in fishing operations in the Mediterranean (<https://portals.iucn.org/library/node/49019>) and are finalizing two publications: a regional review of incidental catches of vulnerable species in the Med and an overview of main mitigation measures used globally. Finally, good practice guides for the safe handling and release of species incidentally caught in fishing operations have been developed and are now available in five languages (<http://www.fao.org/gfcm/data/good-practice-guides>).

BULGARIA

Ms Vesselina Mihneva presented the assessment of the caught, discarded and landed catch and biological data collection of fish species and other marine organisms by scientific observations on board of Bulgarian fishing fleet vessels in 2019.

Data collection for the bycatch of marine species by scientific observers on different types of fishing activities of the Bulgarian fisheries' fleet. The following types of fishing vessels were observed:

1. turbot fishery with gillnets;
2. pelagic and bottom species fishery with pelagic trawls;
3. Rapana fishery with beam trawls;
4. pelagic and bottom species fishery with polyvalent active and passive gears.

The collected data include quantities, species composition, bycatch rate, sizes (length/weight), and sex and age structure for the main catches and bycatches.

For the period II-XI.2019, the total number of days with scientific expeditions is 62 fishing days - 20 days on fishing vessels with gillnets, 12 days on fishing vessels with pelagic trawls, 20 days on fishing vessels with beam trawls, and 10 days on vessels with polyvalent gear.

The target fish species by fishing with gill nets is the turbot. The target species for the pelagic trawls are the sprat, horse mackerel, and red mullet, while for the beam trawl - Rapana. Concerning the polyvalent fishing vessels, the target species are the pelagic fish species - red mullet and horse mackerel.

In a spatial aspect, the beam trawling took place in the northern part of the coastline, near Balchik - Kamchia, the surveys on vessels with gill nets were performed in the zones Rusalka - Krapets and Byala - Obzor, and those on vessels with pelagic trawls for horse mackerel include the southern coastline, while for red mullet and horse mackerel - in the northern area. The observations on the polyvalent vessels took place in the northern coastline - Krapets - Varna.

Discards were not observed during the study, and bycatches consisted mainly of fish, molluscs and crustaceans.

CROATIA

Mr Igor Isajlović presented the sampling of incidental by-catch. There is no pilot study on incidental by-catch of birds, mammals, reptiles and Elasmobranchs as observer sampling programme for the monitoring of commercial fisheries covers also the sampling of incidental by-catch.

CYPRUS

Ms Charis Charilaou presented the 2019 Pilot study on trawlers in GSA25 (Cyprus)

During 2019, information on incidental bycatches was collected through a pilot study on trawlers operating in GSA25. A brief description of the results obtained is included in the 2019 Cyprus AR.

Data on incidental catches were obtained from bottom trawlers through observer programmes, interviews and electronic logbooks.

In general, the two licensed trawlers in Cyprus operate around 7 months, with a closed season from 1 June until 7 November.

The planned trips to be sampled for bycatch by observers were 8, covering all quarters with fishing activity (q1, q2, q4).

In 2019, around 185 fishing trips were performed, from which a total of 14 trips were sampled. Observers were able to collect information on total catch from 5 trips (a percentage accounting for 2.5% of trips) from all relevant quarters, while the rest of the trips were sampled only on the retained catch.

Interviews were made whenever a trip was sampled, following the GFCM guidelines on incidental catch. Information on the specific fishing trips was requested when only retained catch was sampled, while during all sampled trips, general information on bycatches of the preceding week was requested.

Observers recorded 4 elasmobranch species (*Raja polystigma*, *Scyliorhinus canicula*, *Squalus balinville* and *Torpedo nobiliana*), none of which are included in DCF Table 1D concerning the region. Only two fish with MCRS that are included in Table 1D were recorded: *Diplodus annularis*, and *Pagellus acarne*. There were no records of sea birds, mammals and reptiles.

Based on the interviews, sharks are not common in catches, while rays are occasionally caught (*Raja* spp.). Birds, mammals and sea turtles don't seem to be caught.

ERS records of fish included in Table 1D, from the relevant trawlers, concerned mainly *Pagellus acarne*, as well as limited catches of 4 *Epinephelus* species, *Diplodus annularis*, *Pagrus pagrus* and *Pagellus bogaraveo*. Discard records did not concern species included in Table 1D.

Incorporation of results into regular sampling - Results from the pilot study on trawlers do not suggest incidental catches of birds, mammals and reptiles (sea turtles); concerning sea

turtles, this may be due to the closed trawling season covering their reproduction months. Incidental catches of fish included in Table 1D concern species with MCRS.

STREAM project suggests the monitoring of incidental bycatch to be coupled with the monitoring of commercial fisheries and discards, making necessary adjustments: record bycatches at the haul level, an inspection of the opening of the cod-end, record hauls with zero bycatch. Cyprus plans to follow this suggestion.

FRANCE

There is no pilot study on Incidental by-catch of birds, mammals, reptiles and fish because it is covered by the regular at-sea sampling and included in the related protocol since 2017.

GREECE

Mr Kostas Touloumis informed the group that under the provisions of the Commission Decision (EU) 2016/1251, Greece has designed a pilot study suitable to cover the objectives of the incidental by-catch of Protected, Endangered & Threatened (PET) species monitoring program. Following the recommendations of the RCG Med&BS-2017, the duration of the pilot study is 36 months (2018–2020) and it has been planned to record incidental PET by-catch on bottom trawlers in 2018, on longlines in 2019 and on set nets in 2020, for the GSAs 20, 22 and 23. Sampling is been carried out by on-board observers. Observers were instructed to check at the opening of the cod-end and observe the whole shorting process for PET specimens; alternatively, they should estimate the proportion of the cod-end and the shorting process they observed. Additionally, to ensure data quality, observers should photograph the haul at the opening of the cod-end, before the shorting process begins, as well as specimens of rare species caught.

A list of relevant to the program species has been created, consisted of species included in the 1D table of the Decision 2016/1251 (with obligation for the Mediterranean Sea), as well as species protected by the Council Directive 92/43 and the Barcelona Convention. To record data for these species, Greece adopted the sampling protocols provided by MARE/2014/19 project. These protocols are dedicated to specific marine species groups: fishes, sharks & rays (Protocol 1), cetaceans (Protocol 2) and sea turtles (Protocol 3). Additionally, a protocol dedicated to birds (Protocol 4) has also been designed and applied. These protocols, require the recording of standard DCF measurements as well as additional information such as specific body size measurements, weight, sex determination, the estimation of by-caught specimen condition etc.

In 2018, the sampling effort in OTB ranged from 0.5% in GSA22 to 0.9% in GSA20 and GSA23. No mammals and birds were recorded in the entire sample. One sea turtle was caught and released in GSA22. Elasmobranchs were the group with the highest bycatch rates since 317 specimens from 6 species were recorded in GSA22, 69 specimens from 5 species in GSA20 and one specimen was recorded in GSA23. Last, two Osteichthyes species were recorded in GSA20 (44 records) and one in GSA22 (25 records).

During 2019 Greece recorded the incidental by-catch of PETs by on-board observers on set and drifting longlines. The sampling effort in set longlines ranged from 0.07% in GSA22, to 0.15% in GSA20 and GSA23, while in drifting longlines sampling effort was 0.9%. Greece

recorded two elasmobranchs and one Osteichthyes PET species in GSA22 (7 individuals and 5 individuals respectively) and 3 Elasmobranchs species (8 individuals) and 2 Osteichthyes (6 individuals) in GSA20.

The relevant data were disseminated in WGBYC data call in 2019 and 2020. Based on the analyses currently conducted on these data, Greece will take final decisions for the following steps regarding the PETS monitoring for the following years.

ITALY

Pilot study on the incidental bycatch of EPT species (Endangered, Protected, Threatened) under the Italian National Work Plan

The monitoring of the incidental by-catch of vulnerable species in fishing gears other than those already monitored under the Reg. EU 812/2004 has been implemented as a Pilot Study (Incidental by-catch of all birds, mammals and reptiles and fish protected under Union legislation and international agreements”), included into the Italian National Work Plan 2017-2019.

The selection of fishing gears to be monitored was based on the outcomes of the EU Project “Strengthening regional cooperation in the area of fisheries data collection in the Mediterranean and Black Sea” (MARE/2014/19) and the Regional Coordination Group Med&BS 2017 in Larnaka (Cyprus). In the light of the available information, it was decided to perform the monitoring of the by catch of **otter bottom trawl fisheries in 2018**, while the **longlines fisheries were monitored in 2019**. All the Italian GSAs (GSAs 9, 10, 11, 16, 17, 18 e 19) were included in the two monitoring programmes.

The methodology used for the monitoring of the incidental by-catch of vulnerable species is the one proposed by the EU Project MARE/2014/19 through a fleet observer programme, taking the advantage of the monitoring on board already foreseen under the sampling of biological data in commercial fisheries. Additional specific samplings on boards were performed. In parallel, a self-reporting programme by means of the completion of a specific logbook distributed to the skipper of a representative sub-sample of vessels has been performed. Interviews at landing points were also performed.

As a reference to vulnerable species, the lists of EPT species listed in Appendix E of the GFCM Data Collection Reference Framework (GFCM, 2017), those reported in Table 1d of the Dec. Comm. UE 1251/2016 and the species present in the IUCN Red List were considered.

A total of 4536 fishing days were monitored in 2018 in the seven Italian GSAs, as shown in Table 1.

Table 1. Summary of the fishing days monitored by metier and sampling method in 2018.

Methods	Metier	n. vessels	days monitored
Observations on board and at landing	OTB_DES	43	140
Self-sampling (log-book)	OTB_DES	36	2253
Interviews	OTB_DES	6	1000
Observations on board and at landing	OTB_MD D	15	35
Self-sampling (log-book)	OTB_MD D	27	997
Observations on board and at landing	OTB_DW S	6	18

Self-sampling (log-book)	OTB_DW S	7	93
OTB_DES days monitored			3393
OTB_MDD days monitored			1032
OTB_DWS days monitored			111
Days monitored			4536

Twenty-three species were observed and reported during the monitoring programme in 2018: one bony fish (Twaite shad, *Alosa fallax*), one reptile (loggerhead sea turtle, *Caretta caretta*), one cetacean (bottlenose dolphin, *Tursiops truncatus*), and 20 elasmobranchs (bull ray, *Aetomylaeus bovinus*, gulper shark, *Centrophorus granulosus*, common stingray, *Dasyatis pastinaca*, sharpnose sevengill shark, *Heptranchias perlo*, bluntnose sixgill shark, *Hexanchus griseus*, smooth-hound, *Mustelus mustelus*, starry smooth-hound, *M. asterias*, blackspotted smooth-hound, *M. punctulatus*, common eagle ray, *Myliobatis aquila*, angular roughshark, *Oxynotus centrina*, blue shark, *Prionace glauca*, pelagic stingray, *Pteroplatytrygon violacea*, Maltese ray, *Leucoraja melitensis*, thornback ray, *Raja clavata*, brown ray, *R. miraletus*, white skate, *Rostroraja alba*, nursehound, *Scyliorhinus stellaris*, picked dogfish, *Squalus acanthias*, longnose spurdog, *S. blainville*, and electric ray, *T. nobiliana*).

The species showing the largest number of individuals caught is longnose spurdog, *S. blainville* (447 specimens in OTB_DES, 45 specimens in OTB_MDD, and 1 specimen in OTB_DWS), followed by smooth-hound, *M. mustelus* (230 individuals caught by OTB_DES and 14 by OTB_MDD). A considerable by catch of loggerhead sea turtle, *C. caretta*, has been observed, especially in the OTB_DES fishery (93 individuals caught, with a frequency of occurrence close to 2%). The bulk of the loggerhead sea turtle by catch comes from the Adriatic Sea: 23 individuals were reported in GSA 17 (4% frequency of occurrence) and 53 specimens in GSA 18 (9% frequency of occurrence). In the other Italian GSAs, the frequency of occurrence of the by catch of loggerhead sea turtle is lower than 1%.

Table 2. Summary of the vulnerable species reported in 2018.

GSAs	Metier	Species	n. specimens	n. days with catch	days monitored	Frequency (%)
All GSAs	OTB_DES	<i>Caretta caretta</i>	93	59	3393	1.74
All GSAs	OTB_DES	<i>Alosa fallax</i>	3	3	3393	0.09
All GSAs	OTB_DES	<i>Aetomylaeus bovinus</i>	1	1	3393	0.03
All GSAs	OTB_DES	<i>Centrophorus granulosus</i>	4	3	3393	0.09
All GSAs	OTB_DES	<i>Dasyatis pastinaca</i>	106	44	3393	1.30
All GSAs	OTB_DES	<i>Heptranchias perlo</i>	3	2	3393	0.06
All GSAs	OTB_DES	<i>Hexanchus griseus</i>	31	28	3393	0.83
All GSAs	OTB_DES	<i>Mustelus mustelus</i>	230	58	3393	1.71
All GSAs	OTB_DES	<i>Mustelus punctulatus</i>	2	2	3393	0.06
All GSAs	OTB_DES	<i>Myliobatis aquila</i>	65	20	3393	0.59
All GSAs	OTB_DES	<i>Oxynotus centrina</i>	32	28	3393	0.83
All GSAs	OTB_DES	<i>Prionace glauca</i>	1	1	3393	0.03
All GSAs	OTB_DES	<i>Pteroplatytrygon violacea</i>	20	17	3393	0.50
All GSAs	OTB_DES	<i>Leucoraja melitensis</i>	23	3	3393	0.09
All GSAs	OTB_DES	<i>Raja clavata</i>	94	46	3393	1.36
All GSAs	OTB_DES	<i>Raja miraletus</i>	8	2	3393	0.06
All GSAs	OTB_DES	<i>Rostroraja alba</i>	2	2	3393	0.06
All GSAs	OTB_DES	<i>Scyliorhinus stellaris</i>	4	4	3393	0.12

All GSAs	OTB_DES	<i>Squalus acanthias</i>	65	24	3393	0.71
All GSAs	OTB_DES	<i>Squalus blainville</i>	447	44	3393	1.30
All GSAs	OTB_DES	<i>Torpedo nobiliana</i>	1	1	3393	0.03
All GSAs	OTB_DES	<i>Tursiops truncatus</i>	1	1	3393	0.03
All GSAs	OTB_MDD	<i>Caretta caretta</i>	5	5	1032	0.48
All GSAs	OTB_MDD	<i>Aetomylaeus bovinus</i>	3	2	1032	0.19
All GSAs	OTB_MDD	<i>Centrophorus granulosus</i>	6	3	1032	0.29
All GSAs	OTB_MDD	<i>Dasyatis pastinaca</i>	94	14	1032	1.36
All GSAs	OTB_MDD	<i>Hexanchus griseus</i>	16	16	1032	1.55
All GSAs	OTB_MDD	<i>Mustelus asterias</i>	1	1	1032	0.10
All GSAs	OTB_MDD	<i>Mustelus mustelus</i>	14	3	1032	0.29
All GSAs	OTB_MDD	<i>Myliobatis aquila</i>	1	1	1032	0.10
All GSAs	OTB_MDD	<i>Oxynotus centrina</i>	6	5	1032	0.48
All GSAs	OTB_MDD	<i>Raja clavata</i>	1	1	1032	0.10
All GSAs	OTB_MDD	<i>Squalus acanthias</i>	1	1	1032	0.10
All GSAs	OTB_MDD	<i>Squalus blainville</i>	45	24	1032	2.33
All GSAs	OTB_DWS	<i>Centrophorus granulosus</i>	1	1	111	0.90
All GSAs	OTB_DWS	<i>Hexanchus griseus</i>	3	3	111	2.70
All GSAs	OTB_DWS	<i>Hexanchus spp.</i>	2	1	111	0.90
All GSAs	OTB_DWS	<i>Squalus blainville</i>	1	1	111	0.90

As concerns, the monitoring of the incidental by-catch of EPT species in longlines fisheries in 2019, the ports involved in the sampling were 10 distributed in 5 GSAs (excluding GSAs 10 and 17), chosen according to the importance of the sites for this fishery and the reliability of the local fishermen.

During the monitoring of the by-catch of longline fisheries during 2019, a total of 429 fishing days were monitored. Based on the importance of the fleet, the sampling was concentrated on the fleet fishing swordfish (both midwater and surface longlines), as well as some sampling on tuna fleet. The days monitored by scientific observers on board commercial fishing vessels were 36, while 393 were the fishing days monitored by self-sampling. 198 days were monitored for surface longlines, 231 for midwater longlines. A total of 20 vessels were used through self-sampling and on-board observations.

Table 3 shows the list of vulnerable species found, according to the classification of the degree of threatening.

Table 3. List of vulnerable species detected, according to the various international classifications.

Scientific name	IUCN status	Dec. EU 2016/1251	GFCM, App. E
<i>Alopias vulpinus</i>	Endangered	Present (high pr.)	Present
<i>Caretta caretta</i>	Least concern	Present	Present
<i>Centrolophus niger</i>	Least concern	Present	Not present
<i>Centrophorus granulosus</i>	Critically endangered	Present (high pr.)	Present
<i>Hexanchus griseus</i>	Least concern	Present (high pr.)	Not present
<i>Isurus oxyrinchus</i>	Critically endangered	Present (high pr.)	Present
<i>Mola mola</i>	Data deficient	Not present	Not present
<i>Prionace glauca</i>	Critically endangered	Not present	Present
<i>Pteroplatytrygon violacea</i>	Least concern	Present (high pr.)	Not present

<i>Squalus blainville</i>	Data deficient	Present	Not present
<i>Sudis hyaline</i>	Data deficient	Not present	Not present
<i>Trachipterus trachipterus</i>	Data deficient	Not present	Not present
<i>Zu cristatus</i>	Data deficient	Not present	Not present

A total of 13 species were observed: one reptile (the common sea turtle *Caretta caretta*), 7 elasmobranchs (*Alopias vulpinus*, *Hexanchus griseus*, *Centrophorus granulosus*, *Isurus oxyrinchus*, *Prionace glauca*, *Pteroplatytrigon violacea*, *Squalus blainville*), and 5 teleosts (*Mola mola*, *Sudis hyalina*, *Trachipterus trachipterus*, *Zu cristatus* and *Centrolophus niger*).

During the 2019 monitoring of drifting longlines, no incidental catch of sea mammals and birds was observed.

The greatest number of incidental by-catches catches of vulnerable species (Table 4) involved two elasmobranchs: in particular *Pteroplatytrigon violacea*, 151 individuals in 52 days (frequency 12.12%), and *Prionace glauca*, 53 individuals in 47 days (frequency 10.96%). Other elasmobranchs occasionally captured (1 to 6 individuals throughout the monitoring period) were *Alopias vulpinus*, *Centrophorus granulosus*, *Hexanchus griseus*, *Isurus oxyrinchus* and *Squalus blainville*.

Table 4. Summary of the frequency of vulnerable species catches on the total fishing days.

Species	Total days with catches	Total fishing days	Frequency n. days (%)
<i>Alopias vulpinus</i>	1	429	0.23
<i>Caretta caretta</i>	18	429	4.20
<i>Centrolophus niger</i>	1	429	0.23
<i>Centrophorus granulosus</i>	3	429	0.70
<i>Hexanchus griseus</i>	3	429	0.70
<i>Isurus oxyrinchus</i>	1	429	0.23
<i>Grinding wheel</i>	38	429	8.86
<i>Prionace glauca</i>	47	429	10.96
<i>Pteroplatytrigon violacea</i>	52	429	12.12
<i>Squalus blainville</i>	2	429	0.47
<i>Sudis hyalina</i>	4	429	0.93
<i>Trachipterus trachipterus</i>	3	429	0.70
<i>Zu cristatus</i>	24	429	5.59

Excluding the elasmobranchs, the most frequent species was *Mola mola*, 198 individuals in 38 days (8.86% frequency of occurrence), followed by *Zu cristatus*, 38 individuals in 24 days (frequency 5.59 %). The loggerhead sea turtle, *C. caretta*, was caught in 18 occasions, equal to a 4.2% frequency of occurrence.

Analysis of the differences in catches between midwater and surface longlines was also considered. Most of the catches of vulnerable species have been made with midwater longlines, with a relative predominance of blue shark and ocean sunfish, while for surface longlines the predominant species is the pelagic stingray.

MALTA

Mr Jurgen Mifsud presented that Malta has used observers on-board for the collection of biological data to collect data on incidental by-catch of birds, mammals, reptiles and fish. In line with the DC-MAP, on-board observations are carried out on trawlers, surface long lines, trammel nets, combined trammel nets and gillnets and purse seiners.

ROMANIA

Mr Constantin Stroie explained that there is an issue for Romania regarding the Incidental by-catch of birds, mammals, reptiles and fish. The fishermen are not confident in recording the by-catch of dolphin in the logbook. The by-catch of PET is recorded according to the presence of these species, mainly common stingray and piked dogfish. Considering the birds and turtles, the birds were just observed only after the fishing gears are out of the sea. There are no records of caught bird neither by the fishermen, not by the scientists. There are no turtles in the Black sea.

SLOVENIA

Ms Petra Bratina informed the group that in Slovenia there is no pilot study but they obtain data from the regular on-board samplings. Those data about incidental by-catch are also recorded as notes in the logbooks by all fishermen no matter to the length of the vessel or the gear.

SPAIN

This ToR was responded by María González from IEO. The following text corresponds to the one included in the presentation for this ToR.

Following the 2017 Recommendation of the RCG Med&BS on pilot studies for the assessment of incidental catches of birds, mammals, reptiles and fish, Spain are carrying 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).

The sampling plan follows the recommendation of the GFCM to develop some pilot studies from 2018 to 2020, in order to obtain information of the by-catch of these fisheries. We are collecting data of incidental catch of seabirds, turtles, seals, cetaceans, sharks and rays species presents in the Appendix E.1 and E.2 of the GFCM Data Collection Reference Framework Handbook.

In overall, the methodology that we have followed includes the collection of data from observer programmes and Logbooks.

The data collected by the observers on board comprises identification of species, number and weight of individuals, size measurements, location and timing of bycatches.

Results

The 2018 pilot study was carried out together with the onboard observer program to monitor and record data of retained catches and discards. However, observers on board have instructions for collecting data on incidental by-catch species.

The results of the 2018 pilot study confirm the previous observations in the bottom trawl fishery: in general, the by catch is composed by some sharks and rays species of the Appendix E of the GFCM-DCRF. In addition to this, one record of the turtle *Caretta caretta* has been registered. The observers did not report any occurrence of marine mammals or birds bycaught in trawlers. The number of by-catch species and specimens was low.

The 2019 sampling study, focused in set longline fisheries, has only been carried out in the GSAs 1 and 2. In the others GSAs set longliners operating regularly in the sampling ports were not available. In general, the bycatch is composed by some sharks and rays species of the Appendix E. The number of by-catch species and specimens was very low.

The 2020 pilot study has just started. It is expected to collect information of the third and fourth quarter. The bycatch data are stored in a national data base and submitted to end users when data are required.

Recommendations from the RCG MED & BS 2019

Establishment of regional sampling plan for small pelagic fish in the Adriatic Sea	
RCG MED & BS 2019 Recommendation 1	RCG MED&BS 2019 recommends establishment of WGSPF-AS involving the relevant countries.
Justification	<p>STREAM regional grant (MARE/2016/22) identified the most commercially important stocks and fisheries (métiers), beneficial for regional sampling, for which relevant Member States could share sampling tasks using agreed methodologies, ensuring coherent regional data sets with sufficient quality for the end-user needs, one of which is small pelagic fisheries in the Adriatic Sea (GSA 17 and 18).</p> <p>Main objectives for the establishment of the working group is to ensure level play in the area, coordinate activities with third countries and FAO AdriaMed and more closely follow management needs in the area (multiannual management plan for fisheries on small pelagic stocks in the GFCM-GSA 17 and 18) in order to harmonize data collection methodologies for fisheries dependent and fisheries independent information.</p>
Follow-up actions needed	<ul style="list-style-type: none"> • Appointment of national coordinators by relevant MS and establishment of a working group for the coordination of data collection for small pelagic fish in the Adriatic Sea (WG SPF-AS). • Establishment of a regional sampling plan for small pelagic fish in the Adriatic Sea (RSP SPF-AS). • Establishment of a regional work plan for small pelagic fish in the Adriatic Sea (RWP SPF-AS).
Responsible persons for follow-up actions	Relevant MSs
Time frame (Deadline)	<ul style="list-style-type: none"> • WG SPF-AS in December 2019 • RSP SPF-AS from 2021 • RWP SPF-AS from 2022
Comments	No follow-up actions have been taken.

Governance	
RCG MED & BS 2019 Recommendation 2	RCG MED&BS 2019 recommends continuation of the workshop for RF.
Justification	<p>MS should collect data on marine RF on a regular basis, as official statistics are missing in most Med&BS countries. Moreover, there is a need to finalize the pilot studies, assess the outcomes and use them in order to generate plans for regular data collection as well as to identify survey methods and data to be collected and adapted to the specific situation of each MS, on the basis of end user's needs. Finally, a common framework for sampling methodology is needed to assure that data collected is comparable among MS. Regional coordination for data collection is needed to ensure that data provided are at the required spatial resolution, temporal coverage and quality are provided to support scientific advice and management.</p> <p>On this basis, a workshop on RF for the Mediterranean basin is necessary, where all countries will participate, in order to finalize a list of species to be sampled, methodologies and type of data to be collected.</p>
Follow-up actions needed	<p>Workshop for RF with TORs: List of species; methodologies; type of data to be collected.</p> <p>A common list of species for all countries. If RCG chooses other species, request confirmation of country. Propose update of the list after a number of years.</p>
Responsible persons for follow-up actions	MSs, RCG
Time frame (Deadline)	2020 (if possible before the RCG meeting 2020)
Comments	<p>Include end users in this workgroup.</p> <p>– Due to the restrictions connected with travelling in 2020, the second workshop for RF was postponed to the beginning of 2021 (physical or virtual meeting).</p>

<i>Speeding up the establishment of a scientific network for sampling optimization.</i>	
RCG MED & BS 2019 Recommendation 3	RCG MED&BS 2019 recommends speeding up the establishment of a scientific network for sampling optimization.
Justification	<p>The 2018 RCG Med&BS agreed on the need to set up a network of experts to be trained and use the tool developed under MARE/2016/22 STREAM project on sampling stratification and optimization of biological data. It was further agreed that MS should nominate experts to be part of the network.</p> <p>However, the scientific network for sampling optimization has not been established so far, since most of the MS have not nominated experts to be part of the network.</p>
Follow-up actions needed	<p>Med&BS NCs should nominate national experts for participating in the network on sampling optimization; the nominations should be communicated to the RCG Med&BS chairs.</p> <p>A training workshop should be organized on the use of the sampling optimization tools developed under STREAM project.</p>
Responsible persons for follow-up actions	RCG Med&BS NCs, RCG Med&BS chairs, moderators of the scientific network for sampling optimization.
Time frame (Deadline)	November 2019
Comments	Only Greece and Cyprus nominated scientists before the deadline. (all the countries should send their nominations again before the end of October 2020)

<i>Training workshop on the use of the commercial sampling optimization tools developed under STREAM project.</i>	
RCG MED & BS 2019 Recommendation 4	RCG MED&BS 2019 recommends the organization of a training workshop on the use of the sampling optimization tools developed under MARE/2016/22 STREAM project.
Justification	Though training workshops have been organized under STREAM project on the use of the tools developed on sampling optimization, the RCG Med&BS 2019 identifies further training needs on the use of the developed tools, following feedback with the national experts involved in sampling optimization.
Follow-up actions needed	A training workshop should be organized on the use of the sampling optimization tools developed under STREAM project, addressing the needs of the national experts participating in the network for sampling optimization.
Responsible persons for follow-up actions	RCG chairs, MSs, moderators of the scientific network for sampling optimization.
Time frame (Deadline)	Within 2020
Comments	Beginning of 2021. Physical meeting

Data quality checks developed under the STREAM project	
RCG MED&BS 2019 Recommendation 5	RCG Med&BS 2019 recommends applying the data quality checks developed under the WP6 of the STREAM project before submitting data to the relevant Data Calls
Justification	<p>Procedures for improving and enhancing quality checks to detect and flag potential outliers and sources of bias in biological data can streamline the process of data preparation and submission to respond to the different data calls.</p> <p>WP6 of the STREAM project developed a set of quality checks to detect errors in both raw data (<i>a priori</i> quality checks) and in the raised data required by the end-users (<i>a posteriori</i> quality checks), using R-scripts. The <i>a priori</i> data quality checks aim at detecting errors directly on sampling data in the Regional Coordination Group for the Mediterranean and Black Sea (RCG Med&BS) formats for commercial sampling and commercial landings (CS and CL formats) concerning the measurements of biological variables (length, weight, maturity, sex, age) and landings. The <i>a posteriori</i> data quality checks are applied to the EU Mediterranean and Black Sea Data Call formats and provide information on the spatial coverage among the strata (i.e. quarter, metier) and on the assessment of the completeness of biological information. It also allows detecting records with discrepancies between the product of number of raised individuals and individual weight at age in the landings/discards and the total landings/discards by metier, quarter, species and GSA.</p>
Follow-up actions needed	<p>To support MSs experts to familiarize with the R tools developed to perform data quality checks, the network on the sampling strategy optimization will also use those scripts during their activity. This will also streamline the training workshop in view of the network.</p> <p>A calendar for the implementation of the quality checks was also provided by the STREAM project (see STREAM Final Report).</p>
Responsible persons for follow-up actions	RCG, NCs
Time frame (Deadline)	2020, new time frame - 2021

<i>Fish stomach content analysis</i>	
RCG MED&BS 2019 Recommendation 6	RCG Med&BS 2019 recommends implementing the monitoring of fish stomach contents following the protocols provided by the STREAM project
Justification	Stomach contents analysis is the primary method for qualitative estimation of dietary composition by investigating the prey items in the fish stomachs. The study of the feeding habits of fish based on the analysis of stomach content can provide important insights not only to assess food spectra at species level but also to understand the prey-predator relationships, useful aspects to contribute to multispecies stock assessment or to be included in ecological models as mentioned before. Stomach content data are also useful to evaluate the resource partitioning among the species inhabiting a particular habitat/fishing ground. At species level, the information on predator-prey relationship can also be helpful for a better evaluation of the natural mortality of the key exploited stocks.
Follow-up actions needed	The sampling and analysis protocols provided by STREAM (see Deliverable D4.1) will represent the basis for designing and implementing the data collection and analysis of stomach contents. Pilot studies on the species proposed by STREAM should be implemented under the Work Plans.
Responsible persons for follow-up actions	RCG, NCs
Time frame (Deadline)	2021
	<p>Bulgaria - The STREAM protocol was not applied in 2019.</p> <p>Italy – it is planned to be included in 2021.</p> <p>Croatia – Not able to follow the protocol this year.</p> <p>Cyprus – It is not included in the WP, but it is planned to be followed.</p> <p>Greece - The STREAM protocol is applied only in MEDITS and it is included in the WP for 2021.</p> <p>Malta – It is currently not included in the WorkPlan but we plan to follow it.</p> <p>France –</p> <p>Romania – it is applied already.</p> <p>Spain – The STREAM protocol is applied only in the MEDITS, but it cannot be applied next year in laboratory.</p> <p>Slovenia – For now, they are not following the STREAM protocol</p>

Biological parameters – ageing protocols	
RCG MED&BS 2019 Recommendation 7	RCG Med&BS 2019 recommends MSs to follow the agreed protocols from workshops for age reading. All MSs to harmonize age reading protocols for all target species, in case it is not already done.
Justification	<p>Considering the possibility that different scientists/experts responsible for the research surveys and the biological monitoring, might 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 MSs to ensure harmonized 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>
Follow-up actions needed	MSs should make every effort to harmonize age reading and achieve common age reading protocols for fisheries dependent and fisheries independent data, on the level of MS and regional level.
Responsible persons for follow-up actions	RCG, MSs
Time frame (Deadline)	2020 onwards
Comments	This recommendation was followed by all countries.

Age reading workshop – Black Sea	
RCG MED & BS 2019 Recommendation 8	RCG MED&BS 2019 recommends the organization of an Age Reading Workshop on turbot (<i>Scophthalmus maximus</i>) and piked dogfish (<i>Squalus acanthias</i>).
Justification	<p>Under the work of MARE/2016/22 STREAM project (WP7), institutes involved in Data Collection in the Black Sea reported lack of age standardization on rapa whelk, turbot and piked dogfish. Based on this finding, STREAM has proposed the organization of age reading workshops on turbot and piked dogfish, since there was already a workshop on age reading of rapa whelk.</p> <p>RCG Med&BS 2019 reviewed this proposal and agreed on the need to organise age reading workshops on turbot and piked dogfish.</p>
Follow-up actions needed	Organization of an age reading workshop on turbot and piked dogfish.
Responsible persons for follow-up actions	RCG Med&BS chairs, NCs.
Time frame (Deadline)	By the end of 2021.
Comments	There was an age reading workshop on Rapa whelk in 2019, organized under the BlackSea4Fish project.

Continuation of Setting up of a Regional (RDB) for the RCG MED & BS	
RCG MED & BS 2019 Recommendation 9	RCG MED & BS 2019 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.
Justification	<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> <p>Following the relevant recommendation of the RCG 2018, the RDB Steering committee (SC) convened in January 2019. The main decisions that were presented and agreed during the RCG 2019, include:</p> <ul style="list-style-type: none"> • the RDB should contain, as a first step, detailed biological and aggregated transversal data (i.e. landings and effort); • the data policy document, dealing with data confidentiality and data ownership issues; • the main functionalities for the RDB include the estimations required for the various data calls, as well as further analyses that will be proposed by the MS; • existing development initiatives (like RDBES in ICES) needs to be incorporated in the new RDB; • the development will be undertaken by a technical committee proposed by the MS.
Follow-up actions needed	<p>NCs will send the nominations for the RDB Technical Workgroup, and potential updates on the persons of the RDB SC, by the end of October 2019. In addition, a questionnaire distributed by the SC Chairs concerning the current procedures followed by the MS for the data calls and the data quality controls should be submitted at the same time.</p> <p>A representative of the SC will attend the ICES RDB/RDBES Steering Committee (SCRDB) meeting on Dec 3rd - 5th at ICES Secretariat HQ.</p> <p>Subsequently, a joint meeting of the SC and the Technical Workgroup will be organized during January 2020. Issues to be decided on include: (a) setting up the technical roadmap for the RDB development, (b) identifying the needs and priorities both at the regional level and also for every MS regarding the transition to the RDB, (c) Cost estimation.</p>

Responsible persons for follow-up actions	NCs will send the nominations for the RDB Technical Workgroup, and potential updates on the persons of the RDB SC, by the end of October 2019. Eirini Mantzouni, Researcher from the Fisheries Research Institute, and Stefanos Kavadas, fisheries scientist from the HCMR – Greece, will chair the joint SC+ Technical WG meeting during early 2020. The SC will then decide upon its final Chair(s).
Time frame (Deadline)	Before RCG 2020.

<i>Training workshop on PETS identification</i>	
RCG MED & BS 2019 Recommendation 10	RCG MED&BS 2019 recommends the organization of a Training workshop on PETS identification for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).
Justification	Under the work of MARE/2016/22 STREAM project (WP7), training needs on PETS identification have been reported for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles). Institutes with expertise in PETS identification have also been reported (available in STREAM Deliverable.7.1). STREAM has proposed RCG Med&BS to consider two training workshops on PETS identification for the period 2020-2021, one dealing with the identification of sharks and rays, and the other with the identification of marine mammals, sea birds and reptiles. RCG Med&BS 2019 reviewed this proposal and agreed to organize one training workshop on PETS identification, which will cover all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).
Follow-up actions needed	A training workshop on PETS identification should be organized covering all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).
Responsible persons for follow-up actions	RCG Med&BS chairs, NCs.
Time frame (Deadline)	By the end of 2021.
Comments and Follow up	

Next venue and chairs

The schedule for the chairmanship of the RCG Med&BS for the period 2019-2022 is presented below:

	Chair	Co-chair
2019	GRC - Apostolos Karagiannakos	BGR - Simona Nicheva
2020	BGR - Simona Nicheva	HRV - Ivana Vukov
2021	HRV - Ivana Vukov	MLT - Jurgen Mifsud
2022	MLT - Jurgen Mifsud	

In 2020 the RCG MED & BS was co-chaired by Ms Simona Nicheva and Ms Ivana Vukov and in 2021 it will be co-chaired by Ms Ivana Vukov and Mr Jurgen Mifsud.

If the COVID-19 pandemic situation and restrictions allow it, the 2021 RCG MED&BS can be a physical meeting in France or Cyprus. Otherwise, the meeting can be again virtual.

AOB

Under this point two of the MS confirmed that they will resubmit their Work Plan for 2021 – Bulgaria and Croatia.

Glossary

AR	Annual Report (of activities carried out by MS under the DCF)
WP	Annual Workplan
CFP	Common Fishery Policy (EU)
CPC	GFCM Contracting Party
CR	Control Regulations (EU)
DCF	Data Collection Framework (follow up of DCR)
DC-MAP	Multi Annual Programme for Data Collection (follow up of DCF)
DG MARE	Directorate-General for Maritime Affairs and Fisheries (of the European Commission)
DTI	Data Transmission Issue
DTMT	Data Transmission Monitoring Tool
EC	European Commission
EEZ	Exclusive Economic Zone
EMFF	European Maritime and Fisheries Funds
EWG	STECF Expert Working Group
FDI	Fisheries Dependent Information (Data-call)
FPA	Fishing Partnership Agreement
GFCM	General Fisheries Commission for the Mediterranean (FAO)
GSA	Geographical subarea
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
JRC	Joint Research Centre (of the European Commission)
JSC	Joint Scientific Committees (of the FPA)
LDF	Long Distance Fishery
LM	Liaison Meeting
LP	Large Pelagic species
Med&BS	Mediterranean and Black Sea
MS	Member State(s) (of the EU)

NA	North Atlantic
NC	National Correspondent for Data Collection
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
RSP	Regional Sampling Plan
RWP	Regional Work Plan
SCRS	Standing Committee on Research and Statistics (ICCAT)
SDEF	Standard Data Exchange Format
STECF	Scientific, Technical and Economic Committee for Fisheries
TOR	Terms of Reference
WCPFC	Western and Central Pacific Fisheries Commission
WKPICS	ICES Workshop on the Practical Implementation of Statistical Sound Catch Sampling Programmes
WG SPF-AS	Working group for the coordination of data collection for small pelagic fish in the Adriatic Sea
WP	Work Plan for data collection in the fisheries and aquaculture sectors

Annexes

Annex I – AGENDA

Monday, 31 August DAY 1 - End-users Meeting

Meeting link: <https://zoom.us/j/9504532861>

Brussels Time	Duration	Topic	TOR	Presenter
09:45-10:00	15 min	Testing		
10:00-10:30	30 min	Welcome and introduction Welcome, house rules, adoption of the agenda and ToR, format of the report and reporters		Chairs
10:30-10:45	15 min	RCG Med&BS 2019 report and recommendations		Apostolos Karagiannakos
10:45-11:00	15 min	End-user Meeting introduction Conclusions from 2019 and progress		Ivana Vukov
11:00-11:15	30 min	DG MARE/STECF/JRC presentation - Identification of data needs in 2020/2021 and use of data Schedule of data-calls and relevant STECF working groups Changes in data formats Data quality checking procedures and communication with MS - progress in 2020	TOR 1.1	Venetia Kostopoulou (DG MARE, C3) Anne-Cécile Dragon (DG MARE, D1) Alessandro Mannini (JRC) Cecilia Pinto (JRC)
11:15-11:30	15 min	Discussion in plenary		
11:30-11:50	20 min	Break		
11:50-12:20	30 min	GFCM presentation - Identification of data needs in 2020/2021 and use of data Relevant GFCM data submission obligations and related data quality indicators Schedule of relevant working groups and stock assessments New GFCM requirements	TOR 1.1	Miguel Bernal (GFCM) Elisabetta Morello (GFCM)
12:20-12:30	10 min	Discussion in plenary		
12:30-13:30	60 min	Lunch break		
13:30-13:45	15 min	DG MARE/STECF presentation - Evaluation of DCF 2019 annual reports and data transmission issues Main conclusions from STECF EWG 20-08 and STECF PLEN 20-02 relevant for Med&BS MS	TOR 1.2	Venetia Kostopoulou (DG MARE)
13:45-14:00	15 min	Data transmission issues in 2019 and 2018 Agreement on sharing of confidential information on DTI Overview of DTI per data call and MS Identification of common issues	TOR 1.3	Ivana Vukov
14:00-14:15	15 min	Discussion in plenary		
14:15-14:30	15 min	Break		
14:30-15:30	60 min	Data reporting in 2020 Issues in data processing and reporting on MS level (5 min per MS)	TOR 1.4	NC all
15:30-15:45	15 min	Discussion in plenary		
15:45-16:00	15 min	Recommendations Overview of recommendations and conclusions		NC all
END OF DAY 1				

Tuesday, 1 September DAY 2 - Implementation in 2020, EUMAP revision, Regional plans

Meeting link: <https://zoom.us/j/95045322861>

Brussels Time	Duration	Topic	TOR	Presenter
08:45-09:00	15 min	Testing/chat		
09:00-10:30	90 min	Impact of COVID-19 pandemic Presentation by MS. Provide information based on TOR 2 (5-10 min).	TOR 2	NC all
10:30-11:00	30 min	Discussion in plenary		
11:00-11:30	30 min	Break		
11:30-11:45	15 min	Information on DCF legal framework and related legal acts/ Feedback from Commission Update on revision of EU-MAP, content and timing Conclusions from 1st July 2020 Meeting of the Expert Group on Fisheries Data Collection	TOR 3	Monika Sterczewska (DG MA)
11:45-12:00	15 min	Discussion in plenary		
12:00-12:45	45 min	Surveys Review 2019 regional coordination, next steps and actions	TOR 4	MEDIAS and MEDITS chairs, E participants
12:45-13:00	15 min	Discussion in plenary		
13:00-14:00	60 min	Lunch break		
14:00-14:30	30 min	Results from 2020 RCG MED&BS Data Call	TOR 5	Charis Charilaou Simona Nicheva
14:30-14:45	15 min	Discussion in plenary		
14:45-15:30	45 min	Data quality (assurance and control) Description of national data quality framework including methodologies - progress in 2019/2020	TOR 6	NC all
15:30-15:45	15 min	Discussion in plenary		
15:45-16:00	15 min	Break		
16:00-16:15	15 min	Data quality (assurance and control) Presentation on optimization tools of biological sampling and their possible application within RCG	TOR 6	Isabella Bitetto
16:15-16:25	10 min	Regional sampling plans Regional sampling plan for small pelagic fish in the Adriatic Sea	TOR 7	Ivana Vukov
16:25-16:30	5 min	Break		
16:30-16:45	15 min	Med&BS Regional project (MARE/2020/08 Annex 1) Coordination of activities between RCG and project	TOR 7	Alessandro Lugas
16:45-17:00	15 min	Discussion in plenary		
END OF DAY 2				

Wednesday, 2 September DAY 3 - Intersessional groups and pilot studies. Conclusions

Meeting link: <https://zoom.us/j/95045322861>

Brussels Time	Duration	Topic	TOR	Presenter
08:45-09:00	15 min	Testing/chat		
09:00-09:15	15 min	Subgroup on data transmission issues and data requirements Summary of main decisions from DAY 1 - End-users Meeting	TOR 8.1	Ivana Vukov
09:15-09:30	15 min	Discussion in plenary - agreement on main recommendations, next steps and actions		
09:30-09:45	15 min	Feedback from the RDB Steering Committee	TOR 8.2	Stefanos Kavadas
09:45-10:00	15 min	Discussion in plenary - next steps and actions, possible timetable for the RCG subgroups		
10:00-10:15	15 min	GFCM Presentation on recreational fisheries, diadromous species and incidental by-catch of sensitive species	TOR 9-10-11	Miguel Bernal (GFCM) Elisabetta Morello (GFCM)
10:15-10:25	10 min	Discussion in plenary		
10:25-10:45	20 min	Recreational Fisheries Review progress of the pilot projects	TOR 9	NC all
10:45-11:00	15 min	Discussion in plenary - next steps and actions, possible timetable for the RCG subgroups		
11:00-11:30	30 min	Break		
11:30-12:00	30 min	Diadromous species Review of progress 2019-2020	TOR 10	Argyrios Sapounidis
12:00-12:15	15 min	Discussion in plenary - next steps and actions		
12:15-13:00	45 min	Incidental by-catch of birds, mammals, reptiles and fish Description of MS achievements (5-10 min per MS)	TOR 11	NC all
13:00-14:00	60 min	Lunch break		
14:00-14:45	45 min	Incidental by-catch of birds, mammals, reptiles and fish - continued Description of MS achievements (5-10 min per MS)	TOR 11	NC all
14:45-15:00	15 min	Discussion in plenary - next steps and actions		
15:00-15:30	30 min	Break		
15:30-16:30	60 min	Recommendations Overview of recommendations and conclusions		Chairs NC all
16:30-16:45	15 min	RCG 2021 Venue, dates and chairs		All
16:45-17:00	15 min	AOB Financing of work plans 2021 Revision of work plans 2021		All
17:00		END OF THE MEETING		

Annex II – RCG MED&BS 2020 Terms of Reference

RCG MED&BS 2020 Virtual Meeting

31 August - 2 September 2020

Chairs: Simona Nicheva and Ivana Vukov

Background

Regional Coordination Group for the Mediterranean and Black Sea (RCG MED&BS) is established in accordance with Article 9 of Regulation (EU) 2017/1004¹ and follows Rules of Procedure adopted in 2018².

Following the agreement of the RCG MED&BS held in September 2019 in Malta, the annual meeting of the RCG MED&BS was announced for 6-9 April 2020 in Paris while the End-users Meeting was announced for 12-13 March 2020 in Brussels. However, both physical meetings were postponed due to the COVID-19 pandemic.

The first virtual RCG MED&BS coordination meeting was held on June 30th where it was agreed to hold a virtual annual RCG MED&BS meeting from 31st August to 2nd September 2020. Due to the number of topics planned, the agenda can be covered in 3 days – 1 day for meeting with end-users and 2 full days for RCG meeting.

The first day of the meeting is dedicated to end-users, data reporting and data transmission issues (so called End-users Meeting). In 2019 the End-users Meeting was held in the GFCM Headquarters, Rome, from 12-14 March.

The second and the third days will be dedicated to the regular RCG topics and COVID-19 pandemic.

Important: Agenda for the meeting is provided as Excel file which includes the link for the ICES SharePoint. The connection links for every day are the same and they are provided in the agenda.

¹ Regulation (EU) 2017/1004 of the European Parliament and of the Council on the establishment of a Union framework for the collection, 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).

² The Rules of Procedure can be found by navigating through the data collection website (<https://datacollection.jrc.ec.europa.eu/docs/rcg>).

TOR 1 - End-users Meeting

The discussion will focus on the following points:

1.1 – Identification of end-user needs in 2020/2021 and use of data

Presentation by main end-user (GFCM and EC) regarding data needs in 2020/2021 and use of data.

GFCM - Relevant data submission obligations and related data quality indicators:

- GFCM fisheries data needs in 2020/2021
- GFCM procedures for the transmission of national data, including SAFs, by CPCs and use of data in the WGSAs of the GFCM
- Progress on the GFCM implementation of fisheries data quality indicators on the DCRF online platform
- New requirements

EC (DG MARE/JRC) and/or STECF - Identification of data needs in 2020/2021 and use of data:

- Schedule of data-calls and relevant STECF working groups
- Changes in data formats
- Data quality checking procedures and communication with MS - progress in 2020

1.2 – Evaluation of DCF 2019 annual reports and data transmission issues

Presentation by DG MARE and/or STECF on main conclusions from STECF EWG 20-08 relevant for Med&BS Member States.

1.3 – Review of data transmission issues in 2019

- Agreement on DTI sharing on RCG level (as confidential information)
- Overview of data transmission issues (DTI) per data call and Member State
- Identification of common issues

1.4 – Data reporting in 2020

Presentation by each MS on issues in data processing and reporting on MS level (5 min per MS).

TOR 2 - Impact of COVID-19 pandemic

DG MARE conducted two surveys on the impact of COVID-19 pandemic on the implementation of DCF in MS which were presented on the National Correspondents WebEx Meetings on 6th May and 31st July 2020.

RCG MED&BS will discuss on the impact of COVID-19 pandemic on data collection and possible data gaps in 2021 data reporting as well as any issues of regional importance. In case there are any consequences on data regarding shared stocks this should be clearly identified and the end-users should be informed.

For this purpose each MS should present information on the impact of the COVID-19 pandemic on the implementation of its' national data collection programme in 2020 and any possible consequences for 2021. The presentation (not more than 10 minutes) should follow the same general format of the DG MARE Corona questionnaire and include information on data collection (surveys, biological sampling, and collection of socio-economic variables for the fleet, aquaculture and processing industry) as well as data reporting and any other relevant general remarks. In addition, MS should highlight any possible data gaps regarding shared stocks. In case MS prepare a PPT presentation, it should be submitted to the chairs by Friday 28th August.

TOR 3 - Information on DCF legal framework and related legal acts

Feedback from Commission regarding information on DCF legal framework and related legal acts. Conclusions from 31st July 2020 National Correspondents Meeting and plan forward.

TOR 4 - Surveys

Review of 2019 regional coordination (MEDITS, MEDIAS and Black Sea surveys). Next steps and actions.

TOR 5 - Results from 2020 RCG MED&BS Data Call

MS were requested in July 2020 to submit data on effort and landings by métier for the period 2017-2019. Data is analyzed to provide a regional overview in order to assess if any changes need to be made to national sampling plans and incorporated in the revision of national work plans for 2021. Discussion about the possible publication of the aggregated tables as annex to the report - Member States to express their opinion to make the tables public.

TOR 6 - Data quality (assurance and control)

The discussion will focus on the following main points:

- National correspondents or MS representatives should present their progress in regards to the data quality:
- Are the methodologies, sampling guidance, scientific observer protocols publicly available? – In case yes, please provide a link to the documentation.
- Are the methodologies for the socio-economic data collection publicly available? – In case yes, please provide a link to the documentation.
- Do you have some problems in regards to the provision of any of the documents?
- Next steps and actions

TOR 7 - Regional plans

Discussion on regional plans will focus on the following main points:

- Discussion on possibilities for the establishment of regional sampling plan for small pelagic fish in the Adriatic Sea
- Discussion on the future work between the group of experts involved in the drafting of the RWP and the availability of the RCG chairs and NCs.
- Next steps and actions

TOR 8 - Progress of the RCG Med&BS intersessional subgroups

Results by subgroup and discussion on possible timetable for the RCG subgroups in 2021.

8.1 - End-user interactions and identification of end-user needs

Feedback from the intersessional subgroup on data transmission issues and data requirements (covered in TOR 1 – End-users Meeting on 31st August).

8.2 - Feedback from the RDB steering Committee

- Next steps and actions

TOR 9 - Recreational Fisheries

- Review progress of the pilot projects (MSs with pilot projects for recreational fisheries and MSs which plan to have pilot studies)
- Next steps and action

TOR 10 - Diadromous species

- Review of the progress 2019-2020
- Next steps and actions

TOR 11 - Incidental by-catch of birds, mammals, reptiles and fish

- Review progress of pilot studies – Brief description of the Member States' achievements.
- Next steps and actions

In red are highlighted the points, for which we expect MS contribution – presentation, description of the situation in the MS, piece of text for the report, etc.

Annex III – PARTICIPANTS LIST

RCG Med&BS 2020 Virtual meeting, 31 August - 2 September 2020				
31 August - End-users meeting				
1-2 September - RCG Med&BS meeting				
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Annex IV – Recommendations from the RCG MED & BS 2020

Agreement on sharing detailed information on data transmission issues	
RCG MED & BS 2020 Recommendation 1	<p>RCG MED&BS 2020 recommends sharing of detailed information on data transmission issues on MS level for the purpose of RCG MED&BS Subgroup on data transmission issues and data requirements.</p> <p>Detailed information on DTI per MS will be treated as confidential i.e. not to be distributed to third parties or included in RCG MED&BS reports which are publicly available.</p>
Justification	<p>Agreement to share detailed information on DTI per MS is needed to avoid asking additional permission each year from MS to access and use the information on DTI for the purpose of the RCG MED&BS Subgroup on data transmission issues and data requirements and End-users Meeting.</p> <p>The RCG MED&BS shall use detailed information on DTI for the following purposes:</p> <ul style="list-style-type: none"> - Collaborate with end-users to identify common and recurrent issues and prioritize actions to improve the quality of transmitted data and avoid data transmission failures. - Propose ways to improve the communication and feedback on DTI. - Provide feedback and assessment of DTI on a regional level before STECF evaluation of Annual Reports and DTI.
Follow-up actions needed	<ul style="list-style-type: none"> ● Chair of RCG MED&BS Subgroup on data transmission issues and data requirements to request DG MARE on DTI per MS from the DTMT. ● RCG MED&BS Subgroup on data transmission issues and data requirements shall analyze the DTI and provide the results to DG MARE before the STECF EWG on the evaluation of Annual Reports and DTI. ● Chair of RCG MED&BS Subgroup on data transmission issues shall provide relevant information to MS and main end-users during the RCG MED&BS End-users Meeting.
Responsible persons for follow-up actions	<ul style="list-style-type: none"> ● Chair of RCG MED&BS Subgroup on data transmission issues and data requirements ● MS ● DG MARE
Time frame (Deadline)	Yearly, starting from 2021.
Comments	

Establishment of RCG MED&BS data requirements registry	
RCG MED & BS 2020 Recommendation 2	<p>RCG MED&BS 2020 recommends the establishment of a data requirements registry for MED&BS MS.</p> <p>The registry shall be updated every year and shall contain the following information:</p> <ul style="list-style-type: none"> - Data call / Requirement - End-user (DG MARE, GFCM, ICES, ICCAT (optional) national level, Other projects) - Deadline - Legal basis (optional) - Country - Man/days (optional) <p>The registry should be completed at RCG level for common data requirements and at MS level for data requirements on national level. The registry for MED&BS shall be provided to DG MARE if requested.</p>
Justification	<p>Currently, there is no complete list of data requirements either on EU or regional level. Data requirements registry is needed to avoid overlapping data-calls and deadlines for submission as much as possible taking into account data availability at MS and regional level and to try to avoid duplication of reporting of the same type of data.</p>
Follow-up actions needed	<ul style="list-style-type: none"> ● Chair of RCG MED&BS Subgroup on data transmission issues and data requirements shall request information on data requirements from DG MARE (for common data calls) and MS (for information on the national level) before each RCG MED&BS End-user meeting. ● RCG MED&BS Subgroup on data transmission issues and data requirements shall analyze the information and communicate relevant information to MS and main end-users during the RCG MED&BS End-users Meeting.
Responsible persons for follow-up actions	Chair of RCG MED&BS Subgroup on data transmission issues and data requirements / MS / DG MARE
Time frame (Deadline)	MS should provide information for 2020 at the beginning of 2021.
Comments	

Establishment of dedicated STECF EWG for data quality on the Mediterranean and Black Sea data call	
RCG MED & BS 2020 Recommendation 3	RCG MED & BS 2020 recommends the establishment of a dedicated STECF EWG regarding data quality on the Mediterranean and Black Sea data call, which will convene before the STECF EWG on stock assessment.
Justification	Currently, the data quality checks done by JRC and by EWG on stock assessments only cover stocks to be assessed and not the whole set of data reported in the Mediterranean and Black Sea data call. This situation results in the highest number of data transmission issues reported in the DTMT for the Mediterranean and Black Sea MS, since during the EWG on stock assessment there is not enough time for interactions with the relevant MSs for resolving issues detected. Therefore, a dedicated EWG is needed to check the data quality of submitted data, validate data and interact with the relevant MS, as there is not enough time for this task during the EWG on stock assessment.
Follow-up actions needed	<ul style="list-style-type: none"> RCG MED&BS chairs to communicate with DG MARE on possibilities to establish dedicated EWG.
Responsible persons for follow-up actions	RCG MED&BS chairs, DG MARE
Time frame (Deadline)	End of 2020 for follow-up actions.
Comments	

Timeliness of the availability of DCRF templates on the GFCM DCRF online platform	
RCG MED & BS 2020 Recommendation 4	RCG MED & BS 2020 recommends to GFCM that the DCRF templates for reporting on the DCRF online platform are made available to MS earlier if possible.
Justification	<p>Each year the GFCM adapts the templates on the DCRF online platform according to the information transmitted to GFCM by the CPCs on the selection of fleet segments and stocks.</p> <p>RCG MED & BS recommends that all the DCRF templates for the reference year should be made available on the DCRF platform soon after the selection of fleet segments and stocks. This would facilitate the preparation of datasets and the timely delivery according to DCRF calendar submission.</p>
Follow-up actions needed	RCG MED&BS chairs to communicate with DG MARE.
Responsible persons for follow-up actions	RCG MED&BS chairs, DG MARE
Time frame (Deadline)	End of 2020 for follow-up actions.
Comments	

Notification procedure from DTMT	
RCG MED & BS 2020 Recommendation 5	RCG MED&BS 2020 recommends the development of a notification procedure from the data transmission monitoring tool.
Justification	RCG MED&BS 2020 requests for the possibility of establishment of a procedure for notifications to the relevant MS when a new data transmission issue is uploaded in the DTMT. This will ensure the prompt reaction of the MS to provide justification or comment to the end-user on time. - The MS should be allowed to include/delete the email addresses of the people that will receive the notification.
Follow-up actions needed	<ul style="list-style-type: none"> • DTMT host should examine the possibility of establishment of such a channel for communication. • MS should ensure the administrative capacity for answering ASAP to the issues raised.
Responsible persons for follow-up actions	DTMT host, DG MARE, MS
Time frame (Deadline)	2021
Comments	

Recreational fisheries	
RCG MED & BS 2020 Recommendation 6	RCG MED&BS 2020 recommends continuation of the workshop for RF.
Justification	MS should collect data on marine RF regularly, as official statistics are missing in most Med&BS countries. Moreover, there is a need to finalize the pilot studies, assess the outcomes and use them to generate plans for regular data collection as well as to identify survey methods and data to be collected and adapted to the specific situation of each MS, based on end user's needs. Finally, a common framework for sampling methodology is needed to assure that data collected is comparable among MS. Regional coordination for data collection is needed to ensure that data provided are at the required spatial resolution, temporal coverage and quality are provided to support scientific advice and management. On this basis, a workshop on RF for the Mediterranean basin is necessary, where all countries will participate, to finalize a list of species to be sampled, methodologies and type of data to be collected.
Follow-up actions needed	<p>Workshop for RF with TORs: List of species; methodologies; type of data to be collected.</p> <p>A common list of species for all countries. If RCG chooses other species, request confirmation of the country. Propose review and update of the list periodically.</p>
Responsible persons for follow-up actions	MSs, RCG chairs
Time frame (Deadline)	Beginning of 2021 (If a physical meeting is not possible, a virtual meeting should be organised).
Comments	This recommendation is recalled from 2019. Due to the restrictions connected with travelling in 2020, the second workshop for RF was postponed to the beginning of 2021

Speeding up the establishment of a scientific network for sampling optimization.	
RCG MED & BS 2020 Recommendation 7	RCG MED&BS 2020 recommends speeding up the establishment of a scientific network for sampling optimization.
Justification	The 2018 RCG Med&BS agreed on the need to set up a network of experts to be trained and use the tool developed under MARE/2016/22 STREAM project on sampling stratification and optimization of biological data. It was further agreed that MS should nominate experts to be part of the network. However, the scientific network for sampling optimization has not been established so far, since most of the MS have not nominated experts to be part of the network.
Follow-up actions needed	Med&BS NCs should nominate national experts for participating in the network on sampling optimization; the nominations should be communicated to the current moderator of the scientific network for sampling optimization (Ms Isabella Bitetto) and RCG Med&BS chairs.
Responsible persons for follow-up actions	RCG Med&BS NCs, RCG Med&BS chairs, moderators of the scientific network for sampling optimization.
Time frame (Deadline)	31 October 2020
Comments	This recommendation is recalled from 2019.

Training workshop on the use of the commercial sampling optimization tools developed under STREAM project.	
RCG MED & BS 2020 Recommendation 8	RCG MED&BS 2020 recommends the organization of a training workshop on the use of the sampling optimization tools developed under MARE/2016/22 STREAM project.
Justification	Though training workshops have been organized under STREAM project on the use of the tools developed on sampling optimization, the RCG Med&BS 2020 identifies further training needs on the use of the developed tools, following feedback with the national experts involved in sampling optimization.
Follow-up actions needed	A training workshop should be organized on the use of the sampling optimization tools developed under STREAM project, addressing the needs of the national experts participating in the network for sampling optimization.
Responsible persons for follow-up actions	Moderators of the scientific network for sampling optimization, RCG chairs, MSs.
Time frame (Deadline)	2021 or ASAP when the COVID-19 restrictions allow a physical meeting*.
Comments	This recommendation is recalled from 2019.

Data quality	
	Application the data quality checks developed under the WP6 of the STREAM project
RCG MED & BS 2020 Recommendation 9	RCG Med&BS 2020 recommends applying the data quality checks developed under the WP6 of the STREAM project before submitting data to the relevant Data Calls
Justification	<p>Procedures for improving and enhancing quality checks to detect and flag potential outliers and sources of bias in biological data can streamline the process of data preparation and submission to respond to the different data calls.</p> <p>WP6 of the STREAM project developed a set of quality checks to detect errors in both raw data (a priori quality checks) and in the raised data required by the end-users (a posteriori quality checks), using R-scripts. The a priori data quality checks aim at detecting errors directly on sampling data in the Regional Coordination Group for the Mediterranean and Black Sea (RCG Med&BS) formats for commercial sampling (CS format) concerning the measurements of biological variables (length, weight, maturity, sex, age) and landings. The a posteriori data quality checks are applied to the EU Mediterranean and Black Sea Data Call formats and provide information on the spatial coverage among the strata (i.e. quarter, metier) and on the assessment of the completeness of biological information. It also allows detecting records with discrepancies between the product of the number of raised individuals and individual weight at age in the landings/discards and the total landings/discards by metier, quarter, species</p>
Follow-up actions needed	To support MSs experts to familiarize with the R tools developed to perform data quality checks, the network on the sampling strategy optimization will also use those scripts during their activity. This will also streamline the training workshop in view of the network. A calendar for the implementation of the quality checks was also provided by the STREAM project (see STREAM Final Report).
Responsible persons for follow-up actions	RCG Med& BS chairs, RCG Med&BS NCs
Time frame (Deadline)	2021 or ASAP when the COVID-19 restrictions allow a physical meeting*.
Comments	This recommendation is recalled from 2019. The deadline was extended with 1 year.

Age reading workshop – Black Sea	
RCG MED & BS 2020 Recommendation 10	RCG MED&BS 2019 recommends the organization of an Age Reading Workshop on turbot (<i>Scophthalmus maximus</i>) and piked dogfish (<i>Squalus acanthias</i>).
Justification	Under the work of MARE/2016/22 STREAM project (WP7), institutes involved in Data Collection in the Black Sea reported lack of age standardization on turbot and piked dogfish. Based on this finding, STREAM has proposed the organization of age reading workshops on turbot and piked dogfish. RCG Med&BS 2019 and RCG Med&BS 2020 reviewed this proposal and agreed on the need to organise age reading workshops on turbot and piked dogfish.
Follow-up actions needed	Organization of an age reading workshop on turbot and piked dogfish.
Responsible persons for follow-up actions	RCG Med&BS chairs, NCs.
Time frame (Deadline)	2021.
Comments	This recommendation is recalled from 2019.

Training workshop on PETS identification	
RCG MED & BS 2020 Recommendation 11	RCG MED&BS 2020 recommends the organization of a Training workshop on PETS identification for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).
Justification	<p>Under the work of MARE/2016/22 STREAM project (WP7), training needs on PETS identification have been reported for all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles). Institutes with expertise in PETS identification have also been reported (available in STREAM Deliverable.7.1).</p> <p>STREAM has proposed RCG Med&BS to consider two training workshops on PETS identification for the period 2020-2021, one dealing with the identification of sharks and rays, and the other with the identification of marine mammals, sea birds and reptiles.</p> <p>RCG Med&BS 2019 reviewed this proposal and agreed to organize one training workshop on PETS identification, which will cover all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).</p>
Follow-up actions needed	A training workshop on PETS identification should be organized covering all categories of PETS (marine mammals, sea birds, sharks and rays, reptiles).
Responsible persons for follow-up actions	RCG Med&BS chairs, NCs.
Time frame (Deadline)	2021.
Comments	This recommendation is recalled from 2019.

Continuation of Setting up of a Regional Database (RDB) for the RCG MED & BS	
RCG MED & BS 2020 Recommendation 12	RCG MED&BS 2020 recommends continuation of the setting up of a Regional Database.
Justification	RCG MED&BS 2020 considers the development of a regional database as an urgent priority to allow for the efficient use of the data received from the official RCG data calls and avoid duplication of work.
Follow-up actions needed	Confirmation of the members of the Steering committee, if needed, and the second meeting of the RDB SC.
Responsible persons for follow-up actions	MSs, RCG chairs
Time frame (Deadline)	End of October/beginning of November 2020
Comments	

Annex V – RCG MED & BS – 2020 Data Call

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 10th August 2020**. The characteristics of the data required are described below.

Content

The 2020 data call requests data for the period 2017-2019 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 2020, following the 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_2020 RCMMEDBS Data Call	All species landed (combined)
Review and update the landing template for the Mediterranean and for the Black Sea	Landings	Landings template_2020 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 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 the chairs.

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.

6/7/2020

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Landings template for 2020 RCG MED&BS Data Call (for years 2017, 2018, 2019)

		Member State:				
	Species	Area	2017	2018	2019	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				
Picarel	<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

* To be reported at species level

Format:

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

Ranking_Med&BS Table_2020 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:

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: 2017, 2018, 2019.
Fishing activity category Level 6	
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 VI – PRESENTATIONS (It is a separate file)