

RCG NA NS&EA AND RCG BALTIC 2020 REPORT
PART I

Regional Coordination Group North Atlantic,
North Sea & Eastern Arctic
Regional Coordination Group Baltic

8-12 JUNE 2020
Virtual meeting



Regional Coordination Group
North Atlantic
North Sea & Eastern Arctic



Regional Coordination Group
Baltic

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Executive summary

This was the second interim year for the multi-annual Terms of References (ToRs) for the Regional Coordination Group North Atlantic, North Sea & Eastern Arctic and for the RCG Baltic. During the RCGs 2019, it was agreed that the RCG NA NS&EA and RCG Baltic, would meet in back to back meeting in 2020, in Gdansk, Poland from 8-12th of June. Due to the Covid-19 situation, it was not possible to meet in Gdansk and the meeting took place in a virtual way by using ZOOM.

The overall aim for RCG NA NS&EA and the RCG Baltic is to review the status of current issues, achievements and developments of regional coordination and identify future needs in line with DCF requirements and the wider European environmental monitoring and management.

Five ToRs were handled during the RCG NA NS&EA and RCG Baltic 2020, all of which were intersessional carried out by designated ISSG and by SGs during the RCG. The intersessional work 2019-2020 was setup of 16 different ISSGs including the two ICES RDB groups. Almost all the groups conducted their tasks as planned and was presenting the results during the meeting RCG NA NS&EA and RCG Baltic 2020 technical meeting. The output of the ISSGs were extremely valuable for the work of the Technical meeting, and were the basis of the discussions at the meeting. Next to the ISSG, seven SG's were planned during the RCG Technical meeting, and one ad hoc SG concerning PETS was additionally scheduled.

ToR 1 relating to the improvement of the alignment between data collection and end-user needs (by region) was progressed this year through the work of one ISSG on feedback and interaction with the end user and one RCG sub group on making an overview on commercial sampling during Covid-19 pandemia. For the future, the ToRs for the ISSG End-users should be changed to have a more generic focus. The tasks are aiming at being the communication channel between ICES and RCG chairs, communication channel between the COM and RCG chairs, to follow up on end-user needs on a general scale and to integrate the work of the RCG SG on updating the commercial sampling overview caused by Covid-19.

ToR 2 relating to data quality in data quality collection, was progressed this year through the 3 intersessional subgroups working on RCG Catch and effort overview (previously called Fisheries Overviews), on Metier issues and on the ISSG on Data quality and confidentiality. During the RCG presentations were given about the several data quality tools used by RCG.

As a result of the ISSG on RDB Catch and Effort overviews established a common and coherent annual RDB catch and effort overview across all RCGs was established. All suggestions from the National Correspondents were taken into account. The ISSG on Data confidentiality agreed on reviewing the final document and feedback to the ISSG if specific outputs violate the RDB data policy. A shiny R application was set up, which allows for the creation of CS inventory files and interactive maps showing sampling effort and intensity in different aggregation levels. Download function allow the usage of these data for e.g. reports and data requests. After receiving the feedback from RCGs, the subgroup aims to continue to improve the existing scripts, extending them to the remainder of the documents and new analytics. Collaboration will also be established with WGBIOP whereby feedback will be obtained with regards to the sampling inventories and overviews.

It is also intended to further develop the Shiny app and include fisheries data (CL and CE) as well as stock overviews (e.g. age-length overviews, distribution, weight-length per area, etc.) as new elements. The markdown for the RDB catch and effort overviews could be integrated into the shiny R and thus allow more flexibility to the end users and make the data gathering more easily accessible. A smaller script for the RDB catch and effort overview is planned for national data submitter to enable pre-upload testing of datasets. The SG on RDB Catch and Effort overviews formulated three recommendations to present to the RCG Decision meeting in September.

The ISSG on metier under this ToR2, had an operational focus on the development and testing of Métier list, reference lists on species and area codes and the development of R script implementing the agreed best practices.

The métier list with suggested standardized and harmonized codes (especially on mesh-size ranges). Reference to old codes uploaded to the RDB (2009-2017 data). The new suggested métier codes are based on what has been previously used for a gear group in a region, and where there were overlapping métier mesh size ranges, they have been split up into smaller mesh size ranges. The new codes doesn't necessarily follow the legislation. Some new mesh size ranges were suggested.

The reference list on area grouped to regions. Following RCG codes are proposed to be used: BALT, LDF, MBS, Natl and NSEA. The Long-distance (LDF) and Mediterranean (MBS) have been added.

The reference list on species codes grouped to target species assemblage groups. Comparisons with the species list from R Data package, Fish Pi list, RCM NS 2017 list and DWS regulation 2336/2016 or LPF report 2016. The comparison of 1059 species codes show there are differences in 78.

The development of R script for assigning métier codes to transversal data, implementing the best practices agreed on and an additional module that analyse vessel patterns. An R-script was developed and tested in 2019 for assigning métiers in the Baltic Sea, which has been further developed in 2020 to cover more areas and details.

The reference lists and scripts available on GitHub. The lists and scripts are available on GitHub (<https://github.com/ices-eg/RCGs/tree/master/Metiers>).

The ISSG on metier formulated one recommendation.

The ISSG on data quality and confidentiality had multi-annual tasks defined at the start of the 3-year cycle. Task 1 was completed during the first year so no update is required in this report. Task 2 was "Develop indicators to monitor overall progress (based on table 5A) on quality assurance in the region over time." Indicators were proposed and calculated in 2019 – these have now also been calculated for the most recently available work plans.

Task 3 focussed on "Collate relevant tools developed for quality control and quality assurance in data collection developed by other groups and projects (e.g. fishPi2 WP6, ICES WGCATCH, BIOPTIM) and make plans (including accessibility, storage and training) for how these can be integrated in regional work and how MS can be supported to integrate them in national work." This was a big task – and the initial discussions and work have centred on the first part of this task i.e. collating the tools.

The task started by cataloguing recent projects and meetings that the group members had been involved in that had an element of data quality using Zotero for this (an open-source reference management software). A shared Zotero library has been created:

https://www.zotero.org/groups/2449704/fisheries_data_quality/items. This is publically viewable but only members of this ISSG have read-write access to it.

For the Task 4 under this ISSG, "Compile uploads logs retrieved through the RCG data call and prepare feedback to MS on data anomalies", upload logs were compiled and summarised. For Task 5 where data checks for the new RDBES were discussed, no work done was done and this task is under review.

Within the ToR 2, there was feedback given from WGQUALITY and WGSMAART as these are linked to data quality and the RCGs.

Under ToR2, feedback was also given from the output of the WGRDBESGOV (previously the SCRDB). The roadmap for RDBES development was reviewed. Whilst the focus remains on detailed commercial fisheries data the potential inclusion of different types of fisheries data in the RDBES was discussed and the RDBES Data Policy was discussed and some changes recommended. For 2020-2021, the focus will be on making the RDBES work optimal and correct bugs during the test data call. Later specifications and development of more refined exports, extended security and the possibility to view data are needed and will developed during 2020-21.

To expand fisheries-dependent data collection and accessibility, and improving data quality and validity, more and more there is looked at new data sources such as electronic monitoring (EM), artificial intelligence (AI), genetics, etc. Three presentations were given to illustrate this and it was agreed and decided by the RCG NA NS&EA and RCG Baltic 2020 to have this topic on 'Technological developments' as a fix topic on the agenda of the Technical RCG Meeting and to have presentations and information of the on-going research in the different institutes.

ToR 3 relating to impact on management measures on data collection and the RCG NANS & EA 2019 and RCG Baltic 2019 suggested the Pan-Regional Subgroup on the Landing obligation to be temporally suspended, and to convene in few years' time

ToR 4 relating to the development and implementation of regional work plans was progressed this year through the work of several intersessional subgroups and RCG sub-groups:

During this year's meeting, progress was been made under ToR 4 as follows:

Feedback from the ISSG & SG 'Surveys' and Restructuring WGs survey': this ISSG was on hold for the past year, and is re-activated for the coming period 2020-2021 and will work intersessional on the following topics:

- Renewal and finalisation of the multilateral agreements on cost-sharing of the two surveys: International Ecosystem Survey in the Nordic Seas (IESNS, also known as ASH under the EU-MAP) and International Blue Whiting Survey;
- Monitor COVID-19 implications on surveys from a DCF perspective and react when appropriate and requested
- Monitor the follow-up of WKREO proposals and act as focal point for RCG contact
- Review survey aspects of the renewed EU-MAP in the light of cost-sharing and set up methods to identify candidate surveys for future cost-sharing

Feedback from the ISSG 'Development of Draft RWG': in order to prepare for the submission of a formal RWP 2022 the following steps were identified and presented at the RCG technical meeting 2020:

- Agree the set of existing agreements to put through the process (bilateral-multilateral agreements, common methodologies) and identify the low hanging fruit;
- Test these in the work plan structure and propose adjustments where necessary (review and adjustment of work plan structure)
- Review the output of each ISSG sub-group in relation to potential development of RWP and agree on the prioritized outputs and how they are represented in the RWP (text boxes and tables)
- Present roadmap for the test RWP 2021 and the formal RWP 2022 to be presented in RCG 2021 (short-term to September 2020, and midterm to September 2021) with identified steps of decision making.
- Agree on how the MARE call for project would be used to support the work and have roadmap for proposal

Good progress was made on all of the five points at the RCG technical meeting 2020. A detailed roadmap on the time period between June 2020 and October 2021 is developed, outlining the necessary steps from the development of a test RWP in 2020 to the formal submission of an agreed RWP in 2021.

Feedback from ISSG 'Optimized and Operational Regional Sampling Plans': the group will continue in 2020-2021 further developing the tasks last year, but will build on the experiences gained in the three ISSG for the regional sampling plan (RSP) case studies (trawl fishery in Iberian Waters, freezer trawler fleet exploiting pelagic fisheries in the North-east Atlantic and fisheries for small pelagics in the Baltic). The

work needs to be coordinated with the ISSG – Development of Draft Regional Work Plan, so it supports their work and does not overlap. Further the group will have a strong link to WKBIOPTIM and a link to the ISSG – RDB Catch and effort overviews and the ISSG - Data Quality.

Feedback from ISSG ‘Case study of fisheries for small pelagics in the Baltic’: In the case study Denmark, Estonia, Finland, Poland and Sweden participated. Main aim of the pilot study was to test possibility to conduct self-sampling, write report on quality of collected data and fishermen refusal rate, describe the challenges what was experienced. It was suggested to use common protocol for sampling small pelagics. In November-December 2020 a new meeting will be held where results of simulations will be integrated with the experience collected from 2020 Q1 pilot and the protocols improved and agreed towards a new pilot in 2021 Q1. Member states that did not participate in 2020 pilot will be invited to evaluate progress obtained in 2020 and given opportunity to join in 2021 pilot plan.

Feedback from ISSG ‘Evaluation of the data collected for the SSF at EU level’: this has been the first year of work for this ISSG. During this RCG NA NS&EA Baltic technical meeting, the main outputs and tasks covered were presented. Based on the outputs from the work done in 2020 and considering the feedback get from the RCG meeting, potential tasks for 2020-2021 were identified:

- Analysis of catch and effort data in the RDB
- Sampling effort allocated to the under 12m fleet
- PGECON involvement in the subgroup
- RDBES data model and the SSF

Based on the discussions of this subgroup, it was proposed the creation of a ISSG to progress on regionalization sampling plans for Marine Recreational Fisheries. This new ISSG will be presented for approval during the Decision meeting 2020

Feedback from ISSG ‘Case study freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic’: the analysis of the data in this case study show clearly that the EU freezer fleet is a suitable candidate for a regional sampling approach. Improved coverage can be achieved by coordinating the national sampling plans internationally. However, the use of a reference fleet is associated with even higher levels of sampling coverage. This would of course imply a change in national sampling protocols moving from observer and market sampling schemes to a self-sampling scheme on a vessel selection of the European freezer trawler fleet. Here, the barriers/limitations to the practical implementation needs to be investigated. This will be looked at further during the period 2020-2021

Feedback from ISSG ‘Identification of case studies for PETS bycatch monitoring’: during the meeting it was highlighted the importance of working together with the most relevant ICES experts working groups involved in fisheries monitoring and bycatch issues (e.g. WGBYC and WGCACTH). The group agreed on this point and the collaboration between these ICES expert groups and the ISSG will take place in the following years.

Based on the outputs from the work done in 2020 and considering the feedback get from the RCG meeting, potential tasks for 2020-2021 were identified.

Intersessional work with ICES WGBYC and WGCACTH

Case studies: the plan is to work in several case studies following a similar approach conducted by the small pelagic case study, where a generic regional sampling programme was defined.

Feedback from ISSG ‘Towards a regional sampling plan - Case Study of the trawl fishery in Iberian Waters’: based on the outcome of the project FishPi², an ISSG was set up during the RCG 2019 to continue the previous work towards developing a RSP for trawl fishery in Iberian waters. Nevertheless, no progress could be achieved intersessional between RCG 2019 and 2020 due to lack of time to dedicate.

Prior to the RCG 2020 meeting and during the RCG meeting, the ISSG outlined a workplan for the intersessional period between RCG 2020 and RCG 2021.

Feedback from ISSG 'Diadromous Fishes': the group dealt with tasks given by the RCG NA NS&EA and RCG Baltic in autumn 2019. Due to the circumstances caused by the covid-19 pandemic and due to the transition period of Brexit leading to the exclusion of the two former chairs shortly before the meeting, it was not possible to cover all planned tasks during the meeting. For the period 2020-2021, apart from overall tasks the following subjects will be progressed in the next term:

- Questionnaire on electrofishing programs to EGs
- Request to MSs to name the eel index rivers
- Initiation of dialogue between ISSG Diad and ICES EGs

Feedback from ISSG & SG 'Regionally coordinated stomach sampling': this ISSG was not in the possibility to work during the period 2019-2020. Therefore, it was decided to have this topic as a subgroup during the RCG and as such start the work for this group. The subgroup thus invited Anna Rindorf (DTU Aqua, PI of the FishPi² WP dedicated to stomach content) and Alexander Kempf (Thünen Institute of Sea Fisheries, co-chair of ICES WGSAM) to participate, to fuel the discussion with their experience and expectations. Their input to the group was substantial, notably through the provision of a document drafted by WGSAM, and based on conclusions of FishPi² about data needs, species to be sampled and an improved data collection protocol. This document formed the basis for the recommendation requesting support by the Commission. Three main actions are included in the work plan 2020-2021.

ToR 5 relating to ways to improve the regional coordination and feedback on regional issues was progressed this year through the subgroup "Review of current setup of RCGs, technical meeting and decision meeting" and met during the RCG. Sub-Group on RCG development had an exchange of views in two stages. In the first phase a set of questions was sent, set one about the working structure and methods of the RCGs, the second set about the nature of the Rules of procedures of the RCGs. The participants to this RCGs were the NCs. In general, there is a feeling of satisfaction how the RCGs work and operate. The structure is rather fresh, but initial impressions are fairly positive. This applies also to the arrangement of two meetings, technical and decision-making meetings.

Based on the discussions, some of the issues raised and described above are possible to implement already this year in preparation of the decision-making meeting (e.g. pre-screening meeting).

Also taking into account the approaching renewal of the EU-MAP, it was concluded, that an ISSG should be established and the decision-making meeting should take a decision to that effect in 2020. A rather general terms of reference could be advisable for such group but it should include amending the RoP.

The SG "RCG support Secretariat and Website" under ToR5, did not meet during the RCG, but starts immediately after the RCG with the writing of the project for the call for proposal MARE.

To support the operation of RCGs, the ISSG will look into the developing and operating a pan-RCG website and developing and putting in place a continuity including in financial terms.

The setup of working intersessional, was again proved to be successful to achieve the goals to make regional coordination efficient on a regional scale. The suggested next steps for the different ISSGs has been endorsed by the RCG Baltic and RCG NA NS&EA and is covered in this report. All existing groups are suggested to continue and a few new ISSG are suggested to start 2020-2021, in total 19 groups (including two ICES RDB groups) are suggested to work actively on different tasks within different topics. For the period 2020-2021 there are 19 ISSG suggested.

This year the setup of the Technical meeting incorporated two relevant novelties. It was the first time that RCG Baltic and the RCG NA NS&EA conducted a back to back technical meeting, and the meeting was held remotely due to the COVID-19 outbreak. At the end of the meeting a short questionnaire was send to all participants in order to evaluate the meeting and get some feedback.

1 Administrative details

Regional Coordination Group name

Regional Coordination Group North Atlantic, North Sea & Eastern Arctic

Regional Coordination Group Baltic

Year of Appointment within the current cycle

2

Reporting year within the current cycle (1, 2 or 3)

2

Chair(s)

RCG NA NS&EA: Els Torreele, Belgium & Lucia Zarauz, Spain

RCG Baltic: Maria Hansson, Sweden & Elo Rasmann, Estonia

Meeting venue

Virtual Meeting (Covid-19 restrictions)

Meeting dates

8-12 June 2020

2 Terms of Reference

- 1. Propose ways to improve the alignment between data collection and end-user needs (by region)**
 - Define end user needs and assess how they are met by current and future data collection.
 - Define and suggest mechanisms for communication and implementation of end user needs
 - Feedback from ICES end user groups and RCG feedback on their recommendation
 - Improve regional cooperation for small scale fisheries and assessing effects on the ecosystem
 - Formulate recommendation(s) for revision of EU-MAP to ensure that it is in line with end user needs

- 2. Implement and maintain data quality in data collection**
 - Assess the documentation of data quality procedures
 - Update on fisheries overview and sampling overview
 - Update on development of RDB and RDBES
 - Review the outcome of regional orientated projects and other groups
 - Develop strategy for implementation of electronic data capture (REM).

- 3. Review impact on management measures on data collection**
 - Assess Implication on the landing obligation.

- 4. Development and implementation of Regional Workplans**
 - Identify and propose the building blocks of regional workplan
 - Review and evaluate the outcome of regional orientated projects to identify template, content, actions to be incorporated in regional workplan.
 - Optimizing the use of surveys: efficiency, multi-purpose & task sharing Decisions and actions to be taken.

- 5. Propose ways to improve the regional coordination and feedback on regional issues**
 - Review and evaluate the outcome of regional orientated projects
 - Develop & adopt tools and working procedures for more effective regional cooperation and coordination.

- 6. Support of ToRs**
 - Promote publication on findings, likely in the form of peer-reviewed publication (e.g. CRR) that documents the development of methodologies in the field of regional coordination & data collection and the state of scientific knowledge on the topic at the end of the 3-year TOR period
 - Identify pilot studies. Decisions and actions to be taken.

3 Summary of Work plan RCGs 2019-2021

Year 1

End-user Needs: fine tune dialogue & assess additional needs

Review & improve feedback mechanism (benchmark, data call, SID)

Cont. review end user needs

Propose recommendations for EUMAP revision to address end user needs

Data Quality: procedures and documentation

Review/Develop documentation on inventory and quality of DCF data

Coordinate automation of data flows

Regional Sampling plans: review & progress

Review outcome of regional oriented projects (Demersal, Pelagic, bycatch), agree on next steps to develop operational proposals for regional sampling plans

Regional Work Plan: set up basic structure, test procedure

Agree on basic building blocks, develop structure and content, and agree on 1st proposal for testing

Year 2

End-user Needs: fine tune dialogue & assess additional needs (cont.)

Cont. review end user feedback (Benchmark, SID, Data calls, Surveys)

Identify new and obsolete data parameters under new EUMAP

Data Quality: Transition to RDBES, electronic data capture

Finalise documentation on inventory and quality of DCF data and elements to be forwarded to regional work plan)

Agree on adoption of automated processes

First draft strategy on coordinated electronic data capture

Regional Sampling plans: review & progress

Finalise and agree on operational proposals for regional sampling plans to be forwarded to regional work plan

Regional Work Plan: enhance structure, review procedure

Add further content and documentation, review and refine process

Year 3

End-user Needs: fine tune dialogue (cont) & assess additional needs

Cont. review end user feedback (Benchmark, SID, Data calls, Surveys)

Agree on additional/obsolete parameters

Data Quality: Transition to RDBES, electronic data capture

Complete transition to RDBES

Complete strategy for implementation of electronic data capture

Regional Sampling plans: finalise

Refine text and content for adoption

Regional Work Plan: finalise

Incorporate agreed sampling regional plans and data quality documentations, finalise STECF proposal

4 List of Outcomes and Achievements of RCG NA NS&EA and RCG Baltic in this delivery period

During the second year of the new 3-year term of RCG NA NS&EA and of RCG Baltic the work under each ToR has been carried out by designated inter sessional subgroups (ISSG). For some ISSGs it was not possible to start the work. During the RCG these groups have started their workplan for 2020-2021.

The overview of the work done by ToR at the 2020 meeting can be found in this Part I of the report.

In part II the RCG endorsed recommendations and decisions to be looked at during the NC Decision meeting are given.

Detailed progress, outcomes and deliverables achieved in all intersessional subgroups are described in Part III of the RCG NA NS&EA and RCG Baltic 2020 report "Reports on Intersessional SubGroup (ISSG) work 2019-2020".

5 Progress report on ToRs and workplan

5.1 ToR 1 Propose ways to improve the alignment between data collection and end-user needs (by region)

During this year's meeting, progress was been made under ToR 1 as follows:

- Feedback from the Commission/STECF.
- Feedback from ICES
- Feedback from the ISSG 'End users and RCGs'.

5.1.1 Feedback from the Commission

Summary & discussion

The COM has moved from the **EU-MAP 2017-2019 (COM Implementing Decision 2016/1251)** in two phases. First the EU-MAP 2017-2019 was renewed to cover 2020-2021, and in parallel the revision of the EU-MAP began, to cover 2022 onwards. In line with the DCF recast regulation (2017/1004), the EU-MAP has been split in two legal acts for both steps:

A COM **delegated** decision, which is submitted for the European Parliament (**EP**) and the **Council scrutiny** after its adoption. It includes the biological, environmental and socio-economic **data requirements**.

A COM **implementing decision**, which does not need the **scrutiny** by the EP and the Council and contains the **thresholds** for data collection and the list of **surveys**.

The renewed EU-MAP covering 2020-2021 was published in June 2019 ([link to the Eur-Lex publication](#)). The 2020-2021 WP and AR templates stay the same, all MS WP 2020-2021 adopted.

The second phase is still ongoing. It began with a brainstorming during the STECF EWG 18-18 on the assessment of WP, in November 2018. During 2019 the first round of consultations with end-users (such as ICES, STECF, RFMO) took place, and included the Regional Coordination Groups (North Atlantic, North Sea and Eastern Arctic, Baltic, Mediterranean and Black Seas, Long Distance Fisheries, and Large Pelagics), the PGECON (the Planning Group for Economic Issues), the Liaison Meeting and the National Correspondents meeting. There were two STECF specific groups: one on surveys (EWG-19-05) and one on EU-MAP (EWG-19-12), which provided the first draft of the EU-MAP.

The list of surveys and thresholds, **2020 COM Implementing Decision**, is currently [in public consultation](#) (until 16 June 2020). Then it will be consulted with the COM expert group for data collection: the DCF National Correspondents and RCG and PGECON chairs¹ on 1 July 2020, prior to voting in written procedure in the Committee of Fisheries and Aquaculture².

The set of data requirements and variables, the **2020 COM Delegated Decision**, is under a final round of internal consultations and will be consulted with the COM experts for data collection on 1 July 2020. A formal inter-services consultation and a public consultation will follow, before the adoption by the Commission. Finally, after two months of the EP and the Council scrutiny, it will be published.

New work plan and annual report templates in line with this new EU-MAP will be then developed. The dedicated STECF EWG 20-18 will take place at the beginning of 2021, but major drafting should take place beforehand, also under ad-hoc contracts before the end of 2020.

¹ Commission Expert Group number E02750: Expert Group of Fisheries Data Collection

² Commission Expert Group number C16100: Committee of Fisheries and Aquaculture

The new EU-MAP focuses even more on the regionalisation and leaves more space for RCG decisions and recommendations (e.g. COM list of species for recreational fisheries can be extended, waterbodies for data on eel are to be agreed within the regions, new methodologies can be introduced if agreed on regional level). No more structural pilot studies will be mentioned in the EU-MAP, and the current ones have been transformed to regular requirements³ or general provisions on data accessibility⁴. The new EU-MAP will enter into force in 2022, which means it should be published in late 2020 or early 2021, followed by the templates and guidance for WP and AR.

For next period of the European Multiannual Fund, EMF⁵, COM expects a step up, especially regarding the compliance with all data requirements under the EU-MAP, strengthening the regional dimension, improved solutions for data storage and data management, and strengthening EMF – DCF communication at the national level

Proposals for Recommendations and Decisions

Not applicable for this section.

5.1.2 Feedback from ICES

Summary & discussion

ICES gave an overview of communication means regarding data needs and data transmissions for as well as general issues concerning data for advice. Developments in terms of setting up data calls and data transmission through the Stock Information Database (SID) facilitating a more streamlined process were presented as well as the Benchmark Oversight Group (BOG) and recommendations put forward to the RCG from ICES expert groups. The presentation generated some discussions of which the main points are listed below.

Stock Information Database (SID):

Using SID as a repository for the data needs for each of the stocks has been implemented and it has facilitated more efficient and streamlined data calls. The ability for data providers to access and download upcoming data needs immediately after the working group termination was appreciated and the ICES secretariat is implementing a more user-friendly access to up-to-date Issue Lists for all the stocks ([SiD](#)). This module is still under development, it will have open access to all with the possibility to add comments (addressed to EG) and other functionalities will be links to previous benchmarks and reports and potentially a list of data used in the assessment (in collaboration with RCG's). ICES ADGs will review Table on input data as a ToR in 2021; working on a link to SID for this part of the Advice sheets.

In terms of data transmission failures and their reporting, the data submitter feedback module has been implemented ([SiD datacall](#)). Access to this module is granted individually (77 data submitters already have access). This pre-screening by data providers has reduced the non-transmission failures.

Finally, the landing page for SID will be available soon with links and instructions for all its modules making it easier to navigate.

³ Pilot Study 1: Relative share of catches of recreational fisheries compared to commercial fisheries. Pilot Study 2: Level of fishing and impact of fisheries on biological resources and marine ecosystem. Pilot Study 3: Data on employment by education level and nationality.

⁴ Pilot Study 4: Environmental data on aquaculture

⁵ The current EMF for fisheries is the EMFF but the future name is yet to be announced.

Data calls:

Having the expert groups as early as possible to draft the data call text was encouraged and the SiD module for data calls facilitate the 'pre-warning' of upcoming data calls. In 2020, the big data call on catch and landings, etc., is only issued once, early in the year, specifying the deadlines for the various groups in the text as suggested by the RCGs in 2019.

So far 10 data calls are being drafted for upcoming work of which 5 are potential, see table 5.1.2.1.

Table 5.1.2.1 Drafted data calls

Description of data	Approximate issue date	Aim	Additional information
Indicators of species distribution for advice on VME	February 2020	Provision of ICES management advice on VME's	Similar to previous years
VMS/Log book data for fishing activities in the Northeast Atlantic and Baltic Sea	February 2020	Provision of ICES management advice on spatial distribution and impact of fisheries	Similar to previous years
Landings, discards, biological sample and effort data from 2020	January 2021	Support of ICES advice on fisheries opportunities	Deadlines for data submission for each WGs to be shared in December 2020.
Annual observed bycatch, effort and estimates of bycatch rates for relevant species (marine mammals, seabirds, turtles and large elasmobranchs), associated to specific fishing gear types.	Q1 2021 (tentative)	Support of the ICES advice on bycatch of marine mammals, bird, turtles and large elasmobranchs	Tentative
Data call on Baltic salmon	January 2021	Support of the ICES advice on fishing opportunities for salmon and sea trout in the Baltic Sea.	Similar to the 2020 call
Data call on North East Atlantic salmon	February 2021	Support of the ICES advice on fishing opportunities for salmon in the North Atlantic	Similar to the 2020 call
Data call on sandeel benchmark	Q3 2020 (tentative)	Support the benchmarking of sandeel	
Data call on North Sea benchmark	Q3 2020 (tentative)	Support the benchmarking of North Sea stocks	
Data call on Gravel Extraction	TBD	Support of the ICES advice	
Data call on scallop catches	Q3 2020 (tentative)	Support of the ICES advice	

Specific feedbacks to particular data calls were encouraged to be conveyed to ICES Secretariat, and the proposed WGQUALITY group and ICES secretariat should continue a feedback loop on drafting of the upcoming data calls.

Benchmarks:

A list of planned benchmarks, associated issue lists and data calls are available on the SharePoint for benchmarks (accessible by RCG chairs). The benchmark process is under continuous development/scrutiny; The Benchmark Oversight Group (the BOG) has been established under ACOM. This group will explore and propose solutions to address generic issues with benchmarks and conduct an annual review of benchmarks conducted and recommend any remedial actions to address unresolved issues, inconclusive or incomplete benchmarks to ACOM. The BOG will be using the prioritization process decided by ACOM in 2019, and will then recommend the list of benchmarks to be conducted in year+1 and year+2 to ACOM.

The timing of benchmarks being agreed by ACOM in March is challenging for the data processes necessary for the benchmarks. It takes time to do the thorough data QC by the relevant ICES groups. The RCG suggested that the ACOM Consultations in September could provide an initial list of benchmarks, allowing for additional 6 months to enable thoroughly checked data for the benchmarks planned.

Recommendations:

PGDATA has been reviewing the recommendations put forward to the RCGs, however, as this group now will be substituted by WGQUALITY, a new mechanism for streamlining the recommendations put forward to the RCGs from ICES expert groups need to be established. As some recommendations put forward to

the RCG can be difficult to respond to because the remits of the RCGs are not entirely clear to the expert groups. ICES Secretariat can provide the EGs (potentially the chairs) with a summary of the mandate and remits of the RCGs in order to align recommendations with what the RCGs actually can facilitate. The RCG Chairs can provide ICES with this summary.

Sampling – covid-19 disruption

Given the covid-19 disruption, both fishery dependent and fishery independent sampling may be experiencing some changes as a consequence of the disruption. Two subgroups were setup during the RCG to handle these issues: G ‘End User - Overview on commercial sampling during Covid-19 pandemia’ and SG ‘Surveys’. The outcomes of these subgroups can be found in section 5.1.4 and section 5.4.1 of this report.

Proposals for Recommendations and Decisions

Not applicable for this section.

5.1.3 Feedback from ISSG ‘End users and RCGs’

The aim of the subgroup is to review and streamline dialogue between data providers (RCGs) and End-users (ICES) in order to identify effective processes to meet end-user needs and allow the RCG to prioritise its activity relating to future data collection, storage and transmission functions. The subgroup was established as a pan regional group in 2018.

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

Several intersessional meetings have been conducted during 2019 and 2020 in the ISSG on End-Users and RCGs. The sub group has been working on very specific and technical task to improve the communication and the awareness of data between the ICES system and the RCGs.

Workplan for 2020 – 2021

During the RCG meeting 2020 it was decided that the ToRs for this ISSG should be changed to have a more generic focus and not as it has been conducted until now with on a technical and detailed level. The reasoning is to avoid duplication of work between already ongoing ICES working groups or even worse if several people are working in different directions within the same topics. However, it was also realised that it was important to keep the close connection between the RCG and ICES. It was therefore decided to keep the annual information meetings between ICES and the RCG chairs to ensure the good cooperation and to be able to follow the progress over time.

Main tasks for 2020 – 2021 are:

1. communication channel between ICES and RCG chairs
 - define a mechanism for streamlining the recommendations put forward to the RCGs from ICES expert (it used to be a task for WGDATA, but the group disappears in 2021)
 - provide ICES with a summary of the mandate and remits of the RCGs in order to align recommendations from EG with what the RCGs actually can facilitate
3. communication channel between the COM and RCG chairs
 - prepare a document explaining the need for a new RDBES

3. Follow up on end-user needs on a general scale
4. Update commercial sampling overview caused by Covid-19
5. UK related issues

Proposals for Recommendation and Decisions

No proposals for recommendations nor decisions.

5.1.4 Feedback from SG 'End User - Overview on commercial sampling during Covid-19 pandemia'

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

5.1.4.1 Introduction

The Coronavirus disease (COVID-19), which is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was first identified in December 2019 in Wuhan, China, and has since spread rapidly, evolving into a full-blown pandemic. As a result of the general guidelines, countries put in place measures to protect the general population.

As part of the RCG NA NS&EA and RCG Baltic combined a subgroup that convened to look at the impact of the COVID-19 crisis on the Data Collection Framework (DCF) with emphasis on biological sampling of commercial catches on land and at sea.

Prior to the meeting a spreadsheet was designed and circulated among the Member States (MS) to capture information by country and stock. The overview needed input from all MS and will serve as basic information for the end users to understand what data gaps to handle in next year's stock assessment work.

The excel spreadsheets were pre populated with stocks as per the RDB for each country and MS were asked to fill in the impacts perceived by month on the commercial sampling through a number of questions.

The questions asked were as below and were designed to capture in a semi quantitative way on how the current Coronavirus has impacted fisheries and our ability to continue to collect data on the various stocks:

- Were the landings for this stock reduced because of COVID19 (effort)
- Was your planned age sampling on landings for this stock reduced because of Covid?
- Was your planned length sampling on landings for this stock reduced because of Covid
- Did COVID19 impact your sampling to get estimates on discards weight?
- Was your planned length sampling on the unwanted part of the catch reduced because of Covid?
- Was your planned age sampling on the unwanted part of the catch reduced because of Covid?

Answers were graded as Low/Null impacts (0-25%), Medium impact (25-75%) or extreme impact (75-100%), options for impact not known, not applicable and no response were also supplied. For the report the last three answers were combined and excluded so that we could quantify the answers supplied.

5.1.4.2 Overview of the outcomes from the Commission document

In late March the Commission also sent a questionnaire to MS looking for information regarding the impacts of the Coronavirus on their overall work programmes. The subgroup prepared an overview from the Commission questionnaire in conjunction with comments from the received excel sheets.

Landings

Although commercial fishing has not ceased completely, MS revealed that the level of fishing has been restricted or in temporary suspension due to limited availability of markets. Some fisheries virtually closed due to transport restrictions or substantially dropped of prices or just because the demand of fish declined – due to the closure of restaurants and hotels. On the other hand, the low fuel prices stimulated some other fisheries, in other countries.

In some MS, the industrial fisheries seem to be less affected by the pandemic situation, probably because fish is processed and can be stored for a longer period at least until freezers been full. In addition, some small-scale fisheries showed some activity but only for the provision of food to supply the local market

Sampling on board

Most countries suspended on-board sampling from early to mid-March onwards. Two countries resumed the observer trips after 1-2 months. The ICCAT observer trips continued if an observer was already on-board before the corona outbreak. Several countries have a self-sampling programme in place or introduced such a programme due to the outbreak. Generally, the self-sampling programmes have continued.

Sampling on land

The continuation of sampling on land during the corona outbreak differs between countries. Some countries encountered minor effects while other countries suspended their on-land sampling for 1-2 months after which it continued, sometimes in adapted form. There were also a few countries that indicated that on-land sampling stopped and it was still unclear when sampling could commence again.

5.1.4.3 Methods for preparing plots

The overview of the commercial sampling during corona pandemic is presented with heat maps. The plots were prepared by averaging the responses from the 3 months for each question. The scoring for each response followed as; 3 for Extreme impacts (75-100%), 2 for Medium impacts (25-75%) and 1 for Low/Null impacts (0-25%). The answers; Impacts not known (?%), Not applicable, and No response were excluded from the analysis so that the supplied answers could be analysed numerically. The number of countries that responded to each question were included in brackets for each stock. The overview plots showing the impact of COVID-19 are also presented by region. The regions for each stock followed the classification of the regions used in the RCGs: The Baltic Sea (ICES areas III b-d); The North Sea (ICES areas IIIa, IV and VIId); The Eastern Arctic (ICES areas I and II), the ICES divisions Va, XII, XIV and the NAFO areas; and the North Atlantic (ICES areas V-X, excluding Va and VIId).

5.1.4.4 Overview of the outcomes of the questionnaire on commercial sampling during Covid-19

For the Baltic stocks, the effect of COVID-19 on the landings scored overall as low impact with some exceptions; Eastern Baltic Cod (all stocks), salmon and sea trout (all stocks) where the impact was scored as medium. The effect on age and length sampling for both landings and unwanted catch was also mostly scored as having a low or medium impact for all stocks with an exception of salmon in the Baltic where the sampling was extremely impacted by COVID-19. 33% of all responses were listed as Impacts not known, No response, Not applicable or empty cells.

For the Eastern Arctic stocks, the effect of COVID-19 on the landings was overall scored as a low impact. Age and length sampling from both landings and unwanted catch were scored as having a medium impact

on cod, beaked red fish, haddock and Greenland halibut while for blue ling age and length sampling from the landings and unwanted catch was scored with a medium to an extreme affect in this region. 17% of all responses were Impacts not known, No response, Not applicable or empty cells.

The landings of the Northwest Atlantic stocks were not affected by COVID-19 while the sampling of landings and unwanted catch for age and length were scored as extremely impacted. 20% of all responses were Impacts not known, No response, not applicable or empty cells.

For the North Atlantic stocks the effect of COVID-19 on the landings were mainly scored as low impact with exceptions of cod (27.6a and 6b), haddock (27.5b) and sprat where the effect was scored as medium to extreme. Most of the stocks ranged to having a low to high impact in age and length sampling from landings and unwanted catch with the exception of seabass (27.8ab) and Nephrops stocks (FU16, FUs 20,21 and FUs 26,27 and FU30) where the impact was extreme. Other Nephrops stocks were not affected. 11% of all responses were Impacts not known, No response, Not applicable or empty cells.

The landings of the North Sea stocks were scored with a low to medium impact (but more medium compared to the North Atlantic stocks). Only Nephrops FU5 scored an extreme impact on landings. Extreme impacts for age and length sampling of landings and unwanted catch for some stocks (e.g. whg 27.3a) and to a lesser extent Cod 27.21 was noted. 22% of all responses were Impacts not known, No response, Not applicable or empty cells.

The landings of the pan-regional stocks (Sebastes sp) reg 27.461214 and porbeagle (por 27.nea) were extremely affected. Herring was the least impacted in all levels of sampling however only one country had a response for this stock. All other stocks showed some affect. 22 % of all responses were Impacts not known, No response, Not applicable or empty cells.

Table 5.1.4.1 Example plot for the Baltic stocks.

Stock	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
bil.27.22-32-	1 (3)	1 (1)	1.8 (2)	1.8 (2)	1 (1)	1.8 (2)
cod.27.22-24-	1.3 (2)	2 (3)	2 (3)	2 (3)	2 (3)	2 (3)
cod.27.24-32-	2 (2)	1.7 (3)	1.7 (3)	1.7 (3)	1.9 (3)	1.9 (3)
dab.27.22-32-	1.2 (2)	2 (2)	2.2 (3)	2.2 (3)	2 (2)	2.2 (3)
fle.27.2223-	1.3 (2)	2 (2)	2.2 (3)	2.2 (3)	2 (2)	2.2 (3)
fle.27.2425-	1.2 (3)	2 (2)	2.2 (3)	2.4 (4)	2.3 (3)	2.4 (4)
fle.27.2628-	1 (1)	1 (2)	1 (2)	2.3 (3)	2.3 (3)	2.3 (3)
fle.27.2729-32-		1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
her.27.20-24-	1 (3)	1.5 (4)	1.5 (4)	1 (1)	1 (1)	1 (1)
her.27.25-2932-	1.1 (5)	1.3 (7)	1.3 (7)	2 (2)	2 (2)	2 (2)
her.27.28-	1 (1)	1 (1)	1 (1)			
her.27.3031-	1 (1)	1 (2)	1 (2)			
ple.27.21-23-	1.2 (2)	2 (2)	2.2 (3)	2.2 (3)	2.2 (3)	2.2 (3)
ple.27.24-32-	1.3 (3)	2 (2)	2.2 (3)	2.4 (4)	2.3 (3)	2.4 (4)
sal.27.22-31-	2 (2)	2 (3)	2 (3)	3 (2)	3 (2)	3 (2)
sal.27.32-		1 (1)	1 (1)			
sol.27.20-24-	1 (2)	2 (2)	2.2 (3)	2.2 (3)	2 (2)	2.2 (3)
spr.27.22-32-	1.1 (5)	1.1 (8)	1.1 (8)	1.7 (3)	1.7 (3)	1.7 (3)
trs.27.22-32-	1.7 (2)	1.8 (4)	1.8 (4)	2.3 (3)	2.3 (3)	2.3 (3)
tur.27.22-32-	1.2 (3)	1 (2)	1.6 (3)	2.2 (3)	2 (2)	2.2 (3)

Baltic stocks
 Covid-19 impact
 Mar-May 2020
 (number of countries
 in brackets)
 3 - extreme impact
 2 - medium impact
 1 - low or no impact

At the outset it became clear that MS may have interpreted the questions differently and may not have filled the questionnaire correctly, so these results should be treated with caution. The subgroup reworded the questions for future spreadsheets and have changed it from a monthly to a quarterly overview. It is advised that when MS are filling out the spreadsheet for the next quarter that they revisit Q1 (Mar) and complete Q2 (April-June). Q3 (July-Sept) and Q4 (Oct-Dec) spreadsheets will be sent out later.

Some mistakes were noted in the replies by some countries where the columns on age were filled out for crustacean stocks.

All plots are available in Annex 2.

Workplan for 2020 – 2021

The subgroup work will continue to follow up with MS to collate an overview of the effect of COVID-19 on commercial sampling. The revised questionnaire will be re-sent to MS in the beginnings of July, October (2020) and January 2021. Updated plots will be disseminated back to the MS as quickly as possible. This work will be carried out under the scope of the ISSG 'End users and RCGs'

It is proposed that the revised questionnaire is resubmitted to MS and for them to continue to update by quarter. Continued analysis will be done and plots will be available to the relevant WG's and MS as a reference document to see what can be done to ensure that future sampling programmes are maintained as much as possible with continued co-operation between relevant MS.

Proposals for Recommendation and Decisions

NANSEA BALTIC_2020_R01: Data gaps because of Covid-19 restrictions

5.2 ToR 2 Implement and maintain data quality in data collection

During this year's meeting, progress was been made under ToR 2 as follows:

- Feedback from the ISSG 'RCG Catch and effort overviews'
- Feedback from the ISSG 'Metier issues'
- Feedback from ISSG 'Data quality and confidentiality'
- Feedback on data quality tools by SG, to be used by RCGs

5.2.1 Feedback from the ISSG 'RDB Catch and Effort Overviews'

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

This group was formally called 'Regional overviews of fisheries and sampling'. As this created confusion with the ICES Fisheries Overviews documents, it was agreed to rename the ISSG to 'RDB Catch and Effort Overviews'.

The group met in weekly online conferences (via Skype) since December 2019 dealing with specific tasks, reviewing progress and adjusting workloads. Minutes were circulated after each meeting that kept a record on progress achieved and tasks ahead.

In a first step, the group reviewed the feedback of the different RCGs and the RCG Decision meeting 2019 regarding the data analysis and fisheries overviews. Based on these reviews, the group updated and adjusted the structure for headings and graphical content of the overviews. It was decided that structure would be used for all RCGs, facilitating comparative analyses across regions. The group also decided on keeping and updating the RCG [Github](#) (in the ICES EG section) as repository for the r-scripts developed. A restricted [SharePoint](#) was used to hold documents, protocols and RDB data extracts. The common extraction and preparation format defined for 2009-2018 RDB data was updated with regards to 2019 data and the graphical functions improved. R markdown reports were significantly improved by automating captions and the formatting of graph labels. An algorithm was developed that now allows the matching of ICES 2020 stock codes to CL data.

A common and coherent annual RDB catch and effort overview across all RCGs was established as the result of the subgroup work towards the 2020 RCGs. All suggestions from the National Correspondents were taken into account. The ISSG on Data confidentiality agreed on reviewing the final document and feedback to the ISSG if specific outputs violate the RDB data policy.

Routines working on sampling quality indicators or other measurements (CS tables) were sparse and the group decided to set up analysis from scratch. A shiny R application was set up, which allows for the creation of CS inventory files and interactive maps showing sampling effort and intensity in different aggregation levels. Download function allow the usage of these data for e.g. reports and data requests.

Four types of overviews were planned; only development differed among them.

The overview of data time series was not updated this year, as no further review took place during the RCGs Technical and RCG Decision meeting in 2019. This document is however in an advanced stage of development and can be finalized if feedback is given. The document on sampling statistics contains exemplary overviews on sampling intensity and -distribution of the most recent year and an introduction on how to set up the shiny R application on personal devices.

No specific case studies or exemplary stocks/areas are presented this year.

RCG members are welcome to contribute ideas and help specifying, which sampling statistics they would like to see included in a later, more advanced version.

5.2.1.1 RDB catch and effort overviews

During the ISSG work in 2019/2020, the RDB Catch and Effort overviews have been updated and adjusted according to the feedback of the RCG Decision meeting. The RCG subgroup and RCG members are asked to review the updated version of the overviews and feedback to the subgroup.

It is expected to have the documents approved for the RCG usage (decision making and support within the RCGs) and a later point of this years also for selected ICES work (e.g. the annual ICES fisheries overviews or in collaboration with WGBIOP). Further use and publication of the overviews would need further approval. The subgroup suggested different modes for it:

- Making the content of the overviews available for pre-approved ICES groups (i.e. those WGs who already have access to aggregated RDB data, approved by the SCRDB, Annex 3) the same year they are provided to the RCG: that would need verification by the MS (data submitter) whether all data are provided and if there are objections to publishing them in the aggregated format of the overviews. A suggested modus would be to submit the overviews to the respective NCs after the RCG in June and ask for approval until the September meeting. That would give MS the possibility to object or re-upload data that were missing up to this point (June of the following sampling years). This approach would be of most use to ICES expert groups but would give less time for verification and approval of the report contents. See figure 5.2.1.1.

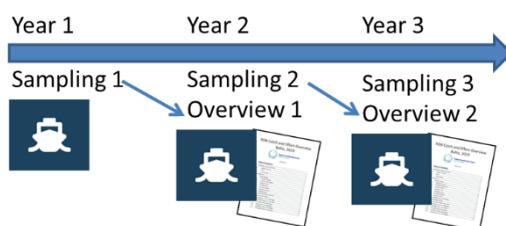


Figure 5.2.1.1 Suggestion 1 of making RCB Catch and effort overviews available

- Making the overviews available one year after they have been provided and used by the RCG: similar method of approval by MS possible, the additional leap-year would enable the publication to a broader audience (e.g. ICES WGs or WGs) as data can be considered “final” at this point; data could again be approved by the MS beforehand. The current data year would be handled as “provisional” and only used for internal RCG use and selected ICES WGs. This approach has the benefit of giving MS more time to verify the report contents but is less useful to ICES expert groups because they will typically be interested in the data from year-1, not year-2 (Figure 5.2.1.2).

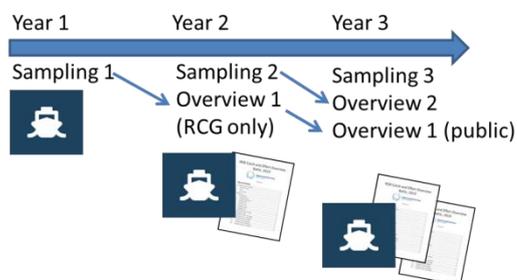


Figure 5.2.1.2 Suggestion 2 of making RCB Catch and effort overviews available

Additionally, to the data year (i.e. making too detailed data available too soon in the running year), concerns were raised to add the overviews as an annex to the RCG report, as those are publicly available on the DCF website. A final permission of the NCs is needed for that.

5.2.1.2. RDB Sampling overview

The RDB sampling overview was presented as a first draft version. The large amount of variables and possible aggregation levels makes the sampling data quite unhandy for a stand-alone document. The ISSG developed a shiny R, which provides a user interface and allows for a variety of aggregations and interactive maps/graphs. The subgroup and RCG member are asked to review and feedback the shiny R.

The group supports the development of a similar (aggregated and ICES data policy approved) overview document as for the catch and effort data, which in turn can be forwarded to respective ICES groups. For the immediate use in relation with the RCG work and possibly ICES benchmarks, the subgroup supports the shiny R and agrees to develop this further in the upcoming ISSG 2020-2021. ICES suggest to get the feedback of stock assessors to determine possible useful graphs and overviews, e.g. for benchmarks. Other ISSG are asked to feedback as well.

The subgroup suggests adding the used conversion script for the CA/SL files on GitHub so that MS and national data submitter can check their own RDB data. The conversion script adds several fields, e.g. the region or the métier to the sampling tables.

The Shiny R must not be a stand-alone document nor should it be public at this point. The ISSG will provide an example data set for testing, if non-RCG approved end-user want to test the shiny R and feedback to the group.

5.2.1.3. Upload logs

The subgroup discussed if the upload-logs (which contain information on RDB data submission and submission failures/problems) could be a part of the standardized RDB overviews. However, this requires all MS to fill out these logs and submit them before the RDB deadline. Additionally, the Upload-logs will need a strict standardization so that the answers of the MS are machine readable. Manual text could still be added as an overview table at the beginning of the documents.

The subgroup needs to determine if upload logs can be made public; Concerns were raised some MS might not answer completely or fully if they are public, minor submission failures might not be reported. WGCATCH also works with similar upload logs and might be able to provide help in finding a streamlined, common format for the logs. The Data Quality ISSG will start to develop a machine readable RDBES upload log format and will consult with the Catch and Effort Overview ISSG, and WGCATCH.

5.2.1.4. Multiannual overviews

The subgroup agrees that multiple years of RDB data need to be available and directly comparable. It was decided to add the variable "year" to the shiny R and allow for the upload of multiple years. As the size of the data files is increasing each year, this might however cause problems in the calculation time (esp. if run on a personal computer). This is supposed to be one of the ToR for the upcoming ISSG working cycle.

5.2.1.5. Data policy and publication

The aggregation of the RDB catch and effort overviews has to follow the ICES RDB/RDBES Data Policy⁶ if it was to be published so the subgroup checked this. The rules within the policy on data aggregation for publicly available plots were analysed and 2 rules related to the catch and effort data were identified: Rule 1 defines a high level of aggregation at which data can always be published, whilst Rule 2 defines a lower level of aggregation at which data can be published subject to some restrictions (in particular that

⁶ https://www.ices.dk/data/Documents/Data_Policy_RDB.pdf

multiple different aggregations by different variables cannot be published in the same report). Most of the general overviews in the first chapter are following Rule 1 in terms of aggregation (i.e. they can be published or distributed without further restrictions). Many graphs of the later chapters are not in compliance with Rule 2 because although each plot complies with the aggregation rule when considered alone the combination of multiple different aggregations is not allowed in the same document. This means that the reports cannot be made publicly available without prior approval of the relevant NCs. Since graphs are likely not to change much between years (as the RDB catch and effort overviews are in a final stage), a systematic approach seems feasible, where e.g. NCs only need to review new developed graphs or if the end-user is changing/added.

Some variables used in the plots are yet not covered by the ICES RDB/RDBES data policy rules on aggregation – these variables should be added to the policy. The group will make a recommendation to the SCRDB - any changes to the policy will then require approval from NCs (Annex 4).

5.2.1.6. Other business

The stock variable of the RDB is using the old format/version and is missing some of the newer stocks. ICES will update the stock variable to the new version in context with the RDBES before the RCG in 2021.

Single sampling inventories, graphs and maps have been requested by other ISSG, assessment WGs, WGBIOP and WGCATCH. These pre-approved ICES WGs usually have access to aggregated RDB data already, so the subgroup has no objections to provide these but needs to decide on a standardized way of requesting and citing those. If more ICES groups start requesting data, RCGs chairs and NCs need to agree on a formalized request mechanism. The subgroup suggested a citation method to the RCG which needs refinement, but was largely accepted (Annex 5)

The Disclaimer needs additional information to recognize that MS might not provide complete data (e.g. census data where effort could not be calculated), which in turn will not be shown in the overviews.

Workplan for 2020 – 2021

After receiving the feedback from RCGs, the subgroup aims to continue to improve the existing scripts, extending them to the remainder of the documents and new analytics. Collaboration will also be established with WGBIOP whereby feedback will be obtained with regards to the sampling inventories and overviews.

It is also intended to further develop the Shiny app and include fisheries data (CL and CE) as well as stock overviews (e.g. age-length overviews, distribution, weight-length per area, etc.) as new elements. The markdown for the RDB catch and effort overviews could be integrated into the shiny R and thus allow more flexibility to the end users and make the data gathering more easily accessible. A smaller script for the RDB catch and effort overview is planned for national data submitter to enable pre-upload testing of datasets.

The subgroup will continue their work on a regular basis throughout the year to improve their achievements and give feedback to the RCG-chairs in regular intervals.

Suggested ToR for the upcoming ISSG work 2020-2021:

1. RDB catch and effort overviews:
 - Incorporate feedback of RCG 2020: Add an introduction on data source, how to read the data, etc. (commented documents on intersessional subgroup)

- Develop a markdown/package/small github for national data submitter to enable them to check their own RDB data files before upload. This could be a smaller version of the overview documents or a simple check list.
 - Include the CE/CL data in the shiny R. Consider first draft version of joining census and sampling data (e.g. effort/catch per rectangle/landing location vs. number of samples.)
2. Shiny App:
- Add more functions, graphs and tables to examine RDB data. This should be in consultation with other ISSG and people involved in benchmarks.
 - Add useful download functions.
 - Interactive maps: Add additional information to the data points when clicking on a statistical rectangle (e.g. number of samples, country, etc.), maybe in a graph?
 - Keeping in mind the upcoming RDBES format, requires some re-coding and adjustment to the new output files.
3. Multiannual overviews:
- -Add variable Year as option (facet) in the shiny R, restrict the number of years if file size is too large to be handled by the uploader.

Proposals for Recommendation and Decisions

NANSEA BALTIC_2020_D01: NCs to approve usage of catch and effort overviews for RCG and approved ICES WGs

NANSEA BALTIC_2020_R02: WGRDBESGOV to adjust and update data policy

NANSEA BALTIC_2020_R03: WGRDBESGOV to implement upload-logs into RDBES

5.2.2 Feedback from the ISSG on "Metier issues"

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

The ISSG has had an operational focus on development and testing of:

- Métier list
- Reference lists on species and area codes
- Development of R script implementing the agreed best practices

Outcomes of the ISSG on Métier issues 2020

- Métier list with suggested standardized and harmonized codes (especially on mesh-size ranges). Reference to old codes uploaded to the RDB (2009-2017 data). The new suggested métier codes are based on what has been previously used for a gear group in a region, and where there were overlapping métier mesh sizes ranges, they have been split up into smaller mesh size ranges. The new codes doesn't necessarily follow the legislation. Some new mesh size ranges were suggested.
- Reference list on area grouped to regions. Following RCG codes are proposed to be used: BALT, LDF, MBS, NATl, NSEA. The Long-distance (LDF) and Mediterranean (MBS) have been added.

- Reference list on species codes grouped to target species assemblage groups. Comparisons with the species list from R Data package, Fish Pi list, RCM NS 2017 list and DWS regulation 2336/2016 or LPF report 2016. The comparison of 1059 species codes show there are differences in 78.
- Development of R script for assigning métier codes to transversal data, implementing the best practices agreed on and an additional module that analyse vessel patterns. An R-script was developed and tested in 2019 for assigning métiers in the Baltic Sea, which has been further developed in 2020 to cover more areas and details. The function to assign the métier codes (getMetier) has three steps:
 - 1. step with selection device
 - 2. step without selection device
 - 3. assign >0 mesh size ranges to metier if no mesh size or abnormal mesh size (e.g. <16 for fixed gear in Baltic) is available for the fishing sequence considered
- Reference lists and scripts available on GitHub. The lists and scripts are available on GitHub (<https://github.com/ices-eg/RCGs/tree/master/Metiers>).

ISSG suggested selection panel code numbers are in table 5.2.2.1.

Table 5.2.2.1 Suggested selection panel code numbers

Code	Description
0	No selection device
1	Selection panel
2	Grid
3	T90
4	There is both selection device and escape window. There could be several mesh sizes. Specify the smallest mesh size.

In some cases there are gears with both selection panels and exit windows. The group agreed that the smallest mesh size of the selection window should be entered into the selection panel mesh size, but the selection panel code number can indicate that there are exit windows with different mesh sizes.

Workplan for 2020 – 2021

1. Compare the proposed metier list with EU-MAP (level 5). (To be done before 2020 Decision meeting)
2. Reformatting the new metier list to get easier reference with old metier codes. (To be done before 2020 Decision meeting)
3. Following and assisting on implementation of the new métier codes and script with open Skype meetings for MS and mail list informing about updates on reference lists and script on GitHub.
4. Write a manual for use of the script and code lists and document the script with a flow chart.
5. Update metier code list, clarify connection between old and suggested metiers, provide reference lists if needed.
6. Crosscheck EU MAP codes list with metier
7. Further development on script:
 - To assign métiers where information on e.g. gear is missing or imprecise (e.g. gear OT)
 - To improve the use of "vessel pattern" to avoid "rare" metiers and complete fishing sequences without any metier assigned in the first step of the script (e.g. gear "FPO" and dominant species group "LPF" highlighting a probable typing error for the fishing sequence considered)
 - Other development needed for implementation
8. When data are uploaded with the new métier codes to the RDB/RDBES, this year's ToR 2 will become relevant: Further develop métier descriptions based on new métier codes. These will be used both as descriptions and for quality checking.

The updated version (23.06.2020) of ISSG report can be found in this RCG report PART III. In the updated ISSG report first two tasks from workplan 2020-2021 task list for the ISSG are done.

Proposals for Recommendations and Decisions

NANSEA BALTIC_2020_D02: Codes for metiers and reference lists that shall be used by Member States

5.2.3 Feedback from the ISSG on „Data quality and confidentiality“

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

This ISSG had multi-annual tasks defined at the start of the 3-year cycle. Task 1 was completed during the first year so no update is required in this report.

5.2.3.1 Task 2) “Develop indicators to monitor overall progress (based on table 5A) on quality assurance in the region over time.”

Indicators were proposed and calculated in 2019 – these have now also been calculated for the most recently available work plans.

Method:

1. Table 5A from the work plans / annual reports of each country were collated (the originals can be downloaded from <https://datacollection.jrc.ec.europa.eu/wp-np-ar>).
2. Data quality indicators were then defined by considering the columns of the table.
3. For each row of the table these indicators were assigned a score from 1 - 4 (with 1 being worst and 4 being the best) - the scores were determined using the criteria in the table below. NAs can also be a valid value for some of these indicators.
4. Sub-group members then evaluated each row in Table 5A for each country which attends either the RCG BS, NA, or NS.
5. The mean of these indicators for different groupings (e.g. for all countries) was then calculated to produce the charts in this report. The R code to produce these reports is available at <https://github.com/davidcurrie2001/Table5ADataAnalysis>

The aim of these indicators is not to rank the performance of countries against each other but to track how each country is improving its data quality procedures. An added benefit will be to demonstrate to countries which information it is useful to provide when completing Table 5A.

The results of the evaluations are shown below. Please note that the year in the legends describes when the evaluations were performed - the work plans or annual reports being evaluated were actually submitted in the previous year.

Overall mean for all countries

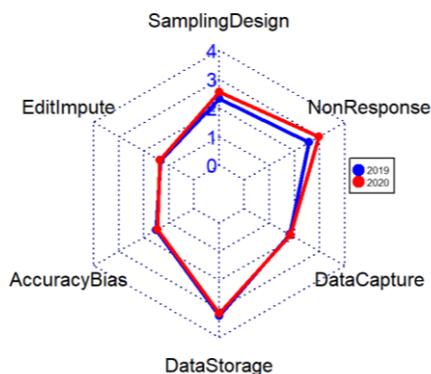


Table 5.2.3.1. Mean indicators for all countries

	Number Of Rows	Sampling Design	Non Response	Data Capture	Data Storage	Accuracy Bias	Edit Impute
2019	328	2.31	2.59	1.82	3.24	1.50	1.33
2020	361	2.55	2.97	1.83	3.16	1.45	1.37

There has been little change in the value of the overall mean indicators, apart from an increase in the NonResponse indicator. This can be seen as a vindication of the method used to assign indicators since the values have proven to be stable over 2 years despite a difference in personnel within the ISSG. There is also a disappointing aspect in that we haven't seen a significant improvement in the value of the indicators.

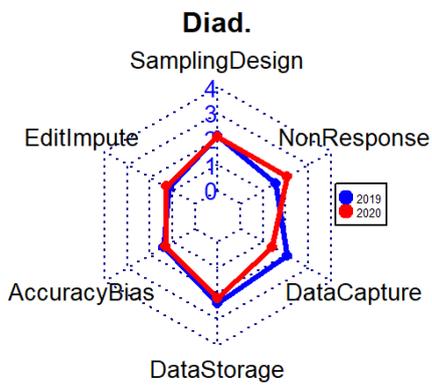
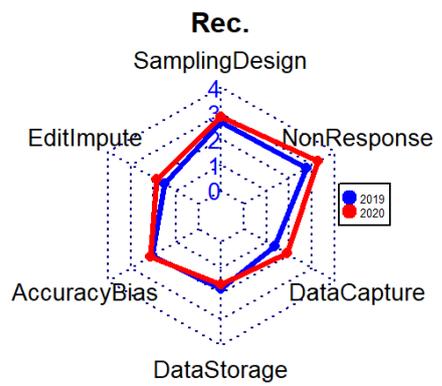
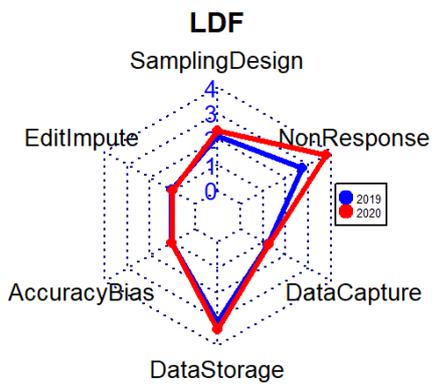
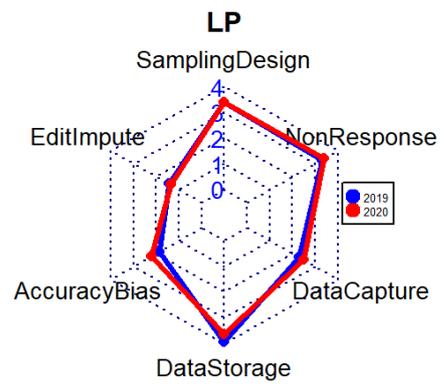
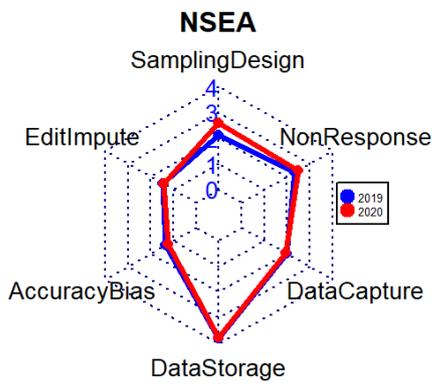
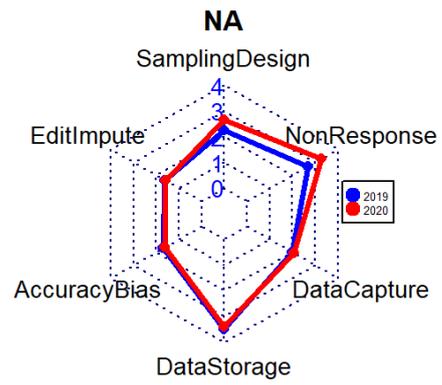
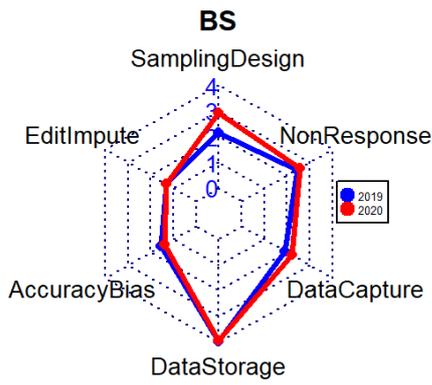
It can be seen that the weakest areas are still those around AccuracyBias, and EditImpute. We believe this reflects a general lack of clarity in the data collection community about how to approach these topics.

The relatively low value of the indicator for DataCapture continues to show that although these checks do exist they are often encoded into local data capture systems and database applications and not documented outside of these systems.

The values for SamplingDesign show that this is often documented, but i) not for all sampling schemes, and ii) when it is documented it is not always clearly following best practice in its documentation.

The relatively high values for NonResponse and DataStorage shows that the good progress made in these areas has been maintained.

The mean value of the indicators for each country and the different RCGs was also calculated – the values for each country are presented in the ISSG report (this RCG report PART III). The values per RCG are shown below – further discussion of these results is presented in the ISSG report.



Recommendations to countries when completing Table 5A

- Provide direct links to relevant documentations where possible,
- Ensure any links provided are correct and work,
- Ensure the documents referenced are reasonably recent (>2014),
- Provide the date when the documentation was written or updated,
- Provide explanations of why this is good/best practice e.g. give explicit references to any expert group reports that define the practices that are being followed,
- Double-check whether “NA” is a legitimate answer to a particular question.

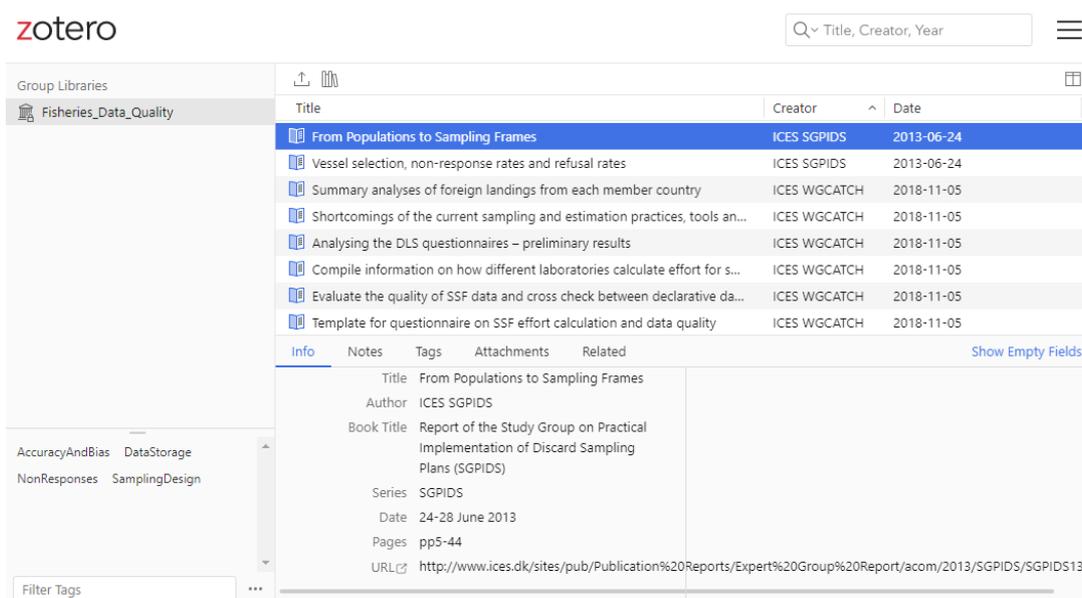
In order to check whether indicator scores were dependent on the person doing the evaluation 3 countries had a second, blind evaluation carried out. These results are shown in the ISSG report. We believe these second evaluations show that our methodology is sound and that whilst not all rows were identical the majority were. However, we should bear in mind that some differences in evaluations are possible since there is an inherent element of subjectivity in people evaluating informal information. The differences are often due to difficulties in interpreting the documentation provided in links, not in the information in table 5A itself. These difficulties apply to all evaluations, as some of the documentation is in a local language or references are to web pages with many documents, without specifically mentioning which of the documents that are relevant.

5.2.3.2 Task 3) “Collate relevant tools developed for quality control and quality assurance in data collection developed by other groups and projects (e.g. fishPi2 WP6, ICES WGCATCH, BIOPTIM) and make plans (including accessibility, storage and training) for how these can be integrated in regional work and how MS can be supported to integrate them in national work.”

This is a big task - our initial discussions and work have centred on the first part of this task i.e. collating the tools. During the initial discussions the ICES PGCCDBS repository <https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx> was shown and the thoughts of PGData around tagging these documents and making them more searchable were also discussed. It was agreed that just referring to an ICES report wouldn't be fine-grained enough to be useful – we'd need to be able to pinpoint the relevant section of a report that contained the relevant information. We also wanted to highlight whether it is a practical tool (e.g. code, scripts) or theoretical (e.g. 4S design approaches). We wanted to try and link the catalogue entries to the indicators from our Table 5A analysis.

We started the task by cataloguing recent projects and meetings that the group members had been involved in that had an element of data quality using Zotero for this (an open-source reference management software). A shared Zotero library has been created: https://www.zotero.org/groups/2449704/fishes_data_quality/items. This is publically viewable but only members of this ISSG have read-write access to it. Once the library is populated it can also be downloaded in common formats (e.g. BibTEX, csv etc.) as well as viewed on-line – this could be a useful feature for people writing reports and papers. The web catalogue can be also searched, or filtered using tags based on the Table 5a indicators.

During the RCG concerns were raised about the difficulty of maintaining such a repository, as a large amount of work is needed. We have examples like the [Data Quality Assurance Repository](#) created by the PGCCDBS, which is now outdated. It is proposed that the maintenance of the repository could be a task for the proposed RCG Secretariat, when it is finally settled



5.2.3.3 Task 4) “Compile uploads logs retrieved through the RCG data call and prepare feedback to MS on data anomalies.”

Upload logs were compiled and summarised in the ISSG report. Upload logs were available for Belgium, Denmark, Estonia, Finland, Germany, Ireland, Latvia, Lithuania, Netherlands, Poland, Portugal, Spain (IEO and AZTI), Sweden, UK (England/Wales, and Scotland).

It should be noted that not all countries have provided upload logs – all countries should be reminded of the need to submit RDB Upload Logs, even if the logs just state that all data was uploaded successfully.

5.2.3.4 Task 5) Discuss data checks for the new RDBES.

No work done on this task during the period under review.

Workplan for 2020 – 2021

Tasks in 2020-2021	Sub-tasks in 2020-21	When
Task 2) Develop indicators to monitor overall progress (based on table 5A) on quality assurance in the region over time.	Re-evaluate Table 5A indicators. Decide whether to perform a full evaluation every year.	Q1 / Q2 2021
	Create sampling design document template for Regional and National Workplans	Q3 2020
	Look at creating templates/guidance for the other table 5A questions for Regional and National Workplans	Q3 / Q4 2020
Task 3) Collate relevant tools developed for quality control and quality assurance in data collection developed by other groups and projects (e.g. fishPi2 WP6, ICES WGCATCH, BIOPTIM) and make plans (including accessibility, storage and training) for how these can be integrated in regional work	Continue to catalogue software tools (not reports)	Q3 / Q4 2020

and how MS can be supported to integrate them in national work.		
Task 4) Compile uploads logs retrieved through the RCG data call and prepare feedback to MS on data anomalies.	Compile the current RDB upload logs and work with the Overviews group to think about a new, machine-readable upload log format	Q2 2021
Task 5) Discuss data checks for the new RDBES.	(Lower priority)	Q4 2020 +

Proposals for Recommendations and Decisions

NANSEA BALTIC_2020_R04: Advice for completing Table 5A in the national workplans

5.2.4 Feedback on ‘Data quality tools by SG, to be used by RCGs’

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

During the RCG following presentations were made linked to data quality.

WGQUALITY

The ICES Planning Group on Data Needs for Assessment and Advice (PGDATA) completed its latest 3 year cycle in 2020. There has been a large amount of activity dedicated to quality within ICES but this has not always been well integrated. To remedy this a change of name from PGDATA to the “**Governance Group on Quality Management of Data and Advice**” (**WGQuality**) is proposed

To summarise the progress made during the PGDATA:

- Attendance at the meetings was not large but of high quality (e.g. chairs of SCRDB, RCGs, STECF/Data issues, national responsible for sampling etc.)
- Last 2 years in ICES HQ with participation of data centre very profitable
- QAF structure has been developed, but remains to be implemented on the ground
- Communication with Assessment Working Groups – found a common ground but not really effectively communicated
- Lack of fisheries independent survey experts hampered progress
- Reflection on SISP and consistency of approach to be continued
- Good connection with the outside world to be continued

The draft ToRs for the next 3-year cycle of work in the new WGQUALITY are:

1. Document an operational ICES quality management system for advice that is in line with the scope and direction decided upon by ACOM. Collate existing quality management tools, resources, and processes related to advice into a single, coherent system. It must also enable ICES to use the best available science in its advice outputs.
2. Create and implement a communication plan to tell people about the quality management system and ensure there are feedback mechanisms to allow improvements to be identified.

3. Use the quality management system to evaluate current activities. Highlight and celebrate good practice. Identify gaps and create a plan to fill them e.g. propose workshops. Identify unnecessary duplication of activities and propose remedies.
4. Operationalise the quality tools and processes that were proposed during the previous 3-year cycle of PGDATA.

WGBIOP – WGS MART

The ICES Working Group on Biological Parameters (WGBIOP) met in Lisbon, Portugal, 7-10 Oct 2019. Their outcome most relevant to the RCGs was briefly presented to the RCG.

Data Quality Developments

An updated age quality (AQ) score for otolith age reading quality grading was included in the ICES vocabulary (<https://vocab.ices.dk/?ref=1395>), to be used across national labs. Regarding the ICES Stock Information Database (SID, <http://stockdatabase.ices.dk/Default.aspx>), WGBIOP suggested a format to include age and maturity information. The original suggestion to work with the RCG ISSG on End-User Needs (2019) on this was not followed up on; this will be done in the coming months.

In 2020, WGBIOP will discuss with the ICES Data Centre on how to incorporate the age and maturity data in SID. WGBIOP continues to work on how to best utilise the RDB annual inventory reports. Lastly, WGBIOP would like to be kept informed of results from RCG work on (biological) data quality.

SmartDots development – WGS MART

The maturity module of SmartDots (web interface and reporting) will be tested in 2020 with a flatfish exchange. There is a continuous loop of feedback and improvements based on end-user input (two new software updates released since RCG meetings 2019). ICES vocabs used in SmartDots, DATRAS and the RDBES (in future?) will be streamlined. There were several improvements to the age calibration analysis R scripts (reporting module). WGBIOP will investigate the preparation of a dashboard to integrate RDB and SmartDots output.

There was a communication with the ICES “Working Group on Machine Learning in Marine Science” (WGMLEARN) on future use of SmartDots as a testing platform for ML algorithms for age reading. As all this is a large workload for a small group of people, support is needed (to be discussed at the next National Correspondents meeting).

Stomach sampling

Last year, the ICES “Workshop on Better Coordinated Stomach Sampling” (WKBECOSS), proposed by WGBIOP, was taking place in Santander, Spain, 3-6 Sep 2019. For 2020, the “Workshop on Operational Implementation of Stomach Sampling” (WKOISS) was planned to take place in Cagliari, Italy, 25-29 May 2020. Due to the Covid-19 measures, it was postponed to early 2021.

Age calibration

There were two age calibration events relevant to the RCGs (under guidance of WGBIOP):

- a) Baltic and Atlantic Salmon Scale Exchange: in progress, will be carried out on SmartDots; results to be ready for the proposed Baltic Salmon benchmark.

b) “3rd Workshop on Age Reading of European and American Eel” (WKAREA3) (Bordeaux, France, 17-18 June 2019).

This was a collaboration with the INTERREG SUDOANG project, carried out in SmartDots. The report is not yet available.

Workplan for 2020 – 2021

Not applicable

Proposals for Recommendations and Decisions

Not applicable

5.2.5 Feedback from the ‘SCRDB’

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

December 2019 was the second meeting with the new unified group structure. The full report can be found at <http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/EOSG/2020/SCRDB%20Report%202019.pdf> the key points from the meeting were:

- The roadmap for RDBES development was revised
 - ICES “2+2 years” funding for technical development confirmed
 - A fully operational RDBES such that statistical estimates for stock assessment can be produced from detailed sample data in a transparent manner by 2022
 - Incorporate detailed data on Bycatch and PETS data AND/OR Recreational data (to be determined by SCRDB) in the RDBES by 2023.
- Whilst the focus remains on detailed commercial fisheries data the potential inclusion of different types of fisheries data in the RDBES was discussed:
 - Long distance fisheries
 - Large pelagic
 - Diadromous
 - Recreational
- The RDBES Data Policy was discussed and some changes recommended.
 - Explicitly allow RCGs to pre-approve access to detailed data for list of ICES EGs
- Use of RDB data
 - In 2019 the largest number of groups have requested data from the RDB
 - WGCATCH, WGBYC, RCG Subgroup, HAWG, WGMIXFISH-METH, WGCSE ICES Spec Req Seabass data bss47, EC Cristina Ribeiro, ICES Spec Req Eastern Baltic Cod, WGSCALLOP
- RCG RDB Effort and Landings Overviews
 - SCRDB sub-group to check whether they follow RDB Data Policy
- RDB/RDBES Data confidentiality agreement has been drafted
- Recommend change name of group to align with ICES guidelines - the RDB/RDBES governance group **WGRDBESGOV**

Workplan for 2020 – 2021

Date	Name	Chairs/responsible
31st January 2020	Publish draft RDBES Data Call	Henrik Kjems-Nielsen
2nd - 5th June 2020	WKRDB-POP2: Second workshop on populating the RDBES Data Model	David Currie and Edvin Fuglebakk
31st July 2020	Release RDBES Test Data Call	Henrik Kjems-Nielsen
14th - 18th September 2020	WKRDB-EST2: Second workshop on design based estimation using the RDBES data model	Nuno Prista and Kirsten Birch Håkansson
30th September 2020	RDBES Test Data Call Deadline	Henrik Kjems-Nielsen
16th - 20th November 2020	WKRDB-RAISE&TAF: Workshop on translating current national estimation methods to the RDBES/TAF	Laurent Dubroca and TBC
1st - 3rd December 2020	SCRDB Meeting	David Currie and Katja Ringdahl

Proposals for Recommendations and Decisions

NANSEA BALTIC_2020_D03: Approve changes to the RDB/RDBES Data Policy

NANSEA BALTIC_2020_D04: Approve the "Conditions for detailed RDBES data use" document

5.2.6 Feedback form the ‘RDBES Core group + use of data by the sub-groups’

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

There are many needs for developing the RDBES, in the table 5.2.6.1 some important needs are shown.

Table 5.2.6.1 Needs for developing the RDBES.

Functionality	RDBES	RDB
Support statistical sound sampling schemes (4S)	Yes	No
Store statistically collected sample data with statistical information	Yes	No
Store collected data the way it was collected, which support some conclusions	Yes	No
Statistical estimations can be made from the data stored including uncertainties	Yes	No
Support regional sampling	Yes	No
Storing regional sampling data from different countries under the same sampling scheme	Yes	No
Fully support landing obligations categories	Yes	No

The data model for the Regional DataBase and Estimation System, RDBES, have been further specified by the Core group, who have done a great job. The tables for commercial landing and commercial effort have been specified. It was found during WKPOP Feb. 2019 that more than the 9 existing hierarchies (ways to do sampling) was needed. Therefore work have been done to specify the needed hierarchies, currently there are 13 hierarchies, which should cover all countries sampling of all commercial species. The complexity of the RDBES is therefore increased. These changes in both the data model and hierarchies is time consuming for the ICES RDBES development, because new fields, codes and hierarchies have to be added and existing source code have to be updated. Therefore it takes longer time to develop the system. There has been a dialog with WGBYC to include relevant data. The specifications and changes of the data model was stopped in May 2020. ICES Secretariat have managed to developed the RDBES in parallel with the specifications, so it possible to upload data for all 13 hierarchies.

Overview of the hierarchies and their table 5.2.6.2.

Table 5.2.6.2 Overview of RDBES hierarchies

Hierarchy 1	Hierarchy 2	Hierarchy 3	Hierarchy 4	Hierarchy 5	Hierarchy 6	Hierarchy 7	Hierarchy 8	Hierarchy 9	Hierarchy 10	Hierarchy 11	Hierarchy 12	Hierarchy 13
Design	Design	Design	Design	Design	Design	Design	Design	Design	Design	Design	Design	Design
Sampling Details	Sampling details	Sampling details	Sampling details	Sampling details	Sampling details	Sampling details	Sampling details					
Vessel Selection	Fishing Trip	Temporal Event	On-shore	On-shore	On-shore	On-shore	Temporal Event	Landing location	Vessel Selection	Location	Location	Fishing Operation
Fishing Trip	Fishing Operation	Vessel Selection	Fishing Trip	Landing Event	Fishing Trip	Landing Event (*)	Vessel Selection	Temporal event	Temporal Event	Temporal Event	Temporal Event	Species Selection
Fishing Operation	Species Selection	Fishing Trip	Landing Event	Species Selection	Fishing Operation (a)	Species Selection	Landing Event	Species selection	Fishing Trip	Fishing Trip	Landing Event	Sample
Species Selection	Sample	Fishing Operation	Species Selection	Sample	Species Selection	Sample	Species selection	Landing Event	Fishing Operation	Landing Event	Species Selection	
Sample		Species Selection	Sample		Sample		Sample	Sample	Species Selection	Species Selection	Sample	
		Sample							Sample	Sample		

(*) LE is not a part of the estimation hierarchy

(a) only FOaggregationLevel ==T

5.2.6.1 First test data call for the RDBES

The 27th May ICES Secretariat send out the first data call for testing the RDBES for 11 stocks, with a deadline the 30th September 2020. Because of the very limited development resources and the tight deadlines the focus has been to be able to upload and download data, the RDBES is not finished system and the development will continue.

5.2.6.2 Information regarding the RDBES

To access the RDBES:

- <https://sboxrdbes.ices.dk>

Information on the data mode/format and documentation:

- <https://github.com/ices-tools-dev/RDBES>

Code lists (search 'RS_'):

- <https://vocab.ices.dk/>

Issues regarding getting data into the right hierarchy etc.

- <https://github.com/ices-tools-dev/RDBES/issues>

Technical issues problems uploading files or missing codes etc.

- RDBsupport@ices.dk

5.2.6.3 Recreational fisheries

Recreational fisheries (WGRFS) would like to include their data in the RDBES. Since they in this first phase would like to include aggregated data, and that is outside the scope of the RDBES, where there are only detailed data. That means new tables and import formats would have to be developed. Therefore an estimate of the cost of including the requested data into the RDBES have been given to the recreational fisheries.

5.2.6.4 RCG Long Distance Fisheries

RCG LDF need a solution regarding area for this year in the RDB, because some catches are given by country and not by specific area. It was suggested to the RCG LDF to use the 'Subpolygon' area for Commercial Landing, CL, and Commercial Effort, CE. The RCG LDF created a list of relevant countries with areas.

For the RDBES a new field called 'Jurisdiction area' is added in the; Fishing operation, Landing event and Sample table.

Workplan for 2020 – 2021

The focus will be on making the RDBES work optimal and correct bugs during the test data call. Later specifications and development of more refined exports, extended security and the possibility to view data are needed and will developed during 2020-21.

Proposals for Recommendations and Decisions

Not applicable.

5.2.7 Feedback on 'New data sources and technology'

Progress during RCG NA NS&EA 2020 and RCG Baltic 2020

To expand fisheries-dependent data collection and accessibility, and improving data quality and validity, more and more there is looked at new data sources such as electronic monitoring (EM), artificial intelligence (AI), genetics, etc.

Electronic monitoring (cameras, gear sensors, GPS), electronic reporting, and other electronic technology, together with advancements in computer vision and machine learning, will provide innovative and integrated data collection to address increasing scientific and management information needs. As technology advances, it is important to review what is available, share lessons learned, and be sure that data collection uses electronic technologies and new data sources, that fit their data collection needs.

As these tools are developed in different institutes, but could be interesting for others, presentations of the following topics were given:

- Ray scan project – Belgium – contact justin.defever@ilvo.vlaanderen.be
- VISIM 1&2 – Belgium - contact justin.defever@ilvo.vlaanderen.be

- Major outcome from the WK FishGenome – contact christoph.stransky@thuenen.de

FishGenome project

The FishGenome project, “Fisheries research surveys and stock assessments using HTS genetic sequencing methods. State of the art, foreseen advantages and barriers for practical implementation”, is developed under the service contract EASME/EMFF/2017/1.3.2.10/ SI2.790889.

It is being carried out by a consortium made up of five organisations, namely the Spanish Council for Scientific Research (IIM-CSIC and ICM-CSIC), CETMAR Foundation, the Spanish Institute of Oceanography (IEO), Thünen Institute and the University of Balearic Islands (UiB), with the collaboration of the University of Santiago (USC) de Compostela and the involvement of an External Expert Panel that includes four world-class experts in the addressed issues.

FishGenome aims to evaluate the suitability of several novel high throughput sequencing (HTS) genomic techniques to estimate essential parameters for fisheries stock assessments, including absolute abundance, biomass and age (the latter using epigenetic biomarkers) among other important parameters - stock boundaries and connectivity, fine-scale population structure, or molecular sexing - which could improve the cost-efficiency of fisheries research surveys (at sea) and fish stocks assessments.

In this context, a number of experts were invited to participate in a virtual workshop organised on 28 May 2020 to: a) Share the conclusions of the state-of-the-art analysis and cover eventual knowledge/references gaps identified with the help of the participants; b) Take advantage of the exchange with a community of experts to identify and discuss around barriers and advantages for the implementation of the HTS techniques in the stock assessments in the future.

Documents containing a project briefing and state-of-the-art reviews of the various techniques were provided on the RCG SharePoint.

Workplan for 2020 – 2021

It was agreed and decided by the RCG NA NS&EA and RCG Baltic 2020 to have this topic on ‘Technological developments’ as a fix topic on the agenda of the Technical RCG Meeting and to have presentations and information of the ongoing research in the different institutes.

Proposals for Recommendations and Decisions

Not applicable.

5.3 ToR 3 Review impact on management measures on data collection

The RCG NANS & EA 2019 and RCG Baltic 2019 suggested the Pan-Regional Subgroup on the Landing obligation to be temporally suspended, and to convene in few years' time with the following ToRs:

- Evaluate the implication of the landing obligation on national and regional catch sampling programmes [redesigned questionnaire]
- Overview of methodologies in the estimation of refusal rates

The following existing ToR is taken up by the subgroup overview of fisheries:

- Review and analyse 2019 BMS and logbook registered discards to include CS and CL data in the RDB

5.4 ToR 4 Development and implementation of Regional Workplans

During this year's meeting, progress was made under ToR 4 as follows:

- Feedback from the ISSG & SG 'Surveys' and Restructuring WGs survey'
- Feedback from the ISSG 'Development of Draft RWG'
- Feedback from ISSG 'Optimized and Operational Regional Sampling Plans'
- Feedback from ISSG 'Case study of fisheries for small pelagics in the Baltic'
- Feedback from ISSG 'Evaluation of the data collected for the SSF at EU level'
- Feedback from ISSG 'Case study freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic'
- Feedback from ISSG 'Identification of case studies for PETS bycatch monitoring'
- Feedback from ISSG 'Towards a regional sampling plan - Case Study of the trawl fishery in Iberian Waters'
- Feedback from ISSG 'Diadromous Fishes'
- Feedback from ISSG/SG 'Regionally coordinated stomach sampling'

5.4.1 Feedback from the ISSG & SG 'Surveys' and Restructuring WGs survey'

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

Reflection on ICES WKREO 2019 outcomes

Multiple initiatives (e.g. EU project JMP and ICES WKPIMP, WGISUR, WKNSIMP...) have considered options for developing more holistic and integrated ecosystem surveys, developing guidance and recommendations on both scientific theory and practical implementation. However, largely due to a lack of a coherent international organisational mechanism, only a small portion of this work has found its way to routine survey implementation.

The WKREO (Workshop on Realigning of the Ecosystem Observation Steering Group) held in October 2019 considered specifically the organisational barriers to developing ecosystem surveys in the northeast Atlantic and developed a regionally focused plan for action. The conclusions were that the Ecosystem Observation Steering Group (EOSG) would need to restructure to better align with the regional ecosystem and fisheries advisory group and perform regional evaluation across monitoring programs to be better placed to feedback needs and options for improvement to national data collectors. For EU Member States, this implies that the RCGs play a pivotal role in ensuring that such information translates into appropriate implementation. After a presentation of the main outcomes of WKREO, the RCG Baltic and RCG NA NS&EA discussed ways forward. In the suggestion from WKREO, "Fisheries Independent Regional Monitoring Groups" (FIRMOGs) perform the important monitoring program evaluation function, providing conclusions and recommendations on best solutions for data collection serving end-user needs in a region. To make such groups (FIRMOGs) functional requires a broad range of expertise and interests as well as active collaboration between participants from end-user groups (ecosystem and assessment working groups) and data collection (survey implementation), as well as applied statistical expertise to cover sampling design and analysis.

After discussing different ideas on how to move forward, the RCG Baltic and RCG NA NS&EA would support ICES to setup a Workshop on a "pilot FIRMOG" in 2021 to focus as a test case on proposed changes for the International Bottom Trawl Survey (IBTS), using the analyses already been conducted on the IBTS

(WGISDAA, WKNSIMP...) and prepare a suggestion for changes that can be brought into the RCG for decisions. The content and aim of the workshop need to be elaborated further within the ICES system.

As part of the role of FIRMOGs in realigning observations through surveys, the RCG subgroup on surveys foresees a vital role for FIRMOGs to strive to reduce the number of test animals used during surveys as well as to optimise the use of vessels to reduce the environmental footprint of surveys. The subgroup suggests to include these cross-cutting themes as additional requirements when and where applicable when it comes to optimisation of surveys to become more multi-disciplinary.

RCG scope and mandate

The main role for the RCGs relates to the comprehensive aspects of data collection, its coordination, quality and regional coverage. This role mainly focusses on fisheries dependent data collection in all its aspects, while its role regarding fisheries independent data collection is relative limited and mainly concerns budgetary aspects. This separation is logical as planning and coordination of the surveys is carried out by dedicated specialist groups under other umbrellas like ICES.

Given the expectation that survey designs, planning and task-sharing might change in the foreseeable future, RCGs are expected to play a more substantial role in the decision making process when it comes to budget and/or national implications. The scope of the RCG will continue to focus on the budgetary aspects and national obligations in relation to proposed changes to a survey. It may be needed to rubberstamp and approve the current survey effort by MS to act as a baseline to measure and evaluate future modifications against. RCG mandates are described in the respective RoPs and these cover survey subjects as well.

Should ICES move towards regionalisation and further integration of regional aspects in survey design and planning, e.g. through the proposed FIRMOGs, RCGs can play a role in linking DCF, regional and national obligations to end-user needs and national capacities (vessels, budget, staffing etc.)

COVID-19 Impact on surveys in 2020

During the DCF National Correspondents meeting at 6 May 2020, the Commission presented a snap-shot overview of the impact of Covid-19 measures on surveys. This snap-shot was based on the response from MS to a DG MARE questionnaire, representing the situation in (mid-)April. As several MS struggled to complete surveys or anticipated issues with upcoming surveys, it was suggested that the RCGs might serve as a platform to exchange vessel capacity and or other options to reduce future loss of fisheries-independent data.

The ISSG discussed the options and role of the RCGs in this context. The overview of the impact on surveys made by DG MARE was considered useful, both for the RCGs as well as for future reference for end-users as it provides a good documentation of the survey execution by MS. This overview is date-stamped and can be updated in the upcoming months. The ISSG doesn't see added value to have this overview available as a „live“-document, as this would require maintenance, access rights etc. while reducing the use for documentation and still not being suitable for planning.

Regarding survey coordination, given the well-established planning groups for surveys, the ISSG doesn't deem it necessary to draw up a secondary network to solve potential survey coverage issues. Based on earlier specific survey issues, e.g. severe technical problems with vessels, the current chain of communication is considered to be sufficient to explore and conclude on solutions. In case a MS experiences issues for a specific survey, the relevant survey planning group is contacted. The planning group will explore potential solutions, and once budgetary and national implications are clear, the issue elevates to the persons responsible for budget and national obligations. When needed, the NCs will be involved to discuss the implications and to agree on binding solutions.

A new set-up would complicate this already existing route. It would, at a minimum, require pre-defined procedures to cope with any request, full and accurate insight in vessel planning, vessel capacities and mandates to take decisions. Moreover, in many cases, research vessels are operated by other parties than the institutes or Ministries, thus ruling out the option to take concrete solutions at the spot as these operators need to be informed and they need to approve any changes to, e.g. the vessel's schedule.

Reduced or even cancelled surveys might have an impact on future stock assessments and subsequently on (quality of) the advice following the assessment. Quantifying the effect of reduced survey effort requires specialist knowledge of the impacted assessments and the use of the survey data for this specific assessment. The ISSG was informed on various end-user initiatives to study the (potential) impact of reduced survey effort on the assessment. Other than providing insight in the effected surveys, the ISSG concluded that there is no need, nor expertise, to try to quantify the impact at this stage, while still seeing surveys impacted by COVID measures. End-users are considered more than capable to set up procedures and to study the impact in a more detailed manner.

Survey tables for the Regional Workplan (RWP)

Currently, the National Workplans contain two tables (1G and 1H) describing the planned, national survey activities as well as common aspects of the coordinated surveys. Based on the DCF, mandatory surveys are (regionally) coordinated by default as this is one of the prerequisites for MS to adhere to when drawing up their planning regarding surveys. Following this, surveys form a logical aspect of the future Regional Workplan.

While various options exist to replace the current tables, e.g. a separate database for planning and reporting surveys, the subgroup concluded that the tables for the Regional Workplan should be straightforward and easy to compile. In the midterm, and once the RWP procedures are settled, more advanced methods can be considered as a database may have added value in automated reporting of survey performance and mapping of surveys.

The STECF EWG 19-12 (STECF 2019) proposed a simplified version of the current Table 1G, while suggesting to remove the current Table 1H from the Workplan. STECF Plenary endorsed this proposal. The ISSG on survey also considers the proposal to be appropriate and sufficient for planning and subsequent reporting afterwards. The ISSG, therefore, concluded to propose this format for inclusion in the RWP.

Multilateral agreements on cost-sharing

Since the 2017 implementation of the DCF recast, the participation by MS to surveys based on TAC shares has become mandatory. Currently, only two surveys are subject to cost-sharing; the International Ecosystem Survey in the Nordic Seas and the International Blue Whiting survey.

As stated in, e.g. RCG NA NS&EA 2019, the discussion on participation mainly revolves around sharing of vessel costs in various forms and the implementation of cost-sharing is a multidisciplinary and time-consuming exercise. This exercise requires thorough consideration and commitment of the MS involved in a survey or presently not involved in the survey but holding a share of the TAC. Pending the inclusion of target species for surveys in future updates of the so-called Table 10 of the EU-MAP (ref. STECF EWG 19-05), and again acknowledging the need to continue the current well-established cost-sharing agreements for these two surveys, the RCG proposes an update and renewal of these two agreements for cost-sharing. Both surveys fall under the remit of this RCG.

International Ecosystem Survey in the Nordic Seas

The EU part of the International Ecosystem Survey in the Nordic Seas is carried out by Denmark (more named explicitly as the Atlanto-Scandian Herring (ASH) survey). Under the 2020 agreement, Denmark,

Germany, Ireland, Sweden, The Netherlands and the United Kingdom contribute to the survey as carried out by Denmark. It is anticipated that the current group of countries will continue to contribute to the survey. However, given current developments regarding Brexit, the participation of the UK in future is currently unknown and needs further consideration.

While accepting that several solutions might be possible, the financial implications of a UK leave from this agreement, while continuing the survey at the current level and current distribution key, would be as follows based on 2019 data:

Table 5.4.1.1 Financial impact of the withdrawal of UK in ASH survey

Member State	Quota (2019)	%	Cost Share MSs	Costs based on 2019	Cost Share MSs	Costs based on 2019	Impact
	(tonnes)	Share	>3%		>3%, excl UK		
Belgium	13	0.03%					
Spain	43	0.11%					
Portugal	43	0.11%					
Finland	203	0.53%					
France	566	1.48%					
Poland	664	1.73%					
Germany	2299	6.00%	6.25%	€ 47,822	8.10%	€ 61,960	€ 14,138
Ireland	3399	8.87%	9.24%	€ 70,704	11.97%	€ 91,606	€ 20,902
The Netherlands	4698	12.26%	12.77%	€ 97,724	16.55%	€ 126,615	€ 28,890
Sweden	4865	12.70%	13.23%	€ 101,198	17.14%	€ 131,116	€ 29,917
United Kingdom	8393	21.91%	22.82%	€ 174,585	0.00%	€ -	€ -174,585
Denmark	13129	34.27%	35.69%	€ 273,100	46.25%	€ 353,837	€ 80,737
Union	38315	100.00%	100.00%	€ 765,133	100.00%	€ 765,133	€ -

The ISSG on surveys will continue to work on this agreement and will hold (a) subgroup meeting(s) with the relevant participants before the summer break.

International Blue Whiting Survey

For the Blue Whiting survey, cost-sharing goes back as far as 2005 (RCM NEA report 2005), when agreement was reached on the cost-sharing model for this survey by Denmark, Germany, Spain, France, Ireland, Netherlands and United Kingdom. This agreement has continued ever since, despite not being acted upon by some MS involved. The EU part of the International Blue Whiting Survey has traditionally been carried out by Ireland and The Netherlands. Since 2019, Spain is contributing vessel time to the survey as well, however this is not part of the multilateral agreement. Future updates of the agreement need to account for this decision as over the last years, Ireland and The Netherlands took the burden and covered for the costs that couldn't be claimed from Spain.

For 2020-2021, an agreement was settled while containing the following clause "Substantial changes to survey design, survey participations or substantial legal and/or financial amendments automatically lead to a review of this agreement." Brexit is considered to be a substantial amendment, subsequently, the agreement needs a review.

Chapter II.7 of COMMISSION IMPLEMENTING DECISION (EU) 2019/909 stipulates that the threshold for participation to a survey is set at 3%. At the same time, the same article also allows for setting an alternative threshold for participation to a survey at regional level. The 3% threshold was debated over when

establishing the current EU-MAP as the initial threshold was set at 5%. The administrative burden is too high when applying a 3% threshold. Thus, following the RCG 2019 proposal, it was decided to raise the threshold for contribution to this survey for 2020-2021 to 5%, pending the revision of the EU-MAP.

As for the ASH, several solutions might be possible to solve potential issues resulting if the UK withdraws from this agreement. The financial impact of this withdrawal and non-inclusion of Spain would be described in table 5.4.1.2.

Table 5.4.1.2 Financial impact of the withdrawal of UK and non-inclusion of Spain in Blue Whiting survey

Member state	Quota (2019)	% share	Cost Share MS >5%	Costs based on 2019 (IE+NL Costs)	Redistributed Cost share >5%, excl UK	Costs based on 2019	Redistributed Cost share >5%, excl UK & ES	Costs based on 2019	Impact UK leave	Impact UK leave & ES not in agreement
Portugal	3,844	1.20%	0.00%	€ -	0		0		€ -	€ -
Sweden	12,057	3.77%	0.00%	€ -	0		0		€ -	€ -
Germany	18,979	5.94%	6.25%	€ 45,359.30	7.89%	€ 57,307.32	9.53%	€ 69,219.62	€ 11,948.02	€ 23,860.32
France	33,970	10.63%	11.18%	€ 81,187.39	14.13%	€ 102,572.82	17.06%	€ 123,894.33	€ 21,385.43	€ 42,706.94
Ireland	37,800	11.82%	12.44%	€ 90,340.99	15.72%	€ 114,137.55	18.99%	€ 137,862.99	€ 23,796.57	€ 47,522.00
Spain	41,383	12.94%	13.62%	€ 98,904.26	17.21%	€ 124,956.47	0.00%	€ -	€ 26,052.20	€ -98,904.26
Denmark	48,813	15.27%	16.07%	€ 116,661.77	20.30%	€ 147,391.44	24.52%	€ 178,029.26	€ 30,729.68	€ 61,367.50
The Netherlands	59,522	18.62%	19.59%	€ 142,255.99	24.75%	€ 179,727.40	29.90%	€ 217,086.80	€ 37,471.41	€ 74,830.81
United Kingdom	63,341	19.81%	20.85%	€ 151,383.30	0.00%	€ -	0.00%	€ -	€ -151,383.30	€ -151,383.30
European Union	319,709	100%	100%	€ 726,093.00	100.00%	€ 726,093.00	100.00%	€ 726,093.00	€ -	€ -

Follow-up

Based on the conditions specified above, the ISSG on surveys will continue to work on the revision of these agreements and will hold (a) subgroup meeting(s) with the relevant participants before the summer break.

The aim is to have both agreements for 2021 in place before the end of September 2020.

When the agreements cannot be settled due to the cost implications for the countries involved, the ISSG on surveys will discuss possible scenarios to reduce costs and will contact the relevant ICES planning groups as well as expert groups on survey design to reduce survey effort (=vessel costs) in a suitable manner, while maintaining acceptable data quality levels for the end-users.

Workplan for 2020 – 2021

ISSG will work intersessionally on the following topics:

- Renewal and finalisation of the multilateral agreements on cost-sharing of the two surveys: International Ecosystem Survey in the Nordic Seas (IESNS, also known as ASH under the EU-MAP) and International Blue Whiting Survey;
- Monitor COVID-19 implications on surveys from a DCF perspective and react when appropriate and requested
- Monitor the follow-up of WKREO proposals and act as focal point for RCG contact
- Review survey aspects of the renewed EU-MAP in the light of cost-sharing and set up methods to identify candidate surveys for future cost-sharing

Proposals for Recommendations and Decisions

NANSEA BALTIC_2020_D04: Renewal cost-sharing agreements for surveys

NANSEA BALTIC_2020_R05: ICES to setup a Workshop on a “pilot FIRMOG” in 2021

NANSEA BALTIC_2020_R06: Revision of the survey effort and coverage of the IBWSS

5.4.2 Feedback from ISSG "Development of Draft Regional work plan"

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

Interaction with RCG ISSGs

Prior to the RCG technical meeting 2020, a questionnaire was circulated to all ISSG chairs to gather information on the development of regionally coordinated activities within each ISSG with the potential to inform a RWP. The purpose was to capture the activities of regional coordination (sampling plan, overviews, quality indicators, data processing, planification, ...), with the following information:

- core actions under development in each ISSG;
- time frame to finalise any relevant agreements;
- dependence on other actions (RDBES, project deliverable);
- resources and action prioritisation;
- potential format/presentation of agreements/regional coordination in a RWP (which table, what kind of textbox);
- questions and issues relating to RWP, that require further discussions in the coming RCGs.

Based on the outcome of the questionnaire, the following elements of regional coordination developed by the ISSGs can be summarised as follows:

- Regional fisheries overviews: The outcome of the ISSG on regional fisheries overview can be implemented in the RWP, either to populate the respective tables (e.g. 1C, 4A, 4C) or to enable comparisons between MS performance in relation to the RWP or in relation to e.g. fishing effort or landings;
- Data quality: development of quality indicators and document templates for use in Table 5A. Table 5A could be left in the same structure, but using MS as different strata within a regional sampling programmes.
- Surveys: Cost sharing agreements on the international blue whiting acoustic survey and the acoustic survey on spring spawning herring with proposed text boxes and table structures;
- Regional sampling plans:
 - for Iberia, mirroring relevant tables in the NWP. Finalisation will depend on additional resources through the DG-MARE grant as expert time on simulation;
 - for the freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic to be documented in part of table 4a and text box 4 -> future sampling frames should be on regional level, agreement to be listed in table 7;
 - for fisheries for small pelagics in the Baltic also to be documented in table 4a and text box 4;
 - Bycatch of PETS - 5 potential cases studies identified for a Regional sampling plan (see section 5.4.7).
- Stomach sampling: a dedicated stomach sampling table in the NWP table does not exist, so the group would start directly with a RWP - The ambition is to have first agreements in June 2021.

Outcome of discussions during RCG technical meeting 2020

- Two components of the regional work plan need to be agreed: The content i.e. actual work that will be coordinated regionally among MS, be it a sampling plan for a given metier/fishery by the several MS of a given region, task-sharing of age reading between countries, etc

- And the structure i.e. the text boxes and tables used for the documentation and submission of a RWP, i.e. the way how the content is presented)."
- Even if the RWP discussions are specific to the RCGs Baltic and NA NS&EA, it is important to consider how this work can be linked to one another, i.e. through common templates and processes that are proposed by this RCG and communicated to and reviewed by the other RCGs. This ensures that the work on the RWP is aligned between the RCGs.
- There are different levels of regional coordination, it is not a simple yes or no, whether work is regionally coordinated. Instead, it can range from an agreed aging workshop or joint survey methodology to a fully developed regional sampling plan. There are also different levels of ambitions in relation to regional coordination. Some components of a work plan are and will have a much stronger national focus, while some have higher levels of regional coordination or the aim to move towards closer regional coordination. The regional work plan needs to reflect these different levels of coordination. One way to express this would be by using the scaling of regional coordination levels as developed in the ISSG for the small pelagics sampling plan in the Baltic (*see figure 5.4.4.1 in Section 5.4.4*).
- The regional work plan should have an overview that captures the level of coordination and reflects status/progress of coordination of its building blocks.
- While the ISSG RWP is reviewing the existing national work plan template and proposing the structure of the RWP, the content is primarily driven by the output of the different ISSGs. ISSG RWP is working closely with all other ISSGs to see how the output of the subgroups fit into the structure. The current status is summarised above.
- There are elements not directly related to sampling such as RDB, guidelines, coordination and agreement that reflect regional coordination. Any type of multilateral agreement or coordination can potentially be included in a RWP and the group aims to develop the RWP structure of the RWP where all these elements are accommodated. This means a full resetting of the NWP tables and additional tables/columns and text boxes when needed.
- To describe data collection for a MS, there will be two documents, a national WP and a regional WP that have both to be evaluated from the legal point of view. The process of submission, reporting and review of the RWP but also a potential regional AR requires close discussions between the RCGs and the Commission. It is important to outline and test this process. It also needs to be considered how the regional and national submissions are referred to in the legal context and how they cross reference each other.
- A RWP will have the same binding force as a NWP, so there is the need to have a learning phase and start with the elements where RCGs have or can achieve agreements across all relevant MS.
- Each RWP should refer exactly to the regions in the remit of the given RCG and refer to the regions as defined in the decision regulation (new EU-MAP).
- A pan-regional or supra-regional agreement, when developed, should be repeated in the different RWP issued from the relevant RCGs.
- It is proposed to test a RWP for 2021 as a not legally binding document to learn how to deal with this new process.
- The RWP needs to clearly document which member state is responsible for what.
- At the moment, there's no such thing as a regional annual report, all countries should report on their own for both the elements contained in their NWP and the relevant elements of the RWP.

Considerations on the development of the RWP structure with tables and text boxes:

- RWP tables and text boxes should mirror the NWP and should retain the numbering of the same sections and tables. Where there are proposals of new table structures and redundancies as part of the EUMAP revision process, these have also been considered.

- The structure of tables was reviewed during RCG in order to prepare for containing all necessary information. The tables must contain (quantitative) elements to be checked against when drafting elements of the National Annual Report linked to the RWP. Additional information (precisions and details of agreements, stepwise approach and ambition) would need to be added in the text boxes.
- All tables of a final RWP structure are included but they do not all have to have content in them. For all tables, if there are regional elements, it has content. If there are only national elements, the tables would be empty.
- In the future, when RWPs are reviewed and accepted, there might be some tables that might disappear from the national work plan and be fully replaced in a RWP.
- In the future, it is envisaged that bilateral and multilateral agreements would be absorbed into RWPs, but during the transition period, it is important not to lose the information. The group is looking at how the documents can be linked to the RWP in the relevant tables.

Detailed review of the RWP tables

As a practical exercise the ISSG RWP reviewed each table of the NWP template and identified how the regional working elements/agreements fit into the structure, starting with the tables that were already prepared last year. If there was information that couldn't be captured in the current format, then it was considered whether it needed to be linked to other or additional tables. The agile document with the [tables](#) and a [textbox](#) word document is in Google Doc for review and adjustment.

If issues in the tables could not be resolved, these were flagged and detailed for further decisions. Status of tables are highlighted to indicate where there was consensus for being part of the test RWP in 2021 (in green and optional in yellow) and where further steps were required. (Table 5.4.2.1)

Table 5.4.2.1

Table	Comments/changes	Table Status
1A	<p>List of required stocks No of MS participating and which countries. Question over using 1A to document the level of regional coordination of sampling and cases where this is not needed (i.e. in the case of national stock). - a draft column was added to show this. In the future, it is hoped that this table is filled out by automated scripts using data from e.g. the RDB(ES)</p>	Candidate for the test case 2021, with information mirroring the NWP 2020-2021
1B	<p>Planning of sampling Should include the sampling activities that are officially regionally coordinated with a link to the agreement(s). Comments can include the aging workshops, which are central to regional coordination. Question over whether to include everything that has a common methodology, or just the ones that have agreed coordinated sampling activities. Two scenarios either 1.) include all the sampling and variables and specify in the comment box if there are formal agreements or 2.) only include the sampling variables that are included in formal agreement.</p>	Needs decision on the two possible scenarios
1C	<p>Sampling intensity No need to fill in- when progressing towards 4s, should not be included as the information is already captured, Agreed to have table empty</p>	Proposed to be deleted in a RWP
1D	<p>Recreational fisheries Shared stocks but different recreational fisheries. What needs to be coordinated is the sampling protocol,</p>	Proposed to be looked at during the ICES WGRFS

	<p>There can be a regional sampling plan in the regional plan, this will allow to give an overview of the sampling present and what activities/variables can go towards it. Should be looked at by the WGRFS which meets next week.</p> <p>The regional sampling plan would be reflected in 4A, agreement on methodologies in 5a; as a starting point table 1D can list the stocks that are legally required in the region and if/when the thresholds are changed or adopted.</p>	
1E	<p>Diadromous species data collection in fresh water</p> <p>As above for 1E, a proposal was developed; will be provided to the ISSG on diadromous. Question on how to deal with the sampling on a regional scale for e.g. Eel which is a panregional species.</p>	Proposal to be looked at by ISSG Diadromous in 2020
1F	<p>Incidental by-catch</p> <p>Proposed not to populate this for the regionally coordinated pilot studies but to use 4A and 4B, where the information is captured.</p>	<p>Move to tables 4A and 4B agreed with feedback from the ISSG on by-catch</p> <p>The test case 2021 could include the BoB case study common dolphin and HP In the Baltic</p>
1G - 1H	<p>Research survey data</p> <p>The STECF EWG 19-12 (STECF 2019) proposed a simplified version of the current Table 1G, while suggesting to remove the current Table 1H from the Workplan. STECF Plenary endorsed this proposal. The ISSG on survey also considers the proposal to be appropriate and sufficient for planning and subsequent reporting afterwards.</p>	Candidate for the test case 2021.
2A	<p>Fishing activity variables</p> <p>transversal variables mostly not relevant for a RWP except when there are regionally agreed studies on data collection</p>	Proposed not to be used at first stage. If anything agreed, the elements should form part of a text-box.
3A	<p>Population segments for collection of economic and social data</p>	Proposed to be looked at in PGECON
3B	<p>Population segments for collection of economic and social data for aquaculture</p>	Proposed to be looked at in PGECON
3C	<p>Population segments for collection of economic and social data for the processing industry</p>	???
4A	<p>Sampling plan description for biological data</p> <p>To be reviewed including RSP ready to be implemented or tested with ongoing development on</p> <ul style="list-style-type: none"> ● Baltic case study? ● Freezer trawlers (table without figures, text in the textbox) ● Iberian trawlers 	Proposed to be developed in the next inter sessional period by the relevant ISSG
4B	<p>Sampling frame description for biological data</p>	Not reviewed
4C	<p>Data on the fisheries by member state</p>	Not reviewed
4D	<p>Landing locations</p>	Not reviewed
5A	<p>Quality assurance framework for biological data</p> <p>Question on how to link to national programme?</p>	Proposed to be developed further by ISSG on data quality
5B	<p>Quality assurance framework for socio-economic data</p>	Proposed to be looked at in PGECON
6A	<p>Data availability</p> <p>Potential to be part of a RWP. To be further thought</p>	Not reviewed
7A	<p>Planned regional and international coordination</p> <p>Relevant for presenting the meetings and ISSG participations</p>	Prime candidate for the test case 2021

7B	Follow-up of recommendations and agreements Relevant for presenting the RCG (ant other) recommendations in a regional context with all countries involved	Prime candidate for the test case 2021
7C	Bi- and multilateral agreements Relevant for presenting all multi-lateral agreements (table and textbox)	Prime candidate for the test case 2021

Development of DG Mare Proposal

An ISSG RWP meeting was held on June 3 2020 with the focus on the [Call for proposals MARE/2020/08](#) Strengthening regional cooperation in the area of fisheries data collection. PGECON co-chair was invited to participate to the discussion in order to initiate bridges between the biological and economic world on the concept of RWP and also on a potential participation to a proposal to the MARE call. The discussion (Annex 6 or ISSG RWP minutes) raised issues on the number of potential candidate projects (6 for annex 1 of the Call) with a large administrative burden for each project and some small RCG demanding to join a larger consortium. Some generic statement on how the project should be constructed were made as follows:

- there should be a clear and unambiguous split of the activity between the RCG/ISSG and the project by, e.g. develop the content by all relevant ISSG and the statistical support and data analysis within the project, together with the structure of the RWP.
- Proposal of reducing the project to only engineering (project contracts fully dedicated) to come in support of intersessional work by ISSG;
- The importance was emphasised of developing the first RWP in a span of one year, before June 2021 for the next submission round of work programmes starting in 2022.
- The structure of the RWP was deemed important to develop, in order to track the state of play of regionally coordinated activities and initiatives. A candidate structure was proposed and discussed during the RCG meeting (section above);
- The Baltic ISSG on RSP proposed a monitoring flowchart for regionally agreed activities, from no coordination to full joint data collection. This flowchart was appreciated by the SG, and should be integrated in the RWP structure proposal;
- PGECON, meeting at the end of the summer (September or October) will consider our work on RWP and see how their own agreements can complete the RWP for the social, economic and aquaculture sectors;

During the RCG the ISSG further elaborated on a response to the call for project, and the group proposed to send pending questions on the possibility to structure a project in a different way as proposed in the grant to the COM (see Annex 6).

In order to finalise a consortium or conclude on a lack of possibility to go further, a **GO-No GO meeting was planned for the 2nd of July 2020** (11:00-12:30 CET), with the items below on the agenda:

- presentation of where we are, what needs to be done and what's going on for a response for annex 1 and annex 2 (secretariat)
- consider the answers by COM on our questions raised (hopefully, we'll have answers by the time)
- consider a partner which would help us leading the project for administrative issues. At the moment we have one candidate, thanks to Christoph, but investigation in each institute should continue

- Count the forces available for a proposal and identify the tasks to be developed during the project (full time experts for developing what? ISSG interactions with the project? Implication/communication to all MS? Dissemination?)
 - consider each of the RCG SG work in relation to a RWP
 - invite economists who would be willing to join for developing their part probably in the form of agreed guidelines, good practises, QAF documents, etc...
- GO - NO GO decision
- if GO - Set a time line until 31 July when we have to send our proposal to COM, identify a leading team

All participants to the RCG NANS&EA and Baltic, PGECON and RCG LD and LP chairs were invited. In order to best prepare for this meeting, companies able to help on the administrative tasks were prospected in advance of the meeting.

Workplan for 2020 – 2021

In order to prepare for the submission of a formal RWP 2022 the following steps were identified and presented at the RCG technical meeting 2020:

1. Agree the set of existing agreements to put through the process (bilateral-multilateral agreements, common methodologies) and identify the low hanging fruit;
2. Test these in the work plan structure and propose adjustments where necessary (review and adjustment of work plan structure)
3. Review the output of each ISSG sub-group in relation to potential development of RWP and agree on the prioritized outputs and how they are represented in the RWP (text boxes and tables)
4. Present roadmap for the test RWP 2021 and the formal RWP 2022 to be presented in RCG 2021 (short-term to September 2020, and midterm to September 2021) with identified steps of decision making.
5. Agree on how the MARE call for project would be used to support the work and have roadmap for proposal

Good progress was made on all of the five points at the RCG technical meeting 2020. In table 5.4.2.2 is a detailed roadmap on the time period between June 2020 and October 2021 outlining the necessary steps from the development of a test RWP in 2020 to the formal submission of an agreed RWP in 2021.

Table 5.4.2.2 Roadmap on development of RWP in time period between June 2020 and October 2021.

	When	What	Who
Short term RWP Test Case 2021	RCG technical June 2020	Feedback on elements to be incorporated into RWP and structure of tables and text boxes	All ISSGs to ISSG RWP
		First proposal on RWP for test run	ISSG RWP
	Pre September 2020	Feedback from other relevant groups on tables & text boxes	ICES WGRFS, ISSG DIAD, Others?
		Complete RWP draft structure and overview of elements to be incorporated, based on RCG output	ISSG RWP
		Informal dialogue with Commission on STECF review of test case	ISSG RWP/ Com
		Circulate for NCs for information with decisions to be made	RCG chairs/NCs
	RCG Decision Sep- tember 2020	Feedback from NCs & decisions taken; endorsement of test RWP	NCs
	Pre October 31 st 2020	Finalise 1 st draft RWP structure based on feedback	ISSG RWP
		circulation to NCs	RCG chairs/NCs
	October 31 st 2020	Test Case Submission to the Commission	RCG NA NS&EA, RCG Baltic
December 2020	STECF evaluation and feedback, Lessons learned	STECF/RCG	
Me- dium term RWP 2022- 2024	Q4 2020/Q2 2021	Coordination of output from ISSGs and incorporation into RWP, informal liaison with relevant NCs when RWP impact on NWP.	ISSG RWP/relevant ISSGs
	RCG technical June 2021	Presentation of RWP with structure of tables and text boxes	All ISSGs to ISSG RWP
		Feedback from RCG and relevant ISSGs	ISSG RWP RCG
	Pre September 2021	Complete RWP draft structure and overview of elements to be incorporated, based on RCG output	ISSG RWP
		Circulate for NCs for information with decisions to be made	RCG NA NS&EA, RCG Baltic
	RCG Decision Sep- tember 2021	Endorsement of NCs and/or feedback for further changes	ISSG RWP/ Com
	Pre October 31 st 2021	Finalise RWP structure based on feedback	ISSG RWP
	October 31 st 2021	Submission of RWP to the Commission	RCG NA NS&EA, RCG Baltic

Proposals for Recommendations and Decisions

NANSEA BALTIC_2020_D06: Agree to non-binding test run and endorse elements for test run

NANSEA BALTIC_2020_R07: RCG recommends a non-binding test run to be reviewed at STECF for feedback and lessons learned on the process of RWP submission.

NANSEA BALTIC_2020_R08: RCG recommends PGECON to review NWP template tables 3a, 3b, 3c (socioeconomic data collection) and 5b (quality) for feedback on how regional and/or panregional coordination of socioeconomic data collection can be documented towards a RWP.

5.4.3 Feedback from ISSG ‘Optimized and Operational Regional Sampling Plans’

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

The ISSG addressed two topics in 2019/2020, 1) compile and review the output of FishPi 1&2, STREAM, RECOLAPE, WKBIOPTIM, in order to produce guidelines and 2) address the theoretical gaps to progress in 4S regional sampling plans.

The main focus of the sub-group was to provide:

- Approaches to support the development of regional sampling plans (EU projects: fishPi², STREAM, RECOLAPE)
- Data quality tools (EU projects: fishPi², STREAM, RECOLAPE)
- Simulations tools and some identified limitations (EU projects: fishPi², STREAM, RECOLAPE)
- Optimization simulation tools specifics (EU projects: fishPi², STREAM. WKBIOPTIM: SimPop, SampleOptim, SampleLevelOptim, SampleReferenceLevel) (adapted from WKBIOPTIM3)

In respect to optimization tools we are at a stage where we have a lot of quite different tools. Some are very case specific, others quite generic. Some optimize at the sample level, others at the population level, but none can simulate the multi-stage sampling practices often in place. It can be challenging to compare outputs across tools and there is a need for some common outputs. None of the tools have been independently reviewed and none of them have a plan maintenance and developments, but all of them give insight to the performance of the suggested regional sampling plans / protocols. ‘Theoretical gaps’ in relation to the optimization of the regional sampling plans were only briefly touched, but the group recognize that there are ‘theoretical gaps’, e.g. characterizing current status quo approach, how to handle low level of samples and relevant quality indicators, on the way to solid proof of when is enough and of the performance of a regional sampling plan compared to present practice.

The group embrace the diversity in approaches and tools and believe that expertise, tools and regional sampling programs will evolve alongside over the years. The group see the role and existence of WKBIOPTIM as a counter-stone in the development of optimized regional sampling programs, since WKBIOPTIM provides a forum where simulations tool can be reviewed, compared and ‘theoretical gaps’ can be addressed and solved. WKBIOPTIM3 started to review, document and compare tools developed under WKBIOPTIM, fishPi² and STREAM and WKBIOPTIM4 will address quality indicators of length and age frequency data.

Workplan for 2020 – 2021

The group will continue in 2020-2021 further developing the tasks last year, but will build on the experiences gained in the three ISSG for the regional sampling plan (RSP) case studies (trawl fishery in Iberian Waters, freezer trawler fleet exploiting pelagic fisheries in the North-east Atlantic and fisheries for small pelagics in the Baltic). The work needs to be coordinated with the ISSG – Development of Draft Regional

Work Plan, so it supports their work and does not overlap. Further the group will have a strong link to WKBOPTIM and a link to the ISSG – RDB Catch and effort overviews and the ISSG - Data Quality.

The tasks for 2020-2021 are;

1. Develop guidance for the development of optimized and operational regional sampling plans. This is a dynamic process that needs to build on practical experience, which will be built up in the ISSG's for the RSP case studies. Maybe this development process should be seen this as a step wise process where we don't improve everything in one go. Identify where you are at the level of regional sampling and where you want to go. Below a preliminary list of relevant steps identified during the RCG meeting 2020 which will act as a starting for further work.
 1. End-users are involved in informing on data needs e.g. how was this achieved?
 2. Involvement from region e.g. are all relevant MS and partners involved or had the opportunity to participate?
 3. Clear description of different MS role / part in the regional sampling plan – is it reflected in the regional work plan? (Link to ISSG – Development of Draft Regional Work Plan)
 4. Identification of fleets relevant for regional coordination e.g. finding common ground in the identification. (Link to ISSG - Regional overviews of fisheries and sampling)
 5. Definition of the objectives and main aspects of the new regional sampling plan - e.g. what is relevant to simulate (identify main scenarios), what is relevant output (identify elements that demonstrate coverage and efficiency for different end-users), how is the efficiency of the new plan evaluated (based on which criteria), evaluate against sampling schemes already in place. (Link to WKBOPTIM)
 6. Description of the sampling protocol (e.g. population, sampling frame, stratification, sampling units, selection units, randomization method). (Link to ISSG - Data Quality (developing a template for the RWP for documenting sampling design) & Link to ISSG – Development of Draft Regional Work Plan)
 7. Permanent structures for data sharing. Mainly in place with the RDB / RDBES, but some of the simulation tools require more dis-aggregated data, than these data structures allow for. Responsibilities in respect to storing data and uploading data to international databases need to be a part of the final plan
 8. Estimation - e.g. consider the suitable estimation procedure needed for the RSP (e.g. how to get number sampled vs. total number) and if it is feasible to implement it
 9. Feasibility and implementation are tested with pilot studies and/or consultations - e.g. is it feasible to sample foreign landings / the planned ports / vessels / strata / etc.
 10. Mechanisms are in place to reach agreements across MS. Identify what normally needs to be agreed on. (Link to ISSG – Development of Draft Regional Work Plan)
 11. Quality checks are made at the national and regional level. (Link to ISSG - Data Quality and ISSG – Development of Draft Regional Work Plan)
2. Address the 'theoretical gaps' encountered when evaluating the new regional sampling plans with the present simulations tools. The simulation tools provide a counter-stone in the development of optimized regional sampling programs. We need solid proof of when is enough and of the performance of a regional sampling plan compared to present practice. The ISSG will act as a forum for discussing shortcomings of the present tools, how these can be handled and needed development of the tools. There is a strong link to WKBOPTIM.

Proposals for Recommendations and Decisions

No recommendation nor decision proposals from this ISSG.

5.4.4 Feedback from ISSG ‘Case study of fisheries for small pelagics in the Baltic’

Implementation of regional schemes frequently gets bogged down by single alternatives, or is stopped because of national interest not being prioritized in the regional context. However, this group sees regionalization as a process that can have several outcomes, and it is not necessary the final goal to have a 100% common approach (same vessel platform etc.) for a regionalization to be fulfilled.

The subgroup considers regionalization as involving 5 general steps located along a gradient that goes from “no coordination” to “common monitoring strategy” and “joint data collection” (Figure 5.4.4.1). These gradient naturally entails a different capability of sampling to meet the needs of national and regional end-users. To supplement the sampling needs of specific end-users, part of the program can left for planning on a national scale. That part can still be coordinated (e.g., have common protocols) but does not necessarily require the higher level of regional coordination involved in full regional sampling plans (Figure 5.4.4.1).

Sampling programme

collecting data for common purposes (eg. stock assessment, international assessment of impact of fisheries etc)

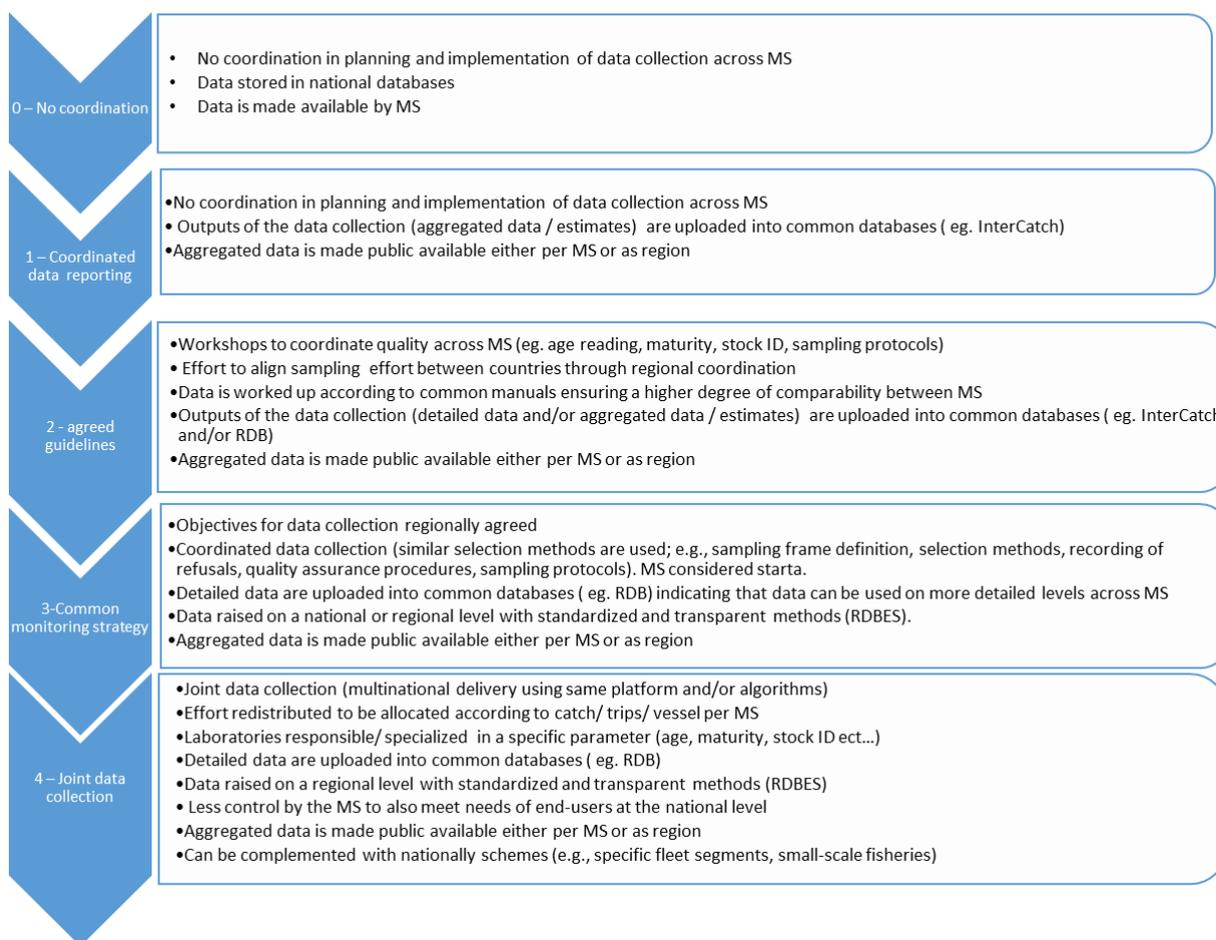


Figure 5.4.4.1 Flow chart of the steps involved in a regional coordination. The objectives can be different from a regional and national point.

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

Present work period started off with a joint workshop held between 25 and 27 November 2019 at DTU in Lyngby, Denmark (see full report on small pelagic case study in this RCG report PART III section 7). In these workshop, national sampling descriptions were compiled and an agreement was reached on a common methodology for a first regional pilot-study of Baltic pelagic fisheries during Q1 2020.

In the pilot study Denmark, Estonia, Finland, Poland and Sweden participated. Main aim of the pilot study was to test possibility to conduct self-sampling, write report on quality of collected data and fishermen refusal rate, describe the challenges what was experienced. It was suggested to use common protocol for sampling small pelagics:

- sample approximately 5 kilos;
- sprat and herring should be sorted separately;
- approximately 50 fish of each species should be taken for analyses (length, weight and otolith);
- fish should be measured in 0.5cm interval.

For this pilot study it was decided to select active trawlers with overall length more than 24 metres targeted sprat and herring (more than 95%) which catches are more than 10 tons per year. Selected vessel was contacted once per week and asked to collect sample from the next trip.

In early first quarter of 2020 (16 January), a skype meeting was held where Member States communicated each other the details of the sampling frames and vessels they randomly selected for sampling during the pilot programme (target: minimum 10 trips). Finally, available results of the pilot programmes and the way forward to their reporting to RCG were discussed in a skype meeting held 14 May 2020.

Workplan for 2020 – 2021

Continue case study

In November-December 2020 a new meeting will be held where results of simulations will be integrated with the experience collected from 2020 Q1 pilot and the protocols improved and agreed towards a new pilot in 2021 Q1. Member states that did not participate in 2020 pilot will be invited to evaluate progress obtained in 2020 and given opportunity to join in 2021 pilot plan.

Simulation work shop in June

The subgroup will be working on simulating aspects of regional sampling the last two weeks of June (15 to 25). At the simulation workshop we will look into:

- broader regional plans - simulating data using different stratifications, onshore and onboard sampling, sampling effort, etc. to see what the impact of the different designs may have on targeting the landings of the stocks. Further, look into the consequences of these designs for the length and age structure of the stocks. These are fishPi2-type of simulations, the first only requiring 2017-2018 data from last year's data call and the latter also requiring sample data in the RDB format.
- national plans - using 2017-2018 data asked for in last year's data call as input (also 2019 in same format if you want it) - simulate different types of trip selection (by week, next trip, etc; random, systematic, etc), haul selection within trip if haul-by-haul data is available (first haul, last haul, random haul, all hauls), and evaluate coverage and workload obtained in terms of

species and subdivisions. These is simulation code Nuno started developing after Lyngby meeting.

- sample processing - using data on RDB:CA and RDB:HL formats from different species and areas, it is possible to simulate how reductions in sample size (kg and/or number of fish processed) impact the perceptions we get from samples in terms of age and length structure. These are WKBIOPTIM-type of simulations.

Species composition from Danish control samples

We have been granted access to 10 years of Danish control data of landings of unsorted fish in Danish harbours. Data can be used to investigate if there is a more systematic (historic) misreporting in the industrial fishery by comparing species composition within a given trip compared to the logbook information.

The Danish control agency have taken control samples of roughly 20% of all industrial landings conducted in Danish harbours in the last 10 years. The sampling have been conducted in a relative consistent way (many samples from every landings – and each sample is around 10 kg). Only the species composition has been registered in the samples, not age, length or weight.

Proposals for Recommendations and Decisions

NANSEA BALTIC_2020_D07: The ISSG on small pelagics recommends that all MS in the Baltic are participating in this study group.

5.4.5 Feedback from ISSG ‘Evaluation of the data collected for the SSF at EU level’

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

This has been the first year of work for this ISSG. During this RCG NA NS&EA Baltic annual meeting, the main outputs and tasks covered were presented. Based on the workplan agreed by the subgroup in January 2020, four tasks were identified to be covered before the annual meeting in June 2020. However, due to the reduce numbers of participants in the subgroup and the covid-19 impact, only 2 of those tasks could be worked on. One of those tasks was the characterization of the under 12m LOA fleet based on the information available under the RDB. In order to do these tasks, the chair of the ISSG RDB Catch and Effort Overviews was contacted and it was agreed to follow the same approach for this under 12m fleet as for the largest commercial fleet in the fisheries overviews subgroup.

Three reports were produced one by region, North Atlantic, North Sea & Eastern Arctic and for the Baltic regions. These reports were considered as a very useful tool to have a general overview of this specific fleet in these regions. The number of vessels, target species, main metiers etc. are identified in these reports. In addition, these reports allowed to identify relevant gaps in the data available for this fleet under the RDB. For example, absence of information from very relevant countries for this fleet, potential gaps in the catch and effort data, but also problems in the definition of trips at the desired metier resolution level. It is the case of some countries were most of the trips are identified as MIS_MIS metiers.

The other task worked on was the evaluation of the assessment of the coverage, completeness and the quality and reliability of the data collected for this specific fleet segment. To this end, it was decided to use the work done by the ICES WGCACTH expert group, where in 2018 an extensive questionnaire was completed by most of the institutes at EU level with the same objective. The subgroup agreed that the

overview obtained from that questionnaire in 2018 will be similar currently so the main outputs were highlighted during the meeting.

Among the results of this questionnaire, it can be seen how most of the institutes use census methodologies for the collection of data from this fleet. In addition, many of the institutes claim to be happy with the data collected and its quality. However, there is no cross 'check exercise between these census data and the information that could be collected through onsite sampling methods. In addition, it appears that the institutes that do carry out this cross-check exercise identify that there are important differences between the information collected through census sampling and on-site sampling.

The group discussed about the need for an ISSG to progress on regionalization sampling plans for Marine Recreational Fisheries (MRF). The EU-MAP states the relevance of the regional approach for these fisheries, including the evaluation of end users needs for biological data collection, the coordination of national surveys of recreational fisheries, and the definition of potential thresholds. The COM has already announced that the new regulation will not have a pre-defined list of species, and that it will be defined by region, based on end user needs. ISSG have proved to be a useful tool to work on regionalization of specific areas of data collection such as SSF, PETs, Stomach sampling or Diadromous Species. The RCG considered that the same approach could be used for MRF and proposed the creation of an ISSG on MRF. For this subgroup to work properly, we need to make sure that the right people is involved, including experts from WGRFS, DCF and PGECON. NC need to be approached to ensure that relevant bodies are contacted to ensure expert participation.

Workplan for 2020 – 2021

Based on the outputs from the work done in 2020 and considering the feedback get from the RCG meeting, potential tasks for 2020-2021 were identified. Below the tasks to be covered by this subgroup:

- **Analysis of catch and effort data in the RDB**

There is a need to analyse the information related to catch and effort in the RDB. How the effort information is estimated by each of the Member States (MS) is essential and the possibility of standardizing this effort estimate for the SSF is one of the objectives and a challenge. In addition, how MS are codifying the metiers at level 6 for this fleet is also very relevant. As mentioned in the previous section, in some cases most of these trips are allocated to this MIS_MIS metier. This metier resolution is not sufficient for regional coordination objectives. The plan is to work together with the metier ISSG subgroup and check if the codes and tools provided by this subgroup could be used also to improve the codification of this fleet.

In addition, within those MS/institutes where a sampling approach is used to collect the data, the plan is to compare the estimates obtained compared to the transversal information uploaded to the RDB.

- **Sampling effort allocated to the under 12m fleet**

In collaboration with the ISSG on fisheries overviews, it will be analysed the effort allocated by MS to this fleet under their National work programmes. This will be done using the information uploaded under the CS (Sampling) data. In addition, the data collected will be also reviewed. This means if apart from the catch and effort data, what other type of information is collected (e.g. discards, length, age, PETS bycatch).

- **PGECON involment in the subgroup**

PGECON colleagues will be contacted to participate in this sub-group. The socio-economic data collection of this fleet is essential due to the importance of this fleet in the coastal populations.

- **RDBES data model and the SSF**

RDBES will be one of the principal tools that will allow to improve the regional coordination and the development of the regional sampling programmes. It's essential for this subgroup to be involved in the

process of the development of this tool, and the data model is the core of this data base. Due to the special characteristics of the SSF, it is probably that the RDBES may require specific issues to be considered in the development of this data model.

Proposals for Recommendations and Decisions

No recommendation nor decision proposals from this ISSG.

5.4.6 Feedback from ISSG 'Case study freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic'

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

Feedback of the pan regional subgroup "Towards a regional sampling plan for the freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic"

A presentation detailing the progress of the subgroup was given to the working group. The primary aim of the subgroup is to propose a statistically robust regional sampling scheme for the European pelagic freezer trawler fleet to be considered for inclusion in the national workplans.

The subgroup continued its work in 2019/2020 before the RCG 2020. A physical workshop was planned in March 2020 but had to be postponed due to the Covid19 pandemic. However, the subgroup worked by correspondence and analysed the existing sampling regime in relation to data needs of the assessments.

The stocks targeted by the European freezer trawler fleet are assessed by the ICES Expert working groups WGWIDE, HAWG and WGDEEP. Catch advice for these stocks is derived primarily using age based assessment models. A key data requirement is therefore accurate annual estimates of catch at age by ICES division and quarter. Within the EU, national sampling programmes are in place to support the collection of the relevant data. At present, the sampling of the European freezer trawler fleet, which is largely Dutch owned, operates under the flags of the Netherlands, Germany, France and the UK (England) is conducted by the Dutch and German administrations. The current sampling programmes are operated by the relevant national administrations. While there exists an element of cooperation, there is no formal arrangement or harmonisation. The subgroup analysed the historical performance of the sampling by examining the WG data submissions.

Based on the historic sampling coverage based on the submission sampling were then simulated in order to reach a better coverage. A number of simulations have been conducted to investigate the potential coverage under various sampling schemes and effort levels and stratification. In these simulations, the selection of vessels/trips is randomised, including sampling probability weighting. Also, a reference fleet approach was considered.

In conclusion, the analysis show clearly that the EU freezer fleet is a suitable candidate for a regional sampling approach. Improved coverage can be achieved by coordinating the national sampling plans internationally. However, the use of a reference fleet is associated with even higher levels of sampling coverage. This would of course imply a change in national sampling protocols moving from observer and market sampling schemes to a self-sampling scheme on a vessel selection of the European freezer trawler fleet. Here, the barriers/limitations to the practical implementation needs to be investigated.

Workplan for 2020 – 2021

- Data call still needs to be completed with all countries
- Complete simulation analysis - to include sampling protocols (how many samples, numbers to age)
- Identify candidate sampling schemes
- Evaluation of the potential suitability for a regional sampling plan and drafting of a proposed sampling agreement
- Proposal for a statistically robust regional sampling scheme which then can be forwarded to NCs/EU

Proposals for Recommendation and Decisions

No recommendation nor decision proposals from this ISSG.

5.4.7 Feedback from ISSG ‘Identification of case studies for PETS bycatch monitoring’

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

During this RCG NA NS&EA Baltic annual meeting, the main outputs and tasks covered were presented. Based on the workplan agreed by the subgroup in January 2020, the plan for the subgroup was to identify several case studies covering different métiers/fisheries, regions and different PETS groups (e.g. marine mammals, seabirds, sharks etc.). To this end, the risk assessment results from the previous year were also considered. Once the case studies were identified, the objective was to analyse the suitability of the on-board sampling to collect bycatch data, but also other potential methodologies as possible alternatives. In addition, the feasibility of monitoring the selected case studies under a regional sampling plan.

However, some of the members of this ISSG participated in a special request coming from the Commission, concerning the introduction of emergency measures to mitigate bycatch of common dolphins in the Bay of Biscay and harbour porpoises in the Baltic Sea, covering the case of the common dolphins in the Bay of Biscay. Many of the issues discussed during the advice drafting process were directly related to the work and the role of the RCGs such as: enduser’s data needs, monitoring issues, and regional coordination, etc. The work carried out as part of this special request required substantial effort throughout the process, nonetheless it was an important learning process. As such, this subgroup members considered it relevant to include this topic on the issues and lessons learned from this process, although it was not included in the original workplan. The main objective was to identify the issues encountered that are directly related to the RCGs role including the limitations identified during this process. These points are detailed in the subgroup report.

During the meeting it was also highlighted the importance of working together with the most relevant ICES experts working groups involved in fisheries monitoring and bycatch issues (e.g. WGBYC and WGCACTH). The group agreed on this point and the collaboration between these ICES expert groups and the ISSG will take place in the following years.

Feedback from COM on by-catch:

Member States have obligations to monitor bycatch of species protected under Birds, Habitats and Marine Strategy Framework Directives and to take the necessary measures to ensure their favourable conservation status. These obligations are also referred to in the fisheries legislation (e.g. DCF and EU MAP,

technical measures regulation) and the Commission is promoting full integration of actions under both policies.

The new EU Biodiversity Strategy gives high priority to eliminating/reducing bycatch of protected species and in particular to improving monitoring/data collection.

In order to achieve the aims of environmental and fisheries legislation on bycatch, the cooperation of national environmental and fisheries authorities is essential, both for monitoring and implementation of measures.

Relevant scientific bodies (STECF/ICES) and projects (e.g. fishPi and fishPi2) have identified significant shortcomings in bycatch monitoring: no MS has a comprehensive dedicated bycatch monitoring programme

These gaps need to be urgently closed, through close cooperation of env/fisheries authorities and regional coordination – EU-MAP is a good framework to ensure this.

Short-term priorities are monitoring of bycatch of common dolphins in BoB and of the Baltic harbour porpoise, following the recommendations of ICES in the latest advice on emergency measures.

There is a need to step up the efforts and to put in place long-term, comprehensive and effective monitoring systems, coordinated on a regional scale through RCGs. If additional financing needs to be provided, MS have programmed significant funds in the EMFF for biodiversity that can be used for this purpose and the Commission can look at other possibilities but first the group needs to define the necessary scope of the full and comprehensive monitoring programme.

RCGs provide unique forum for discussions, we encourage to involve all stakeholders in the process, in particular environmental authorities who, together with fisheries authorities, need robust data on bycatch in order to propose joint recommendations for technical measures to reduce bycatch.

Workplan for 2020 – 2021

Based on the outputs from the work done in 2020 and considering the feedback get from the RCG meeting, potential tasks for 2020-2021 were identified. Below the tasks to be covered by this subgroup:

- **Intersessional work with ICES WGBYC and WGCATCH**

There is a need to know the effort allocated to monitor fisheries with at sea observer programmes. WGBYC is collecting this information during the last years. In addition, in the RDB all the at sea trips monitored under the EU MAP are included. The work will consist in comparing both data bases and compare the results obtained. This will provide a general overview of the effort realized and coverage of the different metiers/fisheries at sea.

In addition, the risk assessment done the previous year will be updated and improve if possible, considering some of the suggestions received by WGBYC. Finally, the RDBES data model and its importance of this data base for bycatch data collection will be addressed between these groups.

- **Case studies**

The plan is to work in several case studies following a similar approach conducted by the small pelagic case study, where a generic regional sampling programme was defined. This generic regional sampling programme will be adapted to the specific issues related to PETS bycatch data collection. One of the case studies will be the “common dolphins in the Bay of Biscay and the harbour porpoise in the Baltic” due to the importance that the special request mentioned above has acquired. The other case study will be defined and agreed together between this subgroup members and WGBYC members.

Under these case studies, several tasks will be covered with the objective to improve the data collection of the bycatch species and move towards a regional sampling programme for this.

Some of these tasks, are tasks that are considered essential as first steps before doing the field work but essential for a regional sampling programme:

- Fisheries/metiers characterization at the right resolution considering bycatch impact.
- Sampling coverage of these fisheries/metiers
- Align observers protocols between countries
- Standardize effort calculation methodologies and identify relevant variables needed to collect under the transversal data to improve bycatch estimates (e.g. number of nets, soak time etc. in the case of passive gears)

The other tasks to be covered are more focus on the need to increase the fisheries monitoring effort:

- Identify minimum sampling coverage per fishery/metier
- Ensure minimum sampling coverage for fisheries that currently have no/low coverage
- Methodologies to collect bycatch data considering different fleet segments
 - Scientific observers
 - New technologies (e.g. CCTV)
 - Fishermen collaboration

Proposals for Recommendation and Decisions

No recommendation nor decision proposals from this ISSG.

5.4.8 Feedback from ISSG ‘Towards a regional sampling plan - Case Study of the trawl fishery in Iberian Waters’

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

Providing some brief background on the ISSG seems relevant:

-One of the case studies in project FishPi was on trawl fisheries in Iberian waters, and in this case study analysed effects of possible alternative regional sampling plan (RSPs) on landed weight of one important species through simulations.

-One of the case studies in project Fishpi2 was on trawl fisheries in Iberian waters. Summarizing the main achievements of that case study in that project:

- Work package 2 defined criteria for selecting fisheries (and species of interest) suitable for potential development and testing of a regional sampling plan (RSP); the case study had been broadly outlined a priori based on previous data / expert knowledge, and the work package confirmed this suitability.
- Work package 3 used existing data to make simulations of alternative scenarios of RSP and compared scenarios based on bias and precision of landed weight of several species of interest (since sampling of these fishery is concurrent). Scenarios were also compared based on feasibility, suitability and cost (but this was at the end of the project and left little time to reflect on this).

- Furthermore, while the FishPI2 project also included some work on the variable of interest (i.e. length composition of landings) this could not be developed for the case study.

An ISSG was set up in RCG 2019 to continue the previous work towards developing a RSP for trawl fishery in Iberian waters. Nevertheless, no progress could be achieved intersessional between RCG 2019 and 2020 due to lack of time to dedicate.

Prior to the RCG 2020 meeting and during the RCG meeting, the ISSG outlined a workplan for the intersessional period between RCG 2020 and RCG 2021.

Workplan for 2020 – 2021

Tasks to be developed within the ISSG:

- Define and implement pilot study, which includes analysing in detail alternative scenarios of RSP and define needed adjustments to agree on a pilot for implementation/testing.

Tasks to be developed by human resource hired full-time by a potential (but yet not existing) project within the MARE/2020/08 annex 1 grant:

- Analyse effects of alternative RSPs on length composition and incorporate these results into the definition of the RSP.

(Alternatively, if a project is not submitted/secured then a workplan for this task needs to be revised and discussed in RCG 2021).

Proposals for Recommendation and Decisions

No recommendation nor decision proposals from this ISSG.

5.4.9 Feedback from ISSG ‘Diadromous Fishes’

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

The ISSG Diad met on 28-30 April 2020 in daily web meeting sessions (2-3 hours per day). Altogether 14 experts participated at least part of the meeting sessions.

The group dealt with tasks given by the RCG NA NS&EA and RCG Baltic in autumn 2019. Due to the circumstances caused by the covid-19 pandemic and due to the transition period of Brexit leading to the exclusion of the two former chairs shortly before the meeting, it was not possible to cover all planned tasks during the meeting. The following points were dealt with in the meeting and were presented to the RCG NA NS&EA and RCG Baltic meeting:

- Data needs in assessments
- Quality Assurance - Electrofishing surveys
- Index rivers/water bodies for eel, salmon and sea trout
- Data from recreational eel fishing
- Communication between ISSG Diad and relevant end users
- Regional Work Plans
- Other diadromous species under EU-MAP

In addition the ISSG Diad expressed a wish to get experts of diadromous fishes from all relevant regions, including third countries like UK, Norway and Iceland, to participate in the group's work. At present participation is weighted to the Baltic and NA NS&EA regions.

In the feedback discussion of RGG technical meeting possibilities to move towards the regional work planning was raised. Diadromous species are monitored both in marine and freshwater but most of monitoring takes place in freshwater areas. This makes challenging to fit all monitoring activities into the Regional Work Plan (RPW) framework, which means that potentially only some part of monitoring would be possible to structure into the RWP format and rest would be in national work plans. Also parts that will be in national work plans should be coordinated in the RCG level (including potential agreements between MS). This procedure need to be structured into the RCG work.

Also needs for catch and effort data from recreational fisheries was recognised. A good progress in estimation off recreational catches has taken place in many regions when it comes to salmon and sea trout, but for eel more work is required. The message will be passed on to the ICES WGRFS. In general the communication between ISSG Diad and ICES WGRFS was considered to be important to improve.

ISSG Diad Report available at [https://community.ices.dk/ExternalSites/datacollection/Regional coordination meetings 2017/rcgnansea/2020 Meeting Docs/02. Background documents/17 ISSG Diadromous fishes 2020 FINAL.pdf](https://community.ices.dk/ExternalSites/datacollection/Regional%20coordination%20meetings%202017/rcgnansea/2020%20Meeting%20Docs/02.%20Background%20documents/17%20ISSG%20Diadromous%20fishes%202020%20FINAL.pdf)

and extracting presentation on the report at [https://community.ices.dk/ExternalSites/datacollection/Regional coordination meetings 2017/rcgnansea/2020 Meeting Docs/05. Presentations/17 RCG Presentation ISSG DIAD RCG NANSEA & Baltic 2020.pptx](https://community.ices.dk/ExternalSites/datacollection/Regional%20coordination%20meetings%202017/rcgnansea/2020%20Meeting%20Docs/05.%20Presentations/17%20RCG%20Presentation%20ISSG%20DIAD%20RCG%20NANSEA%20&%20Baltic%202020.pptx)

Workplan for 2020 – 2021

Apart from overall tasks the following subjects will be progressed in the next term:

- Questionnaire on electrofishing programs to EGs
- Request to MSs to name the eel index rivers
- Initiation of dialogue between ISSG Diad and ICES EGs

The recognised overall tasks are:

- progress development of the regional work/sampling plans for data collection for diadromous species/stocks (Atlantic salmon in the Atlantic and Baltic, sea trout in the Baltic, European eel throughout its natural range) and quality assurance of those data;
- make recommendations on fisheries and fishery-independent data needs for these regional work/sampling plans; and
- support the ICES WGs and other end users in determining the effect of fisheries and fishery-independent data quality issues on their assessments, and make recommendations for addressing issues via the regional work/sampling plans.

Proposals for Recommendation and Decisions

No recommendation nor decision proposals from this ISSG.

5.4.10 Feedback from ISSG & SG ‘Regionally coordinated stomach sampling’

Background

Outcomes of reflections conducted in the framework of previous pilot projects (e.g. DG MARE Contract No MARE/2012/02-SI2.632887, FishPi² etc.) working on fish stomach content in the Baltic and the North Seas, as well as analyses performed in ICES working groups (WGSAM) highlighted the importance of including better estimates of natural mortality in ICES fish stock assessments. It also highlighted the lack of contemporary data on predator-prey relationships. Scientific advices, in a context of major changes in the functioning of marine ecosystems cannot be efficient without recent and accurate information about predator-prey relationship and predation-driven mortality. Revision of the methodology performed during FishPi² also demonstrated that collecting stomach contents to this aim during existing surveys was cost effective.

The RCGs were asked to support and coordinate the regular collection and analysis of stomach content data in the North Sea, the Baltic, and other European sea areas, e.g. as part of existing surveys conducted within the DCF framework.

Progress during RCG NA NS&EA and RCG Baltic 2020

Ten tasks were defined prior to the virtual meeting of the RCGs and proposed for discussion to the participants of the RCG subgroup “Stomach sampling”:

- a. Define key biological parameters (e.g. natural mortality) that are needed for stock assessments (single- and multispecies) and can be deducted from coordinated stomach analysis studies.
- b. Compile and review available information on stomach sampling manuals and best practice from relevant previous studies and Wks (WKSTCON1, WKSTCON2, WKOISS).
- c. Identify international and national surveys that may be available for the stomach sampling (time of the year, duration, number of stations, spatial distribution)
- d. Develop suggestion/roadmap for a database on data for stomach sampling
- e. Develop (or adopt) an appropriate stomach sampling manual or guidelines for best practice. (Estimate expected expenditure of time and costs for analysis – per stomach, per haul, per species, per country involved)
- f. Suggest a regional stomach sampling plan for the North Sea: Period, timing, sample sizes, surveys to be sampled, and predator species to be sampled.
- g. Communicate and circulate this plan to relevant countries that are involved in the fishery on the sampled species and/or are participating in the scientific surveys. Ask for feedback.
- h. Incorporate the suggestions from the feedback into the sampling plan.
- i. Suggest a starting date and sampling period for the first sampling campaign.
- j. Liaise with end-user ISSG

Evaluation of the three first tasks took place during the first day, and revealed that the subgroup cannot reach clear conclusions without input from end-users, *i.e.* people involved in multispecies stock assessment. This question was particularly important for the first task, and all further discussions derived from it. Notably, the different workshops reviewed under the task (b) analysed the pros and cons of different stomach content sampling and analysis methodologies. The choice of the most relevant method to be adopted derives nevertheless from end users expectations and data needs.

The subgroup thus invited Anna Rindorf (DTU Aqua, PI of the FishPi² WP dedicated to stomach content) and Alexander Kempf (Thünen Institute of Sea Fisheries, co-chair of ICES WGSAM) to participate, to fuel

the discussion with their experience and expectations. Their input to the group was substantial, notably through the provision of a document drafted by WGSAM, and based on conclusions of FishPi² about data needs, species to be sampled and an improved data collection protocol. This document formed the basis for the recommendation requesting support by the Commission (see below), and is summarized in the Annex 7 below.

Based on end users requests, the subgroup acknowledged the importance of collecting several species of commercial importance and over a 5-year rotation scheme, so as all the diet of all species would have been documented at least once over a 5 years period (Table 5.4.10.1). The list of species is region-specific, and depends of the commercial importance of species in each ecosystem. The major outcome of this sampling would be to increase the accuracy of regional natural mortality estimates, as well as a better definition of the length relationship driving predator-prey relationships. This parameter was identified as paramount during a review of basic model needs performed during FishPi². Seasonal and interannual variability appear of lower importance compared to the effect of ontogeny. Consequently, sampling the whole size range for the species considered should be favoured.

Table 5.4.10.1. List of suggested species to be sampled per region, and 5-year rolling scheme

Survey Area	Year	Species sampled for biology	Species not sampled for biology
North Sea IBTS (including Skagerrak and Kattegat)	1	Whiting and monkfish	Megrim
	2	Horse mackerel	Starry ray
	3	Saithe (Q1 and Q3) and mackerel (Q3 only)	Grey and red gurnard
	4	Cod and plaice	Halibut
	5	Haddock and hake	Turbot
North Sea IESSNS	1	Mackerel	
	2	Horse mackerel	
Irish Sea	1	Whiting, Hake	Gurnards
	2	Cod and haddock	Monkfish
Baltic Sea	1	Cod	
	2	Whiting	
Bay of Biscay	1	Hake	Tuna
	2	Blue whiting and monkfish	Rays
	3	Horse mackerel	Megrim
	4	Mackerel	Sea bass

The fisheries surveys were identified as efficient platforms for sampling, notably as stomachs can be efficiently collected on board on individuals included in other DCF analyses (*e.g.* biological parameters and otolith collection), providing additional parameters for both analyses. It also guarantees that stomachs could be properly stored frozen on-board immediately after sampling, and that all samples can be accurately assigned in time and space. Finally, spatial coverage of the surveys allows covering most of the geographical distributions of the species considered. The possibility to complement sampling by samples provided by commercial fisheries and other sources was discussed but appeared complex. Preserving samples on board on commercial vessels as well as collecting accurate geographical information about sampling location may be challenging. Provided that ontogenetic diet shifts have been widely acknowledged as of high importance for the description of feeding habits/interactions when compared to other factors (*e.g.* seasonal variability), using samples collected during surveys could be considered as adequate for the needs prioritized by end-users. Finally, surveys provide the temporal stability needed to plan a monitoring program in 5-year intervals, while relying on commercial sources can be more uncertain.

Regarding methods, one question could not be solved during the group's discussion. While WGSAM recommends collecting stomach on-board, and then analyzing samples at laboratory, by visual observation, counting and weighing of the preys, Spain have been performing stomach content analysis on-board, using a volumetric method to determine preys and estimate relative abundance. This work is performed since 1994. Sample distribution by size classes also differs between WGSAM/fishpi² recommendation, notably for hake *Merluccius merluccius* (3 to 5 individual per haul and per 5 cm size class in FishPi², individuals from 9-17 cm, 18-34 cm, 35-69 cm and 70-90 cm in Spanish protocol). A direct application of the WGSAM recommendation to the Spanish surveys may jeopardize the consistency of the time series. This point has been addressed in the discussions and is covered by a specific recommendation.

Workplan for 2020 – 2021

Following the recommendation, three main actions were included in the work plan:

1. The development of a regionally coordinated sampling, using North Sea IBTS as a case study, and based on the recommendations of WGSAM.
2. Discussions, to define specifically the repartition of sample collection and analyses among countries, and of funding. Members of IBTS WG to be involved. This would require the approval of the formation of the subgroup by NC, to coordinate the work. Feedback needed from the COM to support this work.
3. A specific case study should also be developed to intercalibrate the IEO protocol with the WGSAM recommendation, as to guarantee the continuity of the stomach time series, and to allow the comparability of all data collected within EU-MAP.

Proposals for Recommendation and Decisions

NANSEA BALTIC_2020_R09: COM to support regionally coordinated stomach sampling

5.5 ToR 5 Propose ways to improve the regional coordination and feedback on regional issues

During this year's meeting, progress was been made under ToR 5 as follows:

- Feedback from SG 'Review of current setup of RCGs, technical meeting and decision meeting'
- Feedback on 'RCG support Secretariat and Website'

5.5.1 Feedback from SG 'Review of current setup of RCGs, technical meeting and decision meeting'

Progress during RCG NA NS&EA2020 and RCG Baltic 2020

Technical & Decision meeting

Sub-Group on RCG development had an exchange of views in two stages. In the first phase a set of questions was sent:

Working structure and methods of the RCGs

1. Is the current split between a technical and a decision meeting e.g. a workable, sufficient enough and fit for purpose working structure (yes/no and why)? If the structure should be changed, what should be the aim and form of the future structure?
2. Are the working methods of the RCGs (including ISSG, SGs etc.) e.g. delivering timely, efficiently high quality products (yes/no, why)? What needs to be changed?
3. In this respect, what should be the follow up of this June technical meeting in preparation of the September decision meeting and beyond?

Nature of the Rules of Procedure

4. How should the RoPs be understood in general; more as guidelines allowing e.g. flexible approach due to practical reasons/emerging needs or more as strict rules to be followed (e.g. decisions to be taken in accordance with the RoPs, otherwise decisions not becoming formally binding)
5. Should the current RoPs be updated to reflect the current situation of having two separate meetings (technical, decision making)? Any other needs that should be taken into account (clarity on written procedure, by consensus anything can be decided e.g. to avoid delays in implementation of Regional Work Plan due to cumbersome adoption mechanism)?
6. In this respect, what should be the follow up of this June technical meeting in preparation of the September decision meeting and beyond?

8 replies were received. The second phase was a discussion between NCs, RCG Chairpersons and the European Commission.

Summary of the replies and the discussions

In general, there is a feeling of satisfaction how the RCGs work and operate. The structure is rather fresh, but initial impressions are fairly positive. This applies also to the arrangement of two meetings, technical and decision-making meetings.

However, some issues for further development or concerns were raised. These elements can be divided roughly into two categories: issues related to the working culture or practices and issues, which might require separate decisions.

Concerning the role of the NCs, there was a general feeling that the NCs should be more involved to build commitment and ownership to various issues and especially on those issues, which are likely to lead to

decisions, which might involve financial or legal implications for MSs. One option to do this is to engage NCs as early as possible in the ISSG work e.g. already when an ISSG is established.

Facilitating decision making meeting was raised also. There were suggestions to have a pre-screening or informal meeting of the concerned NCs in early autumn before the actual RCG Decision meeting. In addition, the issue of NCs helping colleagues was raised and this could be seen as a part of the informal meeting.

Some concerns were raised referring to a possible situation where a Member State was not living up to its commitment made in the RCG and thus causing difficulties for other Member States. While there were no strong views that the RCG should have powers over misbehaving Member States, the European Commission reminded that if such misbehaving would occur, the European Commission would keep eye on such Member States. It was also reminded of the possibility of financial consequences present in the prevailing and very likely in the coming EU legislation if a Member State would not meet its commitments.

Some felt that the ISSG work should not stop between technical meeting and decision-making meeting.

The issue of Rules of Procedure was raised too. It was felt that it is necessary to amend the present RoP but there was no urgent need to do that. Appropriate time to start working on this is towards the end 2020 or first half of 2021. In terms of changing the content of the RoP, it was recognized e.g. that the RoP should reflect the valid set up of RCG, add some clarity on the possibility for RCG to agree on any relevant issue by consensus to speed decision making in comparison to regional Work Plans and increase efficiency. There was a general sense that flexibility is needed in the RoP, but decision-making should be very strict and clear.

European Commission reminded, that due to Brexit, RoP needs to be updated during autumn 2020 to remove UK from the list of countries establishing a RCG.

The Chairpersons of the RCGs raised the concern of the time available to deliver documents in time from the technical meeting to the decision-making meeting.

Conclusions and follow-up

Based on the discussions, some of the issues raised and described above are possible to implement already this year in preparation of the decision-making meeting (e.g. pre-screening meeting).

Also taking into account the approaching renewal of the EU-MAP, it was concluded, that an ISSG should be established and the decision-making meeting should take a decision to that effect in 2020. A rather general terms of reference could be advisable for such group but it should include amending the RoP.

Workplan for 2020 – 2021

For NCs to decide (including amending RoPs for RCG NA NS&EA and RCG Baltic)

Proposals for Recommendation and Decisions

No recommendation nor decision proposals from this ISSG.

5.5.2 Feedback on 'RCG support Secretariat and Website'

Progress during RCG NA NS&EA and RCG Baltic 2020

The increased relevance of regional coordination of data collection, with the establishment of Regional Coordination Groups (RCGs), has led to an increased burden of coordination and administrative tasks associated with the operation of RCGs.

The annual meetings of RCGs and the Intersessional Subgroups (ISSG) require planning (e.g. establishing dates and timetables for meetings, ensuring timely production and distribution of documents, facilitating access to relevant information) and organisation (e.g. finding venues and accommodation, supporting travel arrangements of participants, organising side events). It includes clerical tasks (e.g. drafting of meeting agenda, written consultations following meetings and/or in preparation of meetings, drafting reports, preparing decisions and recommendations) carried out efficiently to ensure the functioning and added value of the established structures.

RCGs need a dedicated website to share information and communicate between different RCGs and with national administrations, and to increase the visibility of the RCGs' work to stakeholders. As the MARE/2016/22 grant fishPi2 project (first work package) concluded, a dedicated website would improve the impact of RCG work beyond actors already familiar with the DCF.

The different RCGs also exchange and coordinate decisions with each other and with the national correspondents. RCG chairs come together in an annual Liaison Meeting (organised by the Commission), and since 2019, join the DCF national correspondents in the RCG Decision Meeting. It is a crucial meeting for the achievement of RCGs work success, as it allows bringing together relevant issues from all RCGs, adopting specific measures and agreeing on implementing strategies for regional coordination in a long-time perspective. This meeting links to the (following) National Correspondents meeting, where MS and the Commission discuss relevant points to fulfil the implementation of the DCF Regulation.

Challenges

In the current set up of RCGs, the elected RCG chairs are the ones who carry out these tasks (and are expected to address new tasks such as the creation of a website). However, chairs are data collection experts whose primary responsibility should be to bring forward the work on the RCG in terms of the substance of regional coordination. The demands of the administrative and coordination tasks on the chairs of the RCGs are limiting than in furthering the structures, design and content of the work of the regional coordination groups.

The outcomes of the MARE/2016/22 grant fishPi21 (first work package) highlight the increased responsibilities of chairs in recent years and suggest the need for a "secretariat" to support the communication among the RCGs and between RCGs and other stakeholders (relevant end-users of scientific data, RFMOs, Advisory Councils, Commission, third countries).

The shared funding for data collection in the EMFF is based on national envelopes (per MS) and does not foresee EU-wide or regional funding mechanisms. MSs have so far not made funds available to support the administrative needs of regional coordination structures.

Developing mechanisms that will support RCGs (and in particular their chairs) on the planning and execution of necessary administrative tasks, clerical day-to-day work, including devising longer-term funding structures for such work, could, therefore, be a crucial contribution to the operation and functioning of the RCGs. Moreover, it will help RCGs advance beyond national approaches to achieve, transparently and impartially the expected results of coordinated regional work for data collection.

During the RCG NA NS&EA Decision meeting, there was proposed to the NCs to decide to discuss and eventually agree to provide central resources to support work in the RCG, i.e. a long term support for the establishment of a Secretariat and a website. Questions put forward to the NCs were:

- a) NCs to decide if they will finance the central resources
- b) NCs to decide on which model to use for cost sharing, either to use the models presented in 5.5.1 or another model.
- c) NC to decide on starting year, if 2020, include in WP 2020-202

In principal, the MS agreed, but the NCs requested more time to take this into account and to allocate national resources for the funding. Timing was wrong as the financial planning for 2019 could not be changed anymore.

In follow up of the above, the COM has launched a project call, MARE/2020/08 Annex 2 (ARES (2020)2359109 – 04-05-2020) to give to the RCGs and the PGECON to set up a consortium in order to look further into the exploring and establishing, in a hands-on approach, the clerical/planning/administrative work necessary to support the operation of RCGs (work package 1), developing and operating a pan-RCG website (work package 2), and developing and putting in place a continuity including in financial terms, for the work detailed under work packages 1 and 2 (work package 3).

Workplan for 2020 – 2021

- To identify how to move forward with the project call
- To establish a consortium for the project call
- To involve all RCGs and PGECON in the project proposal
- To establish the fundament for long-term funding and establishing of supporting tools for RCG and PGECON.

Proposals for Recommendation and Decisions

No recommendation nor decision proposals from this ISSG.

5.5.3 ISSGs for season 2020-2021

Progress during RCG NA NS&EA and RCG Baltic 2020

The intersessional work 2019-2020 was setup of 16 different ISSGs including the two ICES RDB groups. Almost all the groups conducted their tasks as planned and was presenting the results during the meeting. The setup of working intersessional, was again proved to be successful to achieve the goals to make regional coordination efficient on a regional scale. The suggested next steps for the different ISSGs has been endorsed by the RCG Baltic and RCG NA NS&EA and is covered in this report. All existing groups are suggested to continue and a few new ISSG are suggested to start 2020-2021, in total 19 groups (including two ICES RDB groups) are suggested to work actively on different tasks within different topics. The overview of the suggested ISSG for the next period are presented below.

Workplan for 2020 - 2021

Overview of the ISSG groups suggested for the period 2020-2021. Tasks for suggested ISSG can be found in Annex 8 (state on 6th of July 2020).

Year	Topic	TOR	ISSG	Panregional /regional	status
2020-2021	End users and RCGs	TOR 1	Review and streamline dialogue between data providers (RCGs) and End users (ICES)	Panregional	ongoing
2020-2021	Data Analysis and Quality	TOR 2	RDB catch and effort overviews	Panregional	ongoing
2020-2021	Data Analysis and Quality	TOR 2	Métier issues	Panregional	ongoing
2020-2021	Data Analysis and Quality	TOR 2	Data Quality	Panregional	ongoing
2020-2021	Regional Database	TOR 2	ICES WGRDBESGOV	Panregional	ongoing
2020-2021	Regional Database	TOR 2	RDB Core group	Panregional	ongoing
2020-2021	Implication of management measures on data collection	TOR 3	Implications of the Landing Obligation	NA	currently on hold
2020-2021	Diadromous Fishes	TOR 4	Diadromous Fishes	Panregional	ongoing
2020-2021	Surveys	TOR 4	Surveys	Panregional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Optimized and Operational Regional Sampling Plans	Panregional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Towards a regional sampling plan: Case Study of the trawl fishery in Iberian Waters	Regional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Identification of case studies for PETS bycatch monitoring	Panregional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Towards a regional sampling plan for the freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic	Regional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Towards a regional sampling programme – Case study of fisheries for small pelagics in the Baltic	Regional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Evaluation of the data collected for the SSF at EU level	Panregional	ongoing
2020-2021	Regional Sampling plans	TOR 4	regionally coordinated stomach sampling	Panregional	ongoing
2020-2021	Regional Sampling plans	TOR 4	Recreational fishery	Panregional	new
2020-2021	Governance	TOR 4	Development of Draft Regional work plan	Panregional	ongoing
2020-2021	Governance	TOR 5	Revision of EUMAP	NA	currently on hold
2020-2021	Governance	TOR 5	Implementation of generic tools for the RCGs: Web, secretariat	Panregional	new
2020-2021	Governance	TOR 5	NC	Panregional	new

Proposals for Recommendation and Decisions

NANSEA BALTIC_2020_D08: ISSG proposed to work during season 2020-2021

6 AOB

This year the setup of the Technical meeting incorporated two relevant novelties. It was the first time that RCG Baltic and the RCG NA NS&EA conducted a back to back technical meeting, and the meeting was held remotely due to the COVID19 outbreak. At the end of the meeting a short questionnaire was sent to all participants in order to evaluate the meeting and get some feedback. Following questions were made:

1. Evaluation of the meeting
2. Suggestions for improvement
3. Is the online meeting (or a combination of online + physical meeting) a way forward for future RCGs?

Below a summary of the answers received

1. *Evaluation of the meeting*

- The back to back meeting was positive received by members of both RCGs. It was perceived as a more efficient way to address the common issues and to improve coordination and synergies between the two RCGs. It also represented an important time-saving for people attending both RCG.
- Participants were very positive with the organization of the remote meeting. The communication platform was stable, and the quality of video and sound was good. However, some connexion problems occurred with Finland who was using a "light version" of Zoom, which was less stable and more limited in functionalities. Zoom functionalities as the possibility of splitting in break out rooms were very useful during the meeting. Advantages and drawbacks reported for remote meetings are summarized in the third question of the questionnaire
- Scheduling and timetables were tightly followed. Some participants felt that everyone was given a chance to speak and that we had enough time for discussions. Others missed longer discussions, although they understand the importance of time keeping
- The work of ISSG was very well evaluated, as a tool to make the RCG work and the meeting much more productive (as each ISSG brings work on a certain topic already developed/mature to the meeting)
- In general participants reported that the subgroup had enough time for the needed discussions, but they missed some extra time dedicated to writing the subgroup results

2. *Suggestions for improvement*

- Better communication internally and externally is needed.
- Effort needed to prepare the recommendations / draft decisions for NCs and communicate with them to have all MS on board.
- More focus should be put on turning great ideas into concrete projects.
- Better use of collaborative docs, maybe synthesis so that we can have a quick update on what's going on in all topics, what's agreed, what's on discussion, etc...
- Try to reduce the feedbacks and wrap-ups, making more productive and effective decisions
- Focus on ISSG chairs and key persons coordinators etc rather than entire ISSGs.
- Give a little more time to present feedback from ISSG work and other presentations. Consider cutting down the number of presentations or dividing into parallel sessions.

- From a newcomer in RCG and subgroup chair perspective it would have been helpful to have some support about the organisation and about the format of expected outcomes
- Subgroups could start their work earlier before RCG meeting. There were quite many questionnaires and other work with short notice before the meeting.
- Extra time dedicated to writing the subgroup results
- The different subgroups should be able to start and open own meeting rooms.
- Have the possibility of joining multiple subgroups
- The virtual meeting makes it more difficult for some people to be involved in and participate in the discussions (Although this also happens in the physical meeting)
- Some discussions were cut off before everybody has talked
- Less long discussions
- Do not shorten lunch breaks
- Use other zoom functionalities like polls
- All participants having the cameras on
- Physically meeting
- More attendance of the social evening ;-)

3. *Is the online meeting (or a combination of online + physical meeting) a way forward for future RCGs?*

Participants reported different preferences between online meeting, physical meeting or a combination of both. Below you can find a list of advantages and disadvantages reported for each type of meeting

- Physical
 - They allow more informal conversations, discussions and free brainstorming, which cannot happen during the online meeting. This allows people to participate in these discussions in a more relaxed atmosphere and improves the cohesion of the group. This is especially relevant for new comers to get integrated.
 - Physical meetings are also important to make contacts
 - Easier to keep concentration and follow all interventions
 - In general, physical meetings are evaluated very positively and necessary, and most participants reported the need to have at least one physical meeting a year
- Virtual
 - It allows a higher number of participants that otherwise would not have been able to attend. This is especially relevant for people participating in just one part of the meeting, as for example the subgroups
 - Facilitates faster exchange of ideas and quickly go forwards in tasks.
 - People are so much more disciplined when participating online and there was no talking in circles.
 - It is easier for people to be heard in their interventions (although this can also be addressed with microphones in the physical meeting rooms)
 - Loss of meeting personally with people, allowing for more open and informal contacts.
 - Loss of brainstorming and discussion time during evenings and coffee breaks, and without them, the meeting becomes more static.
 - It is ok for people who know each other but difficult for new people,

- A week long online session is very tiresome to follow actively.
- Combination of physical and virtual meeting
 - This is seen by many as an option and different ways of combination are proposed. In this potential set up it is key to distinguish the work to be done online and the work left for the physical meeting. Proposed options were:
 - To have a shorter online meeting designed to support the physical meeting.
 - To have a physical meeting, but online for preparation and intersession work.
 - To have the decision meeting can be online and the technical meeting physical
 - In a combined meeting, virtual meetings could focus on presentations and ISSG feedbacks, whereas discussions and decisions would be kept for the physical meeting. There is also the proposal to make the subgroup work virtual, to allow the participation of experts but also NCs in when and where needed.
 - Main risks identified of this option are, firstly, that we shouldn't increase the number of meetings, as we already have too many meetings and that we are also committed to the work of the ISSGs (which have online meetings throughout the year). And secondly, that participating remotely while the majority is in the room leads to biased participation (one proposed solution for this is to consider having everyone in the room also on zoom and with cameras on).

7 Conclusions

The approach of having the ISSG as the back bone of the RCG NA NS&EA and the RCG Baltic was very positive evaluated. The output produced in these ISSG is very productive and forms the basis of the discussions and future development of the RCG work.

The back to back meeting of the two RCGs, i.e. RGG NA NS&EA and the RCG Baltic, was positively received by members of both RCGs. It was perceived as a more efficient way to address the common issues and to improve coordination and synergies between the two RCGs. It also represented an important time-saving for people attending both RCG.

During the RCG NA NS&EA 2019 and RCG Baltic 2019, there was too little time for discussion in sub-groups. In this year's RCG, subgroups got allocated several sessions. In general participants reported that the subgroup had enough time for the needed discussions, however they missed some extra time dedicated to writing the subgroup results.

For new participants, and i.e. new co-chair, there should be some time dedicated beforehand to describe better the expectations and a supportive system for them would be welcomed.

The participants expressed the need to have some more time available for the writing.

The coming period 2020-2021 is the third year of the new set-up (Technical meeting and Decision meeting). Once the cycle of three years is finalized, a full evaluation of the setup will be done

8 Next meeting

RCG NA NS&EA and RCG Baltic will meet 7-11 June 2021 in Poland.

The RCG NA NS&EA and RCG Baltic 2020 meeting will be followed up with a RCG Decision meeting, taking one-day meeting for the NCs (21st of September 2020).

For the RCG NA NS&EA 2021 the chairs are Lucia Zarauz and Harriet van Overzee, for RCG Baltic 2021 Elo Rasmann and Sven Stötera.

Annex 1: List of Participants

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Annex 2: Overview on commercial sampling during Covid-19 pandemia

Baltic Stocks

Stock	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
bil.27.22-32-	1 (3)	1 (1)	1.8 (2)	1.8 (2)	1 (1)	1.8 (2)
cod.27.22-24-	1.3 (2)	2 (3)	2 (3)	2 (3)	2 (3)	2 (3)
cod.27.24-32-	2 (2)	1.7 (3)	1.7 (3)	1.7 (3)	1.9 (3)	1.9 (3)
dab.27.22-32-	1.2 (2)	2 (2)	2.2 (3)	2.2 (3)	2 (2)	2.2 (3)
fle.27.2223-	1.3 (2)	2 (2)	2.2 (3)	2.2 (3)	2 (2)	2.2 (3)
fle.27.2425-	1.2 (3)	2 (2)	2.2 (3)	2.4 (4)	2.3 (3)	2.4 (4)
fle.27.2628-	1 (1)	1 (2)	1 (2)	2.3 (3)	2.3 (3)	2.3 (3)
fle.27.2729-32-		1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
her.27.20-24-	1 (3)	1.5 (4)	1.5 (4)	1 (1)	1 (1)	1 (1)
her.27.25-2932-	1.1 (5)	1.3 (7)	1.3 (7)	2 (2)	2 (2)	2 (2)
her.27.28-	1 (1)	1 (1)	1 (1)			
her.27.3031-	1 (1)	1 (2)	1 (2)			
ple.27.21-23-	1.2 (2)	2 (2)	2.2 (3)	2.2 (3)	2.2 (3)	2.2 (3)
ple.27.24-32-	1.3 (3)	2 (2)	2.2 (3)	2.4 (4)	2.3 (3)	2.4 (4)
sal.27.22-31-	2 (2)	2 (3)	2 (3)	3 (2)	3 (2)	3 (2)
sal.27.32-		1 (1)	1 (1)			
sol.27.20-24-	1 (2)	2 (2)	2.2 (3)	2.2 (3)	2 (2)	2.2 (3)
spr.27.22-32-	1.1 (5)	1.1 (8)	1.1 (8)	1.7 (3)	1.7 (3)	1.7 (3)
trs.27.22-32-	1.7 (2)	1.8 (4)	1.8 (4)	2.3 (3)	2.3 (3)	2.3 (3)
tur.27.22-32-	1.2 (3)	1 (2)	1.6 (3)	2.2 (3)	2 (2)	2.2 (3)

Variable

Baltic stocks
Covid-19 impact
Mar-May 2020
(number of countries
in brackets)

3 - extreme impact

2 - medium impact

1 - low or no impact

North Sea Stocks

Stock	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
bil.27.3a47de-	1.8 (7)	2.2 (7)	2.3 (8)	2.2 (8)	2.3 (5)	2.2 (8)
caa.27.3a47de-	2.7 (1)	2.8 (2)	2.6 (3)	2.2 (3)	2.8 (2)	2.2 (3)
cod.27.21-	1.7 (2)	2.5 (2)	2.5 (2)	2.8 (2)	2.8 (2)	2.8 (2)
cod.27.47d20-	1.8 (6)	2.1 (7)	2.1 (7)	2.2 (7)	2.2 (7)	2.2 (7)
coe.27.3a47de-	2.1 (4)	2.1 (3)	2.2 (4)	2.2 (4)	2.1 (3)	2.2 (4)
dab.27.3a4-	1.7 (5)	2.2 (4)	2.4 (6)	2.4 (7)	2.3 (5)	2.4 (7)
fle.27.3a4-	2 (6)	2.3 (4)	2.5 (6)	2.3 (6)	2.6 (3)	2.3 (6)
gug.27.3a47d-	1.8 (5)	2.8 (3)	2.6 (6)	2.4 (6)	2.8 (3)	2.4 (6)
hal.27.3a47de-	2.1 (4)	2.7 (2)	2.7 (4)	2.7 (4)	2.7 (2)	2.7 (4)
her.27.3a47d-	1.7 (6)	2.2 (6)	2.2 (6)	2.2 (4)	2.1 (3)	2.2 (4)
hom.27.3a4bc7d-	1.7 (7)	1.9 (5)	2.1 (7)	2.1 (6)	1.8 (4)	2.1 (6)
lem.27.3a47d-	1.8 (7)	2.2 (7)	2.4 (8)	2.2 (8)	2.4 (6)	2.2 (8)
mur.27.3a47d-	1.6 (6)	2.1 (3)	2.3 (6)	2.1 (6)	2.1 (3)	2.1 (6)
nep.fu.3-4-	1.3 (2)	3 (2)	2.5 (2)	2.8 (2)	3 (2)	2.8 (2)
nep.fu.5-	3 (1)		2.3 (2)	1.8 (2)		1.8 (2)
nop.27.3a4-	1.3 (2)	3 (1)	2.6 (3)	2.1 (3)	2.7 (1)	2.1 (3)
ple.27.420-	1.8 (5)	2.3 (5)	2.4 (6)	2.4 (6)	2.3 (5)	2.4 (6)
ple.27.7d-	1.3 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)
pol.27.3a4-	1.6 (3)	2.7 (1)	2.7 (2)	2.1 (3)	2.7 (1)	2.7 (2)
pra.27.3a4a-	1 (2)	3 (1)	2.3 (2)	2.8 (2)	3 (1)	2.5 (2)
rng.27.3a-	1 (1)		2.7 (1)	2.7 (1)		2.7 (1)
san.sa.1r-				1 (1)		
sol.27.4-	2.1 (5)	2.4 (6)	2.4 (6)	2.4 (6)	2.4 (6)	2.4 (6)
sol.27.7d-	1.5 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)
spr.27.3a4-	1.7 (5)	2.1 (4)	2.2 (5)	2.2 (4)	2.7 (2)	2.7 (3)
sys.27.3a47d-	1.6 (6)	2.1 (3)	2.3 (5)	2.1 (6)	2.1 (3)	2.3 (5)
tur.27.3a-	1 (2)		2.7 (1)	2.7 (1)		2.7 (1)
tur.27.4-	2.1 (5)	2.5 (5)	2.5 (5)	2.3 (5)	2.6 (3)	2.3 (5)
whg.27.3a-	1 (2)	3 (1)	2.8 (2)	2.8 (2)	3 (1)	2.8 (2)
whg.27.47d-	1.6 (6)	2.2 (6)	2.2 (7)	2.2 (7)	2.2 (6)	2.2 (7)
wit.27.3a47d-	1.9 (5)	2.4 (4)	2.5 (5)	2.4 (6)	2.8 (4)	2.7 (5)

Variable

North Sea stocks
Covid-19 impact
Mar-May 2020
(number of countries
in brackets)

3 - extreme impact

2 - medium impact

1 - low or no impact

North Atlantic Stocks (1)

Stock	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
ane.27.8-	1 (1)	2.3 (1)	2.3 (1)	2.3 (1)		2.3 (1)
ane.27.9a-	1 (2)	2.7 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
ank.27.78abd-	1 (1)	2.3 (1)	2 (1)	2 (1)		2 (1)
ank.27.8c9a-	1 (2)	2.3 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
aru.27.5b6a-	1 (2)	1 (1)	2.2 (2)	2.2 (3)	1.8 (2)	2.2 (3)
boc.27.6-8-	1 (1)	1 (1)	2.5 (2)	2.2 (3)	2.7 (1)	2.2 (3)
bss.27.8ab-	1 (1)		3 (1)	3 (1)		3 (1)
bss.27.8c9a-	1 (2)	2.3 (1)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
cod.27.6a-	2 (3)	2 (3)	2.7 (3)	2.3 (4)	2.1 (3)	2.3 (4)
cod.27.6b-	2.5 (2)	2.5 (2)	2.5 (2)	2.7 (2)	2.7 (2)	2.7 (2)
cod.27.7a-	1.9 (5)	1.9 (5)	2.2 (6)	2 (6)	2.1 (4)	2 (6)
cod.27.7e-k-	1.8 (5)	1.8 (5)	2.3 (6)	2.2 (6)	2 (5)	2.2 (6)
had.27.5b-	2.7 (1)	2.7 (1)	2.7 (1)	2.7 (1)	2.7 (1)	2.7 (1)
had.27.6b-	1.8 (2)	2.2 (2)	2.5 (2)	2.3 (2)	2 (2)	2.7 (2)
had.27.7a-	1.4 (4)	1.8 (3)	2.2 (4)	1.7 (5)	1.4 (3)	1.9 (5)
had.27.7b-k-	1 (5)	1.6 (4)	2.2 (5)	2.1 (6)	1.7 (3)	2.2 (6)
hke.27.8c9a-	1 (2)	2.7 (2)	2.2 (2)	2.2 (2)	2.3 (1)	2.2 (2)
hom.27.9a-	1.2 (2)	2.7 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
ldb.27.8c9a-	1.2 (2)	2.2 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
meg.27.7b-k8abd-	1.2 (4)	2.1 (4)	2 (4)	2.1 (4)	1.9 (3)	2.1 (4)
meg.27.8c9a-	1 (2)	2.7 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
mon.27.78abd-	1.3 (5)	2.1 (4)	2.1 (5)	2.2 (5)	2.1 (4)	2.2 (5)
mon.27.8c9a-	1.3 (2)	2.7 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
mur.27.67a-ce-k89a-	1.3 (7)	1.8 (4)	2.3 (7)	2.2 (8)	2 (3)	2.2 (8)
nep.fu.15-	1.7 (1)		1 (1)	1 (1)		1 (1)
nep.fu.16-	1 (1)		3 (1)	3 (1)		3 (1)
nep.fu.17-	1.7 (1)		1 (1)	1 (1)		1 (1)
nep.fu.19-	1.7 (1)		1 (1)	1 (1)		1 (1)
nep.fu.20-21-	1.7 (1)		1 (1)	1 (1)		1 (1)
nep.fu.2021-	1 (1)		3 (1)	3 (1)		3 (1)
nep.fu.22-	1.3 (2)	1 (1)	1.9 (4)	1.9 (4)	1 (1)	1.9 (4)
nep.fu.2324-	1 (2)	1 (1)	2 (2)	2 (2)	1 (1)	2 (2)

North Atlantic stocks
Covid-19 impact
Mar-May 2020
(number of countries
in brackets)

3 - extreme impact
2 - medium impact
1 - low or no impact

North Atlantic Stocks (2)

Stock	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
nep.fu.2627-	1 (1)		3 (1)	3 (1)		3 (1)
nep.fu.30-	1 (1)	2.3 (1)	3 (1)	3 (1)		3 (1)
pil.27.7-	1 (2)	2 (1)	2.6 (3)	2.2 (3)		2.2 (3)
pil.27.8abd-	1 (1)	1 (1)	2 (1)	2 (1)		2 (1)
pil.27.8c9a-	1 (2)	2.7 (2)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
ple.27.7a-	1.4 (4)	2.2 (4)	2.2 (4)	2.1 (3)	1.9 (3)	2.1 (3)
ple.27.7bc-	1 (1)	1 (1)	2.3 (1)	2.7 (1)	2 (1)	2.7 (1)
ple.27.7e-	1.2 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)
ple.27.7fg-	1.3 (5)	2.2 (4)	2.3 (5)	2.4 (5)	2.1 (4)	2.4 (5)
ple.27.7h-k-	1.4 (3)	2.2 (2)	2.7 (3)	2.8 (3)	2.3 (2)	2.8 (3)
ple.27.89a-	1.2 (2)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
pok.27.7-10-	1.2 (5)	1.7 (1)	2.7 (3)	2.8 (4)	2.7 (1)	2.8 (4)
poi.27.67-	1.6 (7)	2.1 (5)	2.4 (6)	2.5 (7)	2.1 (3)	2.5 (7)
poi.27.89a-	1 (2)	2.3 (1)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
sbr.27.6-8-	1.8 (2)		2.8 (2)	2.8 (2)		2.8 (2)
sbr.27.9-	1.3 (2)	2.3 (1)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
sho.27.89a-	1.5 (2)	2.3 (1)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
sol.27.7a-	1.8 (4)	2.2 (4)	2.2 (4)	2.1 (3)	2.1 (3)	2.1 (3)
sol.27.7bc-	2.3 (1)	2.3 (1)	2.3 (1)	2.7 (1)	2.7 (1)	2.7 (1)
sol.27.7e-	1 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)	1.8 (2)
sol.27.7fg-	1.3 (5)	2.2 (4)	2.3 (5)	2.4 (5)	2.2 (4)	2.4 (5)
sol.27.7h-k-	1.8 (3)	2.5 (2)	2.7 (3)	2.8 (3)	2.7 (2)	2.8 (3)
sol.27.8ab-	1 (2)	1 (1)	2 (2)	2 (2)	1 (1)	2 (2)
sol.27.8c9a-	1 (2)	2.3 (1)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
spr.27.67a-cf-k-	2.7 (2)	2.7 (2)	2.7 (3)	2.7 (3)	2.7 (2)	2.7 (3)
syc.27.67a-ce-j-	1.9 (7)	2.1 (3)	2.4 (6)	2.3 (8)	2.1 (3)	2.5 (7)
syc.27.8abd-	1 (2)	1 (1)	2 (2)	2 (2)	1 (1)	2 (2)
syc.27.8c9a-	1 (2)	2.3 (1)	2.7 (2)	2.7 (2)	2.3 (1)	2.7 (2)
syt.27.67-	2 (4)	1.8 (2)	2.2 (4)	2 (5)	1.8 (2)	2.2 (4)
usk.27.6b-	1.8 (2)	2.7 (1)	1.8 (2)	2.7 (2)	2.7 (1)	2.7 (2)
whg.27.6a-	1.6 (3)	2.2 (2)	2.7 (3)	2.6 (3)	2 (2)	2.8 (3)
whg.27.6b-	1.8 (2)	2.2 (2)	2.5 (2)	2.3 (2)	2 (2)	2.7 (2)
whg.27.7a-	1.7 (4)	1.8 (3)	2.2 (4)	1.9 (3)	1.2 (2)	2.1 (3)
whg.27.7b-ce-k-	1.3 (5)	1.8 (3)	2.2 (4)	2.3 (5)	1.7 (3)	2.4 (5)
whg.27.89a-	1.1 (3)	1.7 (2)	2.1 (3)	2.1 (3)	1.7 (2)	2.1 (3)

North Atlantic stocks
Covid-19 impact
Mar-May 2020
(number of countries
in brackets)

3 - extreme impact
2 - medium impact
1 - low or no impact

Eastern Arctic Stocks

Stock	Variable					
	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
bli.27.5b67-	1.8 (2)	2.7 (1)	2.5 (2)	2.7 (2)	2.7 (1)	2.7 (2)
cod.27.1-2-	1 (3)	2 (2)	2 (2)	2 (2)	2 (2)	2 (2)
ghl.27.1-2-	1 (2)	1 (2)	2 (2)	2 (2)	1 (2)	2 (2)
had.27.1-2-	1 (2)	1 (1)	2 (2)	2 (2)	1 (1)	2 (2)
lin.27.1-2-	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
pok.27.1-2-	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
reb.27.1-2-	1 (2)	2 (2)	2 (2)	2 (2)	2 (2)	2 (2)
reg.27.1-2-	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)
usk.27.1-2-	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)	1 (1)

Eastern Arctic stocks
Covid-19 impact
Mar-May 2020
(number of countries in brackets)

3 - extreme impact
2 - medium impact
1 - low or no impact

Northwest Atlantic

Stock	Variable					
	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
ALF/N6G-	1 (1)		3 (1)	3 (1)		3 (1)
COD/N2J3KL-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
COD/N3M-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
COD/N3NO-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
GHL/N3LMNO-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
HKW/N3NO-	1 (1)		3 (1)	3 (1)		3 (1)
PLA/N3LNO-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
PLA/N3M-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
PRA/N3LNO-	1 (1)		3 (1)	3 (1)		3 (1)
PRA/N3M-	1 (1)		3 (1)	3 (1)		3 (1)
RED/N3L-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
RED/N3M-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
RED/N3O-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
RHG/N_SA3-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
SKA/N3LNO-	1 (1)		3 (1)	3 (1)		3 (1)
SQI/N34-	1 (1)		3 (1)	3 (1)		3 (1)
WIT/N3L-	1 (1)		3 (1)	3 (1)		3 (1)
WIT/N3NO-	1 (1)		3 (1)	3 (1)		3 (1)
YEL/N3LNO-	1 (1)		3 (1)	3 (1)		3 (1)

Northwest Atlantic stocks
Covid-19 impact
Mar-May 2020
(number of countries in brackets)

3 - extreme impact
2 - medium impact
1 - low or no impact

Pan Regional Stocks

Stock	Pan-regional stocks Covid-19 impact Mar-May 2020 (number of countries in brackets)					
	Landings	Landings age sampling	Landings length sampling	Discard estimates	Unwanted catch age sampling	Unwanted catch length sampling
anr.27.3a46-	2.2 (4)	2.8 (3)	2.7 (5)	2.4 (6)	2.8 (4)	2.4 (6)
aru.27.123a4-	1 (3)	1.3 (1)	2 (2)	2.1 (3)	1.8 (2)	2.1 (3)
aru.27.6b7-1012-	1 (1)		3 (1)	3 (1)		3 (1)
bli.27.nea-	1.4 (4)	2.7 (1)	2.8 (3)	2.8 (3)	2.7 (1)	2.8 (3)
bsf.27.nea-	1.6 (3)	2.5 (2)	2.7 (3)	2.7 (3)	2.5 (2)	2.7 (3)
bsa.27.4bc7ad-h-	1.8 (4)	2.2 (4)	2.2 (5)	2 (5)	2.1 (3)	2 (5)
dgs.27.nea-	1.5 (7)	2.7 (2)	2.7 (6)	2.5 (7)	2.7 (2)	2.5 (7)
ele.2737.nea-	1.2 (2)	1 (2)	1.3 (2)	1 (1)		1 (1)
gag.27.nea-	1.6 (4)	2.7 (1)	2.7 (4)	2.8 (4)	2.7 (1)	2.8 (4)
gfb.27.nea-	1.7 (8)	2.3 (4)	2.6 (7)	2.5 (8)	2.6 (3)	2.7 (7)
ghl.27.561214-	2.2 (3)	2.8 (2)	2.7 (3)	2.8 (3)	2.8 (2)	2.8 (3)
gur.27.3-8-	1.9 (5)	2.7 (2)	2.6 (6)	2.4 (6)	2.7 (2)	2.4 (6)
had.27.46a20-	1.7 (7)	2.5 (5)	2.7 (7)	2.5 (8)	2.5 (5)	2.5 (8)
her.27.1-24a514a-	1 (1)	1 (1)	1.3 (1)	1 (1)	1 (1)	1 (1)
hke.27.3a46-8abd-	1.6 (9)	2.4 (7)	2.4 (8)	2.3 (10)	2.4 (5)	2.3 (10)
hom.27.2a4a5b6a7a-ce-k8-	1.7 (8)	1.9 (7)	1.9 (8)	1.9 (7)	1.7 (5)	1.9 (7)
lez.27.4a6a,lez.27.4a6a-	1.8 (2)	2.2 (2)	2.5 (2)	2.7 (2)	2.3 (2)	2.7 (2)
lin.27.3a4a6-91214-	1.7 (8)	2.3 (7)	2.5 (8)	2.4 (9)	2.3 (5)	2.5 (8)
mac.27.nea-	1.4 (11)	2 (9)	2.1 (10)	2.1 (10)	1.8 (6)	2.1 (10)
pok.27.3a46-	1.6 (7)	2.2 (5)	2.4 (7)	2.3 (8)	2.4 (5)	2.5 (7)
por.27.nea-	2.7 (1)	2.7 (1)	2.7 (2)	2.1 (3)	2.7 (1)	2.7 (2)
Rajidae-	1.6 (8)	2.3 (4)	2.4 (9)	2.4 (9)	2.3 (4)	2.4 (9)
reb.2127.dp,reb.2127.sp,reb.27.14b-	2 (2)	3 (2)	3 (2)	3 (2)	3 (2)	3 (2)
reg.27.461214-	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
rhg.27.nea-	2.3 (1)	2.3 (1)	2.3 (1)	2.3 (1)	2.3 (1)	2.3 (1)
rng.27.1245a8914ab,rng.27.5a10b12ac14b-	2.3 (1)	2.3 (1)	2.3 (1)	2.3 (1)	2.3 (1)	2.3 (1)
rng.27.5a10b12ac14b,rng.27.5b6712b-	1 (1)	3 (1)	3 (1)	3 (1)	3 (1)	3 (1)
rng.27.5b6712b-	1 (2)	3 (1)	2.7 (2)	2.8 (3)	2.8 (2)	2.8 (3)
sai.neac.all-		2 (1)	2 (1)	1 (1)		1 (1)
sdv.27.nea-	1.6 (4)	2.5 (2)	2.5 (4)	2.3 (5)	2.5 (2)	2.6 (4)
spr.27.7de-	2.3 (1)	2.7 (1)	2.7 (1)	1.8 (2)		2.7 (1)
usk.27.3a45b6a7-912b-	2.2 (2)	2.7 (1)	2.7 (1)	2.7 (1)	2.7 (1)	2.7 (1)
whb.27.1-91214-	1.6 (9)	2.1 (7)	2.2 (9)	2.2 (8)	1.9 (5)	2.2 (8)

Pan-regional stocks
Covid-19 impact
Mar-May 2020
(number of countries
in brackets)

3 - extreme impact
2 - medium impact
1 - low or no impact

Annex 3: Pre-approved ICES Group data access (ISSG RDB Catch and Effort overviews)

These ICES expert groups have access to all landings data, effort data and aggregated sample data from the RDB/RDBES, without requesting permission from the countries.

Access to detailed sample data have to be requested at each country.

To make the ICES EG's access to detailed data and the approvals from the countries as easy as possible EU MS / ICES countries can choose to pre-approve access to detailed data for all EGs on this list – this approval must be given in writing to the RDBES host. This approval must be renewed by 31 January each year in writing to the RDBES host.

Yellow marked: EGs which requested data from the RDB in 2019.

Pre-approved ICES Group data access 2020.

Group Acronym	Group Name	Steering Group/parent
[Any new ICES EG under FRSG]	[Any new or missing ICES Expert Group under FRSG]	FRSG
ICES Secretariat	ICES Secretariat primarily for special requests	
WKMSSEDEV	Workshop on MSE development	FRSG
WKCOLIAS	Workshop on Atlantic chub mackerel (<i>Scomber colias</i>)	FRSG
WKSHARK6	Workshop on the OSPAR and NEAFC joint advice request to generate species distribution maps for listed deep sea shark species and provide scientific support for ICES advice on bycatch management options	FRSG
WKRFSAM	Workshop on the Review and Future of State Space Stock Assessment Models in ICES	FRSG
HAWG	Herring Assessment Working Group for the Area South of 62° N	FRSG
WGTAFGOV	Working Group on Transparent Assessment Framework Governance	FRSG
WKGSS	Benchmark Workshop on Greater silver smelt	FRSG
WKCLuB	Benchmark Workshop on Herring in the Gulf of Bothnia	FRSG
WKEEL-MIGRATION	Workshop on relevant geographical area on the temporal migration patterns of European eel	FRSG
WKCELTIC	Benchmark Workshop on Celtic Sea Stocks	FRSG
WKDEM	Benchmark Workshop for Demersal Species	FRSG
WKFlatNSCS	Benchmark Workshop for Flatfish stocks in the North Sea and Celtic Sea	FRSG
WKTAF	Workshop on Training for the Transparent Assessment Framework	FRSG
NIPAG	Joint NAFO/ICES Pandalus Assessment Working Group	FRSG
WKBaltSalMP	Workshop on Evaluation of certain provisions of a draft Baltic salmon MP	FRSG
WKREBUILD	Workshop on guidelines and methods for the evaluation of rebuilding plans	FRSG
WKBALTIC	Workshop on the Ecosystem Based Management of the Baltic Sea	FRSG
WKMIXFISH	Scoping workshop on next generation of mixed fisheries advice	FRSG
WKTAF	Workshop on Training for the Transparent Assessment Framework	FRSG
HAWG	Herring Assessment Working Group for the Area South of 62° N	FRSG
WGNAS	Working Group on North Atlantic Salmon	FRSG
WGBAST	Assessment Working Group on Baltic Salmon and Trout	FRSG
WGBFAS	Baltic Fisheries Assessment Working Group	FRSG

AFWG	Arctic Fisheries Working Group	FRSG
WGNSSK	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak	FRSG
NWWG	Northwestern Working Group	FRSG
WGDEEP	Working Group on the Biology and Assessment of Deep-sea Fisheries Resources	FRSG
WGBIE	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion	FRSG
WGCSE	Working Group for the Celtic Seas Ecoregion	FRSG
WKENSEM- BLE	Joint ICES-JRC Workshop on Model Ensembles for Stock Assessment and Advice	FRSG
WGEF	Working Group on Elasmobranch Fishes	FRSG
WKDSG	Workshop on Standards and Guidelines for fisheries dependent data	FRSG
WGMIXFISH- METH	Working Group on Mixed Fisheries Advice Methodology	FRSG
WGWIDE	Working Group on Widely Distributed Stocks	FRSG
WKDLSSLS	Workshop on Data-limited Stocks of Short-lived Species	FRSG
WGEEL	Joint EIFAAC/ICES/GFCM Working Group on Eels	FRSG
WGNSSK	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak	FRSG
WGCSE	Working Group for the Celtic Seas Ecoregion	FRSG
WKLIFE X	Tenth Workshop on the Development of Quantitative Assessment Methodologies based on LIFE-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks	FRSG
NWWG	Northwestern Working Group	FRSG
WGDIAD	Working Group on Science to Support Conservation, Restoration and Management of Diadromous Species	FRSG
WGTRUTTA	Working Group with the Aim to Develop Assessment Models and Establish Biological Reference Points for Sea Trout (Anadromous <i>Salmo trutta</i>) Populations (WGTRUTTA)	FRSG
WKG MSE3	The third Workshop on guidelines for management strategy evaluations	FRSG
WKNSROP	Workshop on the North Sea reopening protocol	FRSG
WGHANSA	Working Group on Southern Horse Mackerel, Anchovy, and Sardine	FRSG
WGMIXFISH- ADV	Working Group on Mixed Fisheries Advice	FRSG
PGDATA	Planning Group on Data Needs for Assessment and Advice	EOSG
WGRFS	Working Group on Recreational Fisheries Surveys	EOSG
SCRDB	Steering Committee of the Regional Fisheries Database	EOSG
WGCATCH	Working Group on Commercial Catches	EOSG
WGBIOP	Working Group on Biological Parameters	EOSG
WGCEPH	Working Group on Cephalopod Fisheries and Life History	EPDSG
WGScallop	Scallop Assessment Working Group	EPDSG
WGCRAW	Working Group on the Biology and Life History of Crabs	EPDSG
WGBYC	Working Group on Bycatch of Protected Species	HAPISG
WGSFD	Working Group on Spatial Fisheries Data	HAPISG
MGWG	Methods Working Group	HAPISG
WGMEDS	Working Group on Methods for Estimating Discard Survival	HAPISG

Annex 4: Review data policy overviews (ISSG RDB Catch and Effort overviews)

Rules

Rule nr	Rule Type	Rule description
1	General rule	Sample data (CS), landing data (CL) and effort data (CE) can always be shown when data are disaggregated at the following level: Year, Quarter, Species, Metier level 4-6, Area
2	CL/CE rule	When showing landings and/or effort data in a public report the highest resolution is determined by selecting at least 4 out of the 7 following variables: Vessel flag country, Year, Month, Species, Metier level 4-6, Vessel length category, Statistical rectangle. Only one option/figure can be shown to ensure conclusions cannot be drawn from a combination of several figures. If it is needed to publish data at higher resolution the relevant National Correspondents have to be asked for approval.
3	CS rule	The data that will be publicly available through the RCGs or ICES Expert Groups reports should be aggregated to the same level as the landings data.
4	CS rule	It is not allowed to publish CS data in a report in such a way that the individual catches from a given trip are shown.
5	CS rule	In the overall data there in general must be more than three different samples in each variable to be able to aggregate over the variables. When showing sample data in a public report the highest resolution is determined by selecting at least 3 out of the 9 following variables: Vessel flag country, Year, Month, Species, Metier level 4-6, Vessel length category, Vessel size category, Vessel power category, Statistical rectangle. Only one option/figure can be shown to ensure conclusions cannot be drawn from a combination of several figures:
6	CS rule	When plotting maps a maximum of three of the following variables can be used: Vessel flag country, Year, Month, Species, Metier level 4-6, Vessel length category, Vessel size category, Vessel power category, Position. This rule does not apply if the amount of data in the map is so sparse that individual vessels or trips might be identified. It is the responsibility of the data user to ensure that maps do not plot data that comes from a small number of vessels or trips.
7	CS rule	Individual fish (CA) holds information on measurement from individual fish. It is always acceptable to show these as individual measurements.

Report analysis

Report Section	Comments	Chart/map/table title	Disaggregation variables			
Overall fleet evolution	This data is derived from the publicly available EU Fleet register so there are no confidentiality issues	ALL	N/A			
Landings (CL)	Rule 1	2.1.1 Landings by species	Year	Species		
Landings (CL)	Rule 2	2.1.1.2. Landings by Species and Country	Year	Species	Vessel flag country	
Landings (CL)	Rule 1	2.1.2.1. Landings by Catch Group	Year	Species assemblage		
Landings (CL)	Rule 2	2.1.2.2. Landings by Catch Group and Country	Year	Species assemblage	Vessel flag country	
Landings (CL)	Rule 2	2.1.3.1. Landings by Vessel Length Category and Country	Year	Vessel length category	Vessel flag country	
Landings (CL)	Rule 1	2.1.4.1. Landings by Area	Year	Area		
Landings (CL)	Rule 2	2.1.4.2. Landings by Area and Country	Year	Area	Vessel flag country	
Landings (CL)	Rule 2	2.1.4.3. Landings by Country and Area	Year	Area	Vessel flag country	
Landings (CL)	Rule 1	2.1.5.1. Landings by Metier Lv5	Year	Metier (level 5)		
Landings (CL)	Rule 2	2.1.5.2. Landings by Metier Lv5 and Country	Year	Metier (level 5)	Vessel flag country	
Landings (CL)	Rule 2	2.1.5.3. Landings by Metier Lv6	Year	Metier (level 6)		
Landings (CL)	Rule 2	2.1.5.4. Landings by Metier Lv6 and Country	Year	Metier (level 6)	Vessel flag country	
Landings (CL)	Rule not defined for harbour or landing country	2.1.6.1. Landings by 20 main Harbours	Year	Harbour		
Landings (CL)	Rule not defined for harbour or landing country	2.1.6.2. Landings by 20 main Harbours and Country	Year	Harbour	Vessel flag country	
Landings (CL)	Rule not defined for harbour or landing country	2.1.6.3. Sum of Landings by Harbour	Year	Harbour		

Report Section	Comments	Chart/map/table title	Disaggregation variables			
			Year	Harbour	Vessel flag country	
Landings (CL)	Rule not defined for harbour or landing country	2.1.6.4. Sum of Landings by Harbour	Year	Harbour	Vessel flag country	
Landings (CL)	Rule not defined for harbour or landing country	2.1.7.1. River plot of Landings between Country and Landing Country	Year	Landing country	Vessel flag country	
Landings (CL)	Rule 2	2.1.7.2. Sum of Landings by Statistical Rectangle	Year	Stat. rectangle		
Small pelagic landings	Rule 2	2.2.1.1. Landings by Country	Year	Species assemblage	Vessel flag country	
Small pelagic landings	Rule 1	2.2.2.1. Landings by Species	Year	Species		
Small pelagic landings	Rule 2	2.2.2.2. Landings by Species and Country	Year	Species	Vessel flag country	
Small pelagic landings	Rule 2	2.2.3.1. Landings by Fleet	Year	Species assemblage	Vessel flag country	Vessel length category
Small pelagic landings	Rule 2	2.2.3.2. Landings by Country and Vessel Length Category	Year	Species assemblage	Vessel flag country	Vessel length category
Small pelagic landings	Rule 2	2.2.3.3. Landings by Vessel Length Category and Country	Year	Species assemblage	Vessel flag country	Vessel length category
Small pelagic landings	Rule 1	2.2.4.1. Landings by Area	Year	Species assemblage	Area	
Small pelagic landings	Rule 2	2.2.4.2. Landings by Area and Country	Year	Species assemblage	Area	Vessel flag country
Small pelagic landings	Rule 2	2.2.4.3. Landings by Country and Area	Year	Species assemblage	Area	Vessel flag country
Small pelagic landings	Rule 1	2.2.4.4. Sum of Landings (1000 t) by Area (small pelagic)	Year	Species assemblage	Area	
Small pelagic landings	Rule 2	2.2.4.5. Sum of Landings by Area (small pelagic)	Year	Species assemblage	Area	Vessel flag country
Small pelagic landings	Rule 1	2.2.5.1. Landings by Metier Lv5	Year	Species assemblage	Metier (level 5)	
Small pelagic landings	Rule 2	2.2.5.2. Landings by Metier Lv5 and Country	Year	Species assemblage	Metier (level 5)	Vessel flag country

Report Section	Comments	Chart/map/table title	Disaggregation variables			
Small pelagic landings	Rule 1	2.2.5.3. Landings by Metier Lvl6	Year	Species assemblage	Metier (level 6)	
Small pelagic landings	Rule 2	2.2.5.4. Landings by Metier Lvl6 and Country	Year	Species assemblage	Metier (level 6)	Vessel flag country
Small pelagic landings	Rule not defined for harbour or landing country	2.2.6.1. Landings by 20 main Harbours	Year	Species assemblage	Harbour	
Small pelagic landings	Rule not defined for harbour or landing country	2.2.6.2. Landings by 20 main Harbours and Country	Year	Species assemblage	Harbour	Vessel flag country
Small pelagic landings	Rule not defined for harbour or landing country	2.2.6.3. Sum of Landings by Harbour (small pelagic)	Year	Species assemblage	Harbour	
Small pelagic landings	Rule not defined for harbour or landing country	2.2.6.4. Sum of Landings by Harbour (small pelagic)	Year	Species assemblage	Harbour	Vessel flag country
Small pelagic landings	Rule not defined for harbour or landing country	2.2.7.1. River plot of Landings between Country and Landing Country	Year	Species assemblage	Landing country	Vessel flag country
Small pelagic landings	Rule 2	2.2.8.1. Sum of Landings by Statistical Rectangle (small pelagic)	Year	Species assemblage	Stat. rectangle	
Demersal Landings	Assume same plots as small pelagic	...				
Flatfish Landings	Assume same plots as small pelagic	...				
Effort	Rule 2	3.1.1.1. Number of trips by Country	Year	Vessel flag country		
Effort	Rule 2	3.1.1.2. days at Sea by Country	Year	Vessel flag country		
Effort	Rule 2	3.1.1.3. KW-Days * 1000 by Country	Year	Vessel flag country		
Effort	Rule 2	3.1.1.4. GT-Days * 1000 by Country	Year	Vessel flag country		
Effort	Rule 2	3.2.1.1. Number of trips by Fleet	Year	Vessel flag country	Vessel length category	

Report Section	Comments	Chart/map/table title	Disaggregation variables			
Effort	Rule 2	3.2.1.2. Number of trips by Country and Vessel Length Category	Year	Vessel flag country	Vessel length category	
Effort	Rule 2	3.2.1.3. Number of trips by Vessel Length Category and Country	Year	Vessel flag country	Vessel length category	
Effort	Rule 2	3.3.1.1. Number of trips by Area. (u10m)	Year	Area	Vessel length category	
Effort	Rule 2	3.3.1.2. Number of trips by Area and Country. (u10m)	Year	Vessel flag country	Area	Vessel length category
Effort	Rule 2	3.3.1.3. Number of trips by Country and Area. (u10m)	Year	Vessel flag country	Area	Vessel length category
Effort	Rule 2	3.3.2.1. Number of trips by Area. (over 10m)	Year	Area	Vessel length category	
Effort	Rule 2	3.3.2.2. Number of trips by Area and Country. (over 10m)	Year	Vessel flag country	Area	Vessel length category
Effort	Rule 2	3.3.2.3. Number of trips by Country and Area. (over 10m)	Year	Vessel flag country	Area	Vessel length category
Effort	Rule 2	3.4.1.1. Number of trips by Metier Lvl5 (u10m)	Year	Metier (level 5)	Vessel length category	
Effort	Rule 2	3.4.1.2. Number of trips by Metier Lvl5 and Country (u10m)	Year	Vessel flag country	Metier (level 5)	Vessel length category
Effort	Rule 2	3.4.1.3. Sum of Trips Number by Statistical Rectangle (Below 10 meters & Top 6 metiers)	Year	Metier (level 5)	Vessel length category	Stat. rectangle
Effort	Rule 2	3.4.2.1. Number of trips by Metier Lvl5. (over 10m)	Year	Metier (level 5)	Vessel length category	
Effort	Rule 2	3.4.2.2. Number of trips by Metier Lvl5 and Country (over 10m)	Year	Vessel flag country	Metier (level 5)	Vessel length category
Effort	Rule 2	3.4.2.3. Sum of Trips Number by Statistical Rectangle (10 meters and above & Top 6 metiers)	Year	Metier (level 5)	Vessel length category	Stat. rectangle
Effort	Rule not defined for harbour or landing country	3.5.1.1. Number of trips by 20 main Harbours (u10m)	Year	Harbour	Vessel length category	

Report Section	Comments	Chart/map/table title	Disaggregation variables			
Effort	Rule not defined for harbour or landing country	3.5.1.2. Number of trips by 20 main Harbours and Country (u10m)	Year	Vessel flag country	Harbour	Vessel length category
Effort	Rule not defined for harbour or landing country	3.5.1.3. Sum of Trips Number by Harbour (Below 10 meters)	Year	Harbour	Vessel length category	
Effort	Rule not defined for harbour or landing country	3.5.2.1. Number of trips by 20 main Harbours (over 10m)	Year	Harbour	Vessel length category	
Effort	Rule not defined for harbour or landing country	3.5.2.2. Number of trips by 20 main Harbours and country (over 10m)	Year	Vessel flag country	Harbour	Vessel length category
Effort	Rule not defined for harbour or landing country	3.5.2.3. Sum of Trips Number by Harbour (10 meters and above)	Year	Harbour	Vessel length category	
Effort	Rule 2	3.6.1.1. Sum of Trips Number by Statistical Rectangle (Below 10 meters)	Year	Vessel length category	Stat. rectangle	
Effort	Rule 2	3.6.2.1. Sum of Trips Number by Statistical Rectangle (10 meters and above)	Year	Vessel length category	Stat. rectangle	

Annex 5: Citation suggestion (ISSG RDB Catch and Effort overviews)

Request mode	Requester	Responsible contact	Approval needed	Data access	Citation
0	Other ISSG	ISSG chairs	No, but RCG chairs in cc	No restrictions	None (RDB or survey data: extraction date)
1	Pre-approved WGs (by SCRDB for aggregated RDB data), COM	ISSG chairs, RCG chairs	Yes, general approval of NCs needed. For reoccurring standard request (e.g. inventories), approval could be given until further notice	Restricted, according to Data policy and NC decision	In Text/figure caption: <i>RCG ([year], prelim. Data)</i> In References: <i>RCG ([year]). Regional Coordination meeting [area]. Report of the ISSG on [topic], prelim. data</i>
2	Other ICES WGs	RCG chairs, NCs	Yes, approval (or non-objection) by NCs needed	Restricted, according to Data policy, after report is published or if approval is given beforehand	In Text/figure caption: <i>RCG ([year])</i> In References: <i>Respective RCG report</i> OR: Request mode 1 citation.
3	Third party	RCG chairs	Yes, TBD	Restricted, TBD	TBD

Example:

- ➔ Request by WGBFAS in 2020 to use the following graph in the report. ISSG chair was contacted and RCG chairs agreed on providing the graph. Aggregation follows RDB data policy.

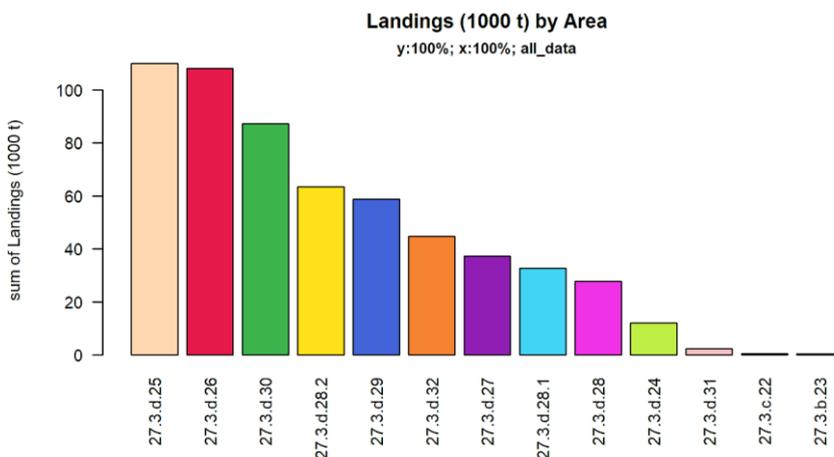


Figure X. Landings of small pelagics (in 1000 t) in the Baltic Sea by Area in 2019 (RCG 2020, prelim. Data).

Reference before publication:

RCG NA NS&EA RCG Baltic (2020). *Regional Coordination Group North Atlantic, North Sea & Eastern Arctic and Regional Coordination Group Baltic 2020 - Report of the ISSG on RDB Catch and Effort overviews*. Preliminary data of the RDB (<https://www.ices.dk/data/data-portals/Pages/RDB-FishFrame.aspx>).

After publication: Recommended format for purposes of citation:

RCG **NA NS&EA RCG Baltic** [year]. Regional Coordination Group North Atlantic, North Sea & Eastern Arctic and Regional Coordination Group Baltic. XX pgs. (<https://datacollection.jrc.ec.europa.eu/docs/rcg>)

To add at respective Report section:

The material in this report may be reused using the recommended citation. The RCG may only grant usage rights of information, data, images, graphs, etc. of which it has ownership. For other third-party material cited in this report, you must contact the original copyright holder for permission. For citation of datasets or use of data to be included in other databases, please refer to the latest RCG and ICES data policy on the ICES website. All extracts must be acknowledged. For other reproduction requests please contact the authors. This document is the product of a Regional Coordination Group under the auspices of the Expert Group on Fisheries Data Collection (EC - DCF) and does not necessarily represent the view of the EU Expert Group (NCs).

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Extract from the current ICES Data Policy <https://www.ices.dk/data/Documents/ICES-Data-policy.pdf>

Citation of Data

Data Sources should be acknowledged by a citation. The citation must include as a minimum a reference to the ICES database where the data extraction was made and the year in which the database was referenced. Preferably, data is cited by using the dataset's PID. When no PID is available, one can cite the dataset using one of options below can be used as examples:

Examples of citation are given below:

Standard citations

- *“ICES Historical plankton dataset 2011. ICES, Copenhagen”*
- *“ICES EcoSystemData data portal, 2012. ICES, Copenhagen”*

Extended citations

- *“ICES Database of Trawl Surveys (DATRAS), Extraction 3 JUNE 2012 of International Bottom Trawl Survey (IBTS). ICES, Copenhagen”*
- *“ICES Environmental database (DOME), Extractions 3-10 JUNE 2012; Chemical data for the OSPAR CEMP, Reporting laboratory(s) via British Oceanographic Data Centre (UK). ICES, Copenhagen”*

A Data Citation may also include a URL to the database, and/or a URL to the meta-data record for the ICES dataset in the ICES Spatial facility (<http://ices.dk/marine-data/maps/Pages/default.aspx>). Additional citation information is made available in the Disclaimer file that accompanies the data download under the section ‘Data Acknowledgment’.

Data citation should follow community best practices, please refer to the 8 principles of data citation available here.

Annex 6: RCG issues raised on the grant proposal related to RWP (annex 1 MARE call for project)

Letter sent to the Commission mailbox (MARE-2020-08@ec.europa.eu) on June 12, 2020

This document issued by the RCG NANS&EA and RCG Baltic 2020, emanated from a discussion in the subgroup on Regional Work Plan and discussed in plenary. The discussion in the subgroup focused on the [Call for proposals MARE/2020/08](#) Strengthening regional cooperation in the area of fisheries data collection - Annex 1 on establishing regional work plan. PGECON co-chair, RCG LP co-chairs and the STREAM coordinator participated to the discussion.

Here are the principal conclusions of the meeting, expressed in two sections, one on the generalities agreed in the RCG, which lay out how the grants can realistically support the RCGs towards establishing regional work plans. The second section lays out proposed departures from the details of the grant, which would ease the constitution of a consortium and, in our opinion, better meet the needs of the RCGs. We asked feedback from the Commission whether these would be acceptable in a proposal submission in the letter submitted on June 12 to MARE-2020-08@ec.europa.eu. COM did not participate in the discussions related with the call during the meeting.

1. Background and generalities agreed in RCG 2020

- **The grant should be in support of all relevant RCG-ISSGs** and provide resources to ensure they can complete their work towards a regional work plan (RWP);
- The RCGs have a critical role to play within the grant proposal as they are the lead in developing the RWP; a continuous feedback between the experts involved in the project, the relevant ISSGs and the RCGs must be secured;
- There are **elements of the RWP which are pan-regional** (template development, consistency of approach, basic concepts, ...), other elements are regional and activity specific. Developing 5/6 proposals would not be efficient and would miss the pan-regional objectives;
- The ISSG RWP proposed that a way forward would be to **appoint full time dedicated researcher/s to provide support to the intersessional work** of the RCGs and their relevant ISSGs. The actual ISSG expert time is already financed through EU-MAP and cannot be further stretched too much into a project;
- Securing the provision of RWP by mid-June 2021 is important in the construction of the timeframe and the budget of the project;
- Involvement of all relevant ISSGs to the project is needed, with clear proposals ready to go on where external resources are required to bring their work towards RWP;
- Hiring an entity to help on the administrative burden should be considered, if possible;

2. Elements of a potential application departing from the details of the call

A proposal of one Lot encompassing all or most of the RCGs would reduce the administrative burden (countries pertaining to more than one region, small RCGs with little means to develop such a project, ...), and address the pan-regional perspective correctly. The regional and activity specifics would then form work packages, **and those WP actually specified in the proposed grant would become tasks;**

- o Activity such as diadromous sampling is pan-regional, and would therefore fit naturally in the above proposal in a dedicated WP;

- o Economic activities sampling is supra-regional, and would also fit in such a scheme;
- o **A steering committee (WP1) including WP leaders and RCG chairs would ensure consistency of approach** and be a forum of discussion for all issues coming from the WP developments;
- o If needed, third country (outside EU and UK) could be eligible under the form of sub-contracts (e.g. as in fishPi), if that is possible;

Concerns were raised on the balance between regional and national objectives and the danger of a lack of acceptance of the concepts developed during a project where all of the countries of a region would not be directly involved; **A WP on communication and dissemination would be needed;**

The group highlighted the risk of having no respondent to the grant for several reasons, including the pandemic context impeding physical meetings and the tight agenda to finalise a proposal. The RCG acknowledges the benefits of having money to support the intersessional activities, but if no leader emerges in the coming days to drive the project, consideration should be given on a plan B where full-time researcher time to support the move towards RWP could be shifted to the annex 2 proposal.

Annex 7: stomach sampling (Summary of the WG SAM recommendations)

Regionally coordinated stomach sampling in the North Sea, Baltic and other European seas

Rationale

Fundamental changes in the importance of natural versus fishing induced mortality have been observed in the North Atlantic while moving towards maximum sustainable yield (MSY) management targets. The reduction of fishing mortality in combination with successive recovery of fish stocks, especially of some larger predatory species, led to an increasing natural mortality as opposed to fishing mortality. Consequently, estimates of natural mortality have become more important for stock assessments and forecasts.

A DG MARE tender (Contract No MARE/2012/02-SI2.632887) pilot study on stomach sampling in the North and Baltic Seas was able to demonstrate, in cooperation with the ICES Working Group on Multi Species Stock Assessment Methods (WGSAM), that cost-effective sampling of stomachs is possible during existing surveys. It was possible to analyse stomachs in a cost-effective manner with the help of national labs and/or external contractors. Results of the FishPi project (EU MARE/2014/19) conclude that opportunistic stomach sampling on existing DCF surveys is a promising way forward.

However, missing regional coordination was identified a challenge. The lack of coordination leads to unbalanced sampling effort resulting in a lack of statistically sound sampling of all key species needed for food web characterisation and finally to a barrier for moving towards an Ecosystem Approach to Fisheries (EAF).

Based on a review of the status of ecosystem models, WGSAM considers that the lack of up-to-date information on 'who eats who' and how this has changed over time makes it increasingly difficult to provide adequate scientific advice. There is an obvious danger when models using patchy or grossly out-of-date information are used to assess the present state of ecosystems and make predictions about the future.

For instance, the last comprehensive investigations of species interactions in the North Sea were conducted 29 years ago and ecosystems such as the Celtic Seas and Bay of Biscay have never conducted an internationally coordinated full scale sampling event. Consequently, the information is unlikely be representative for the current state of the ecosystems in these areas. Since the early 1990s, major changes have occurred in the North Sea, including shifts in benthic communities, plankton and fish communities.

WGSAM is now tasked, on a regular basis, to provide updated estimates of predation mortality for inclusion in single-species stock assessments, but this has become a challenging task because of the lack of contemporary information of the diet composition of piscivorous fish species. Currently, WGSAM provides natural mortality estimates for assessments of 11 commercially important stocks in different sea regions (Table 2).

Table 2: List of stocks for which ICES WGSAM provides natural mortality estimates for single species fish stock assessments.

Species	Stock	Area
Cod (<i>Gadus morhua</i>)	cod.27.47d20	North Sea, eastern English Channel, Skagerrak
Whiting (<i>Merlangius merlangus</i>)	whg.27.47d	North Sea and eastern English Channel
Haddock (<i>Melanogrammus aeglefinus</i>)	had.27.46a20	North Sea, West of Scotland, Skagerrak
Herring (<i>Clupea harengus</i>) – autumn spawners	her.27.3a47d	North Sea, Skagerrak and Kattegat, eastern English Channel
Herring (<i>Clupea harengus</i>)	her.27.25-2932	Eastern Baltic herring, excluding the Gulf of Riga (central Baltic Sea)
Sprat (<i>Sprattus sprattus</i>)	spr.27.3a4	Skagerrak, Kattegat, and North Sea
Sprat (<i>Sprattus sprattus</i>)	spr.27.22-32	Baltic Sea
Sandeel (<i>Ammodytes</i> spp.)	san.sa.1r	central and southern North Sea, Dogger Bank
Sandeel (<i>Ammodytes</i> spp.)	san.sa.2r	central and southern North Sea
Sandeel (<i>Ammodytes</i> spp.)	san.sa.3r	northern and central North Sea, Skagerrak
Sandeel (<i>Ammodytes</i> spp.)	san.sa.4	northern and central North Sea

Many more assessments could potentially benefit from up-to-date natural mortality estimates. However, no model can provide reliable estimates and predictions of natural mortality unless it is calibrated with up to date information. In the absence of recent data, the modelling work may continue but the accuracy and relevance of the estimates and predictions will deteriorate. And, even worse, biased natural mortality input from WGSAM can decrease the quality of stock assessments since natural mortality estimates operate at the heart of the stock assessments.

Therefore, one important aim of the Regional Coordination Group North Atlantic, North Sea & Eastern Arctic and Baltic Sea (RCG NANS & EA, BS) is to initiate and to coordinate the regular collection and analysis of stomach content data in the North Sea, the Baltic Sea, and other European sea areas, mainly on the existing surveys within the scope of the DCF framework.

General Approach

In terms of number of stations, the Study Group on Multi Species Assessment in the North Sea concluded that the sampling intensity for future stomach sampling cannot be substantially lower than the sampling intensity in the North Sea 'years of the stomach' surveys in 1981 and 1991 (ICES, 2006). The probability of detecting a specific interaction decreases with a reduction in sampling intensity. A reduction in the number of sampling stations of more than 25% leads to substantial decreases in detection probabilities. In addition, the full spatial distribution of predators has to be covered to get an unbiased overview of the diet composition of the predator populations. What may be reduced compared to 1981 and 1991, however, is the number of stomach samples per haul and predator type. The species and size distribution of prey tends to be more similar at a local scale than at the scale of the predator population (Bogstad et al., 1995). Such intra-haul correlation points to a small gain in sampling a larger number of stomachs at a particular station. It is more cost effective to increase the number of stations and sample only a few fish at each station, which would minimize the additional effort associated with analysis of individual stomachs.

In general, only pooled stomach contents data (by predator size, for each haul) are available from the samplings of 1981 and 1991. This results in bias with regard to diet composition and consumption rates. This is because gastric evacuation rates are used to convert information about the stomach contents into estimates of food ration and diet composition. Studies on gastric evacuation have shown that the actual prey composition of a stomach substantially affects the gastric evacuation of its content. This may result in extremely variable estimates of food ration and especially prey composition depending on how the information on pooled stomach contents is interpreted (Andersen 2001). Therefore, individual stomachs should be sampled and analysed to apply gastric evacuation models on single stomachs (Andersen and Beyer 2005).

Given limited time and financial resources, it is preferable to concentrate the sampling effort for a particular predator to one year rather than having an insufficient sampling intensity each year. The frequency of stomach samples, however, should at least ensure that important changes in the food web can be detected every 2–5 years. **A rolling scheme sampling with each year 2-3 key fish predators should be sufficient to ensure a sufficient availability of time series data.** This will allow for process studies on the evolution of predator-prey interactions over time and a proper parameterisation of improved multi-species assessment models and deliver valuable information for the characterisation and environmental status of the food web. WGSAM sees the following species as key fish predators in the relevant ecosystems:

North Sea and Skagerrak: cod, whiting, saithe, haddock, hake, mackerel, horse mackerel, grey gurnard, halibut, starry ray, monkfish, plaice, turbot, megrim

Baltic Sea incl. Kattegat: cod and whiting, flounder

Bay of Biscay: tuna, hake, monkfish, rays, megrim, sea bass, blue whiting, mackerel and horse mackerel

Irish Sea and Celtic Sea: cod, whiting, gurnards, haddock, monkfish, hake

Species can be sampled in different years in a rolling scheme, ensuring that at least one species for which biological samples are taken (e.g. maturity and/or otoliths) and one species for which this is not the case (and which hence provides a greater increase in work load) is sampled every year and that a maximum of 5 years passes between the sampling of any one species. In addition to the sampled species, it should be considered to sample other rays and sharks to derive estimates of the proportion of commercial fish in the diet of the most abundant elasmobranchs. One preliminary recommended sampling scheme starting in 2021 is presented in Table 3 (YZ).

Table 3: Preliminary sampling scheme for the rolling scheme of a coordinated stomach sampling in different areas of the North Atlantic. IBTS = International Bottom Trawl Survey, IESSNS = International Ecosystem Summer Survey in the Nordic Seas.

Survey Area	Year	Species sampled for biology	Species not sampled for biology
North Sea IBTS	1	Whiting and monkfish	Megrim
	2	Horse mackerel	Starry ray
	3	Saithe (Q1 and Q3) and mackerel (Q3 only)	Grey and red gurnard
	4	Cod and plaice	Halibut
	5	Haddock and hake	Turbot
North Sea IESSNS	1	Mackerel	
	2	Horse mackerel	
Irish and Celtic Seas	1	Whiting, Hake	Gurnards
	2	Cod and haddock	Monkfish
Baltic Sea	1	Cod	
	2	Whiting	
Bay of Biscay	1	Hake	Tuna
	2	Blue whiting and monkfish	Rays
	3	Horse mackerel	Megrim
	4	Mackerel	Sea bass

Guidelines

The sampling should be carried out based on the guidelines from WGSAM to ensure that data can be used for multi-species modelling, assessments and advice. The best practices regarding the stomach selection at sea as well as the actual stomach analyses have been discussed extensively in the past by WGSAM, including a weighting between most efficient handling time and the necessary amount of detail in the analyses. These best practices have been published as ‘Manual for ICES Stomach sampling projects in the North Sea and Baltic Sea’ (ICES 2010) and were revised by the fishPi²Project (EU MARE/2016/22) in 2019. The regionally coordinated stomach analyses should follow this revised manual with a few minor modifications to ease its application during the surveys (the revision will be presented in the next report by WGSAM in autumn 2020).

General remarks

The above mentioned revised manual for stomach sampling represents the best practice as a basis for a regionally coordinated stomach sampling in European waters with the aim of gaining knowledge on natural mortalities of commercially important and other fish species as an essential parameter for improving the stock assessments of commercially exploited fish species. We are well aware that this manual was developed based on the circumstances in the northern European waters, e.g. North and Baltic Seas, and

that for the application of this manual in more southerly waters like the Bay of Biscay and the Mediterranean Sea, adaptations to the local situations may be necessary. Independently of this, the RCG NANS&EA sees this manual and the resulting regionally coordinated stomach sampling program (specified by the RCG NANS&EA in intersessional work 2020 - 2021) as an adequate starting point for such a sampling program.

As a case study, the RCG will define a regionally coordinated stomach sampling program in both the North Sea and in the Baltic Sea. These case studies will outline the amount of stomach samples to be expected, the time frame for the sampling and the analyses of the stomach contents and data compilation and may serve as feasibility studies for a regional coordination of these activities.

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Annex 8: Suggested ISSG tasks for season 2020-2021 (state on 6th of July 2020)

Topic	TOR	ISSG (chair)	Tasks	comment
End-users and RCGs	TOR 1	Review and streamline dialogue between data providers (RCGs) and Endusers (ICES) (RCG chairs)	<ol style="list-style-type: none"> 1. communication channel between ICES and RCG chairs 2. communication channel between the COM and RCG chairs 3. Follow up on end-user needs on a general scale <ol style="list-style-type: none"> 3.a Update commercial sampling overview caused by Covid -19 3.b UK related issues 	
Data Analysis and Quality	TOR 2	RDB catch and effort overviews (Marta Suska)	<ol style="list-style-type: none"> 1. RDB catch and effort overviews: <ul style="list-style-type: none"> - Incorporate feedback of RCG 2020: Add an introduction on data source, how to read the data, etc. - Develop a markdown/package/small github for national data submitter to enable them to check their own RDB data files before upload. - Include the CE/CL data in the shiny R. 2. Shiny App: <ul style="list-style-type: none"> - add more functions, graphs and tables to examine RDB data. - add useful download functions. - Interactive maps - keeping in mind the upcoming RDBES format 3. multiannual overviews: <ul style="list-style-type: none"> - Add variable Year as option (facet) in the shiny R, restrict the number of years if file size is too large to be handled by the uploader. 	

Topic	TOR	ISSG (chair)	Tasks	comment
Data Analysis and Quality	TOR 2	Metier issues (Josefine Egekvist)	<ul style="list-style-type: none"> • <i>Compare the proposed metier list with EUMAP level 5</i> • <i>Reformatting the new metier list to get an easier reference with the old metier codes</i> • <i>Following and assisting on implementation of the new métier codes and script</i> • <i>Write a manual for use of the script and code lists and document the script with a flow chart.</i> • <i>Update metier code list, clarify connection between old and suggested metiers, provide reference lists if needed.</i> • <i>Crosscheck EU MAP codes list with metier</i> • <i>Further development on script</i> • <i>When data are uploaded with the new métier codes to the RDB/RDBES, this year's ToR 2 will become relevant: Further develop métier descriptions based on new métier codes</i> 	Josephine to ask RCG Med and Black Sea for participation
Data Analysis and Quality	TOR 2	Data Quality (David Currie)	<ul style="list-style-type: none"> - <i>Re-evaluate Table 5A indicators. Decide whether to perform a full evaluation every year.</i> - <i>Create sampling design document template for Regional and National Workplans</i> - <i>Look at creating templates/guidance for the other table 5A questions for Regional and National Workplans</i> - <i>Continue to catalogue software tools (not reports)</i> - <i>Compile the current RDB upload logs and work with the Overviews group to think about a new, machine-readable upload log format</i> - <i>Discuss data checks for the new RDBES. (Lower priority)</i> 	
Regional Database	TOR 2	ICES WGRDBESGOV (David Currie and Katja Ringdahl)	<i>details see ToRs for SCRDB</i>	This group is not a proper RCG ISSG
Regional Database	TOR 2	RDB Core group (Henrik Kjems-Nielsen)	<i>details see ToRs for Core group</i>	
Implication of management measures on data collection	TOR 3	Implications of the Landing Obligation (NA)	<i>No tasks, suspended for three years</i>	

Topic	TOR	ISSG (chair)	Tasks	comment
Diadromous Fishes	TOR 4	Diadromous Fishes (Tapani Pakarinen and Marko Freese)	<ul style="list-style-type: none"> • <i>Questionnaire on electrofishing programs to EGs</i> • <i>Request to MSs to name the eel index rivers</i> • <i>Initiation of dialogue between ISSG Diad and ICES Egs</i> <p><i>For development of a regional sampling plan for Diadromous fishes the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i></p>	ISSG Diad will collect (in the term 2020-2021) the proposals for index water bodies from relevant MS. The collected data will be passed on to the ICES WGEEL (to their autumn 2021 meeting) for the review and evaluation.
Surveys	TOR 4	Surveys (Sieto Verver and Christoph Stransky)	<ol style="list-style-type: none"> 1. <i>Renewal and finalisation of the multilateral agreements on cost-sharing of the two surveys: International Ecosystem Survey in the Nordic Seas (IESNS, also known as ASH under the EU-MAP) and International Blue Whiting Survey;</i> 2. <i>Monitor COVID-19 implications on surveys from a DCF perspective and react when appropriate and requested</i> 3. <i>Monitor the follow-up of WKREO proposals and act as focal point for RCG contact</i> 4. <i>Review survey aspects of the renewed EU-MAP in the light of cost-sharing and set up methods to identify candidate surveys for future cost-sharing</i> 	
Regional Sampling plans	TOR 4	Optimized and Operational Regional Sampling Plans (Kirsten Håkansson, Rita Vasconcelos and Harriet van Overzee)	<ol style="list-style-type: none"> 1. <i>Act as a forum for discussing issues arising from the case studies</i> 2. <i>Develop guidance with the potential following steps (random order)</i> <ol style="list-style-type: none"> a) <i>Identification of fleets relevant for regional coordination</i> b) <i>Simulation tools</i> c) <i>Permanent structure for data sharing</i> d) <i>Quality checks are made at the national and regional level</i> e) <i>End-users are involved in informing on data needs</i> f) <i>Feasibility and implementation are tested with pilot studies and/or consultations</i> g) <i>Mechanisms are in place to reach agreements across MS</i> <p><i>For development of a Optimized and Operational Regional Sampling Plan the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i></p>	

Topic	TOR	ISSG (chair)	Tasks	comment
Regional Sampling plans	TOR 4	Towards a regional sampling plan- Case Study of the trawl fishery in Iberian Waters (Rita Vasconcelos)	<ul style="list-style-type: none"> - Define and implement pilot study, which includes analysing in detail alternative scenarios of RSP and define needed adjustments to agree on a pilot for implementation/testing. Tasks to be developed if human resource is hired full-time by the project within the MARE/2020/08 annex 1 grant: Analyse effects of alternative RSPs on length composition and incorporate these results into the definition of the RSP. <i>For development of a regional sampling plan for trawl fishery in Iberian Waters the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i> 	
Regional Sampling plans	TOR 4	Identification of case studies for PETS bycatch monitoring (Estanis Mugerza)	<ul style="list-style-type: none"> - Fisheries monitoring effort comparison between WGBYC and RDBES (liase with WGBYC and WGCATCH:) - CS at sea observed trips by metiers (liase ISSG fisheries overviews) - risk assessment update and improvement - RDBES (data model) importance for bycatch data collection: PETs species list - CS Bay of Biscay and Baltic Harbour porpoise + CS Baltic <i>For development of a regional sampling plan for PETS bycatch monitoring the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i> 	
Regional Sampling plans	TOR 4	Towards a regional sampling plan for the freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic (Andrew Campbell and Jens Ulleweit)	<ul style="list-style-type: none"> - Finalise dataset - Complete simulation analysis - to include sampling protocols (how many samples, numbers to age) - Identify candidate sampling schemes - Draft proposal for a statistically robust regional sampling scheme which then can be forwarded to NCs/EU <i>For development of a regional sampling plan for freezer trawler fleet in Northeast Atlantic, the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic)</i> 	

Topic	TOR	ISSG (chair)	Tasks	comment
			<i>and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i>	
Regional Sampling plans	TOR 4	Towards a regional sampling programme – Case study of fisheries for small pelagics in the Baltic (Katja Ringdahl and Marie Storr-Paulsen)	<ul style="list-style-type: none"> - Evaluation WK in June – testing the output in the case study (Chaired by Nuno and Kirsten) - 10 years of Danish control data to compare species composition - Continuations of case study in the fall 2020 <p><i>For development of a regional sampling plan for fisheries for small pelagics in the Baltic the approach suggested by your group "5 general steps" for moving towards regional sampling programs should be taken. (For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).)</i></p>	
Regional Sampling plans	TOR 4	Evaluation of the data collected for the SSF at EU level (Estanis Mugerza)	<ul style="list-style-type: none"> - Catch and effort data analysis in the RDB: standarization of SSF effort estimates, metiers codification based in ISSG metiers work (e.g. MIS_MIS trips), comparison of catch estimates between RDBES and sampling estimates - Sampling effort allocated by MS to this fleet (in collaboration with fisheries overviews ISSG): CS data, data gaps (discards, PETS) - PGECON involvement: Socioeconomic data collection needs - RDBES data model and SSF <p><i>For development of a regional sampling plan for the SSF the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i></p>	

Topic	TOR	ISSG (chair)	Tasks	comment
Regional Sampling plans	TOR 4	regionally coordinated stomach sampling (Pierre Cresson and Matthias Bernreuther)	<p>1. <i>development of a regionally coordinated sampling, using North Sea IBTS as a case study, and based on the recommendations of WGSAM.</i></p> <p>2. <i>Discuss, including members of the IBTS WG to define specifically the repartition of sample collection and analyses among countries. Discuss with COM how to secure fundings for the sampling.</i></p> <p>3. <i>Development of a specific case study to intercalibrate the IEO protocol with the WGSAM recommendation, as to guarantee the continuity of the stomach time series</i></p> <p>4. <i>For each region the group will compile an updated overview of historic and contemporary stomach samplings by area and species. Based on the work of fishPi2 and suggestions by the endusers of the stomach data (e.g. ICES WGSAM) the group will incorporate existing approaches, guidelines and protocols into the design of the sampling plan. A regional sampling plan and protocols (by species) will be developed for each region.</i></p> <p><i>For development of a regional coordinated stomach sampling the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i></p>	<p>The subgroup on stomach sampling noticed that additional work is needed for the design and planning of a regionally coordinated stomach sampling program. MS have to discuss and coordinate details that require work beyond the activities possible during an RCG.</p> <p>Based on conclusions of fishPi2 Project and suggestions by the end users of the stomach sampling data (e.g. ICES WGSAM), the ISSG on stomach sampling considers it is necessary to draw up a regional stomach sampling plan, incorporating existing approaches, guidelines and protocols.</p> <p>The SPNGFS-WIBTS-Q4 "DEMERSALES" survey, conducted in ICES Divisions 8c and 9aN (Northern of the Iberian Peninsula) is using the IEO sampling stomach protocol, specifically designed for this survey, and on which the historical feeding data series is based. This data set will be useful in the future to improve ecosystem assessment. Currently, information from this survey on hake diet is being used in a GADGET model in development for the Southern hake stock assessment.</p> <p>The volumetric method used in this survey will be easily comparable to the gravimetric method recommended by WGSAM, applying appropriated regression models.</p>

Topic	TOR	ISSG (chair)	Tasks	comment
Regional Sampling plans	TOR 4	Recreational fishery (Dália Reis ??)	<p>- <i>Regional species list</i></p> <p>- <i>Regional sampling plans for shared stocks</i></p> <p>- <i>MRF data incorporation in the RDBES but also MRF and the data model</i></p> <p>- <i>Proposal of a RWP table 1d on recreational fisheries to be reviewed by ICES WGRFS and WGRFS to provide feedback on structure and content of table 1d as well as required changes to support the documentation of regional coordination of recreational fisheries towards a RWP.</i></p> <p><i>For development of a regional sampling plans for recreational fisheries the approach "5 general steps" for moving towards regional sampling programs should be taken. For details see RCG NA NS&EA RCG Baltic 2020 PART I sec 5.4.4 (Case study small Pelagic Baltic) and also PART III Chapter 7 (ISSG Case study small pelagics Baltic) (Figure 3.1-3.3).</i></p>	<p>The ISSG RWP reviewed each table of the NWP template and identified how the regional working elements/agreements fit into the structure. If there was information that couldn't be captured in the current format, it was considered whether it needed to be linked to other or additional tables. The agile document with the tables and a textbox word document is in Google Doc for review and adjustment. A proposed structure was developed for table 1d to capture regional coordination of recreational fisheries. A regional sampling plan would be reflected in 4A, agreement on methodologies in 5a; as a starting point table 1D can list the stocks that are legally required in the region and if/when the thresholds are changed or adopted. As scientific experts in recreational fisheries, ICES WGRFS is asked to review the proposed table 1d and provide feedback to the RCG ISSG RWP.</p> <p>There is not an ISSG covering recreational fisheries. There will be tasks related to these fisheries that the RCGs need to address concerning regional sampling programmes. Most of these tasks are included in the regional sampling programme scheme identified and developed under the RWP ISSG (e.g. small pelagic regional sampling plan case study).</p>

Topic	TOR	ISSG (chair)	Tasks	comment
Governance	TOR 4	Development of Draft Regional work plan (Joel Vigneau and Leonie O'Dowd)	<i>In order to prepare for the submission of a formal RWP 2022 the following steps were identified and pre-sented at the RCG technical meeting 2020:</i> <ol style="list-style-type: none"> 1. Agree the set of existing agreements to put through the process (bilateral-multilateral agreements, common methodologies) and identify the low hanging fruit; 2. Test these in the work plan structure and propose adjustments where necessary (review and ad-justment of work plan structure) 3. Review the output of each ISSG sub-group in relation to potential development of RWP and agree on the prioritized outputs and how they are represented in the RWP (text boxes and tables) 4. Present roadmap for the test RWP 2021 and the formal RWP 2022 to be presented in RCG 2021 (short-term to September 2020, and midterm to September 2021) with identified steps of decision making. 5. Agree on how the MARE call for project would be used to support the work and have roadmap for proposal. <i>A detailed roadmap on the time period between June 2020 and October 2021 see section 5.4.2 in the report.</i>	chairs to make sure that participants from other RCGs will be contacted
Governance	TOR 5	Revision of EUMAP	<i>No tasks</i>	
Governance	TOR 5	Implementation of generic tools for the RCGs: Web, secretariat (Els Torreele)	<ol style="list-style-type: none"> 1. To identify how to move froward with the project call 2. To establish a consortium for the project call 3. To involve all RCGs and PGECON in the project proposal 4. To establish the fundament for long-term funding and establishing of supporting tools for RCG and PGECON. 	
Governance	TOR 5	NC (Anna Hasslow)	<i>For NCs to decide</i> <ol style="list-style-type: none"> 1. amending RoPs for RCG NA NS&EA and RCG Baltic by e g removal of UK from the North Sea part. 	