



Regional Coordination Group
Baltic Sea Region

Report of the Regional Co-ordination Group Meeting for the Baltic Sea region (RCG Baltic) 2018

Klaipeda, Lithuania 17-21 September 2018



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1. Introduction

1.1 General

The annual Regional Coordination Group (RCG) of the Baltic Sea region met in Klaipeda (Lithuania) between September 17th and 21st, 2018. Overall, 29 participants from all Baltic countries except Russia, ICES and the European Commission joined the meeting.

The meeting was chaired by Ari Leskelä and Maria Hansson. There were 3 main subgroups covering a) End-user needs and data quality, b) Regional plans, recreational fisheries and By-catch c) cost-sharing of surveys which was a group of National Correspondents. One person for each ToR was designated and had the responsibility to lead and support discussions in subgroup and report back to plenary, as well as produce the text to the report. Subgroup a and b merged, but detailed work on each TOR was undertaken in smaller groups and was presented and endorsed in plenary.

RCG Baltic thanks the Lithuanian delegation for hosting the meeting. The nice locality and arrangements were very much appreciated.

General Terms of Reference for Regional Coordination Groups, the adopted agenda of the meeting, the list of participants and the responsible persons for TORs are presented in Annex 1.

1.2 Legal requirements

The EU Data Collection Framework establishes a framework for the collection of economic, biological and transversal data by Member States (MS). This framework provides the basic data needed to evaluate the state of fishery resources and the fisheries sector and the impact of the fisheries on the marine ecosystems.

Commission Regulation 665/2008 Article 4: Regional co-ordination

1. The Regional Coordination Meetings referred to in Article 5(1) of Regulation (EU) No 199/2008 shall evaluate the regional co-ordination aspects of the national programmes and where necessary shall make recommendations for the better integration of national programmes and for task, sharing among MS.
2. The Chair of the meeting shall be designated by the Regional Coordination Meeting in agreement with the Commission for a two year period.
3. The Regional Coordination Meetings may be convened once a year. The terms of reference for the meeting shall be proposed by the Commission in agreement with the Chair and shall be communicated to the national correspondents referred to in Article 3(1) three weeks prior to the meeting. Member States shall submit to the Commission the lists of participants two weeks prior to the meeting.

REGULATION (EU) 2017/1004 of 17 May 2017 (recast of 199/2008).

This framework provides the basic data needed to evaluate the state of fishery resources and the fisheries sector and the impact of the fisheries on the marine ecosystems.

With the implementation of the recast of the DCF **Regional Coordination Groups (RCG)** have been established. These groups are the successors of the Regional Coordination Meetings (RCM).

RCGs shall aim at developing and implementing procedures, methods, quality assurance and quality control for collecting and processing data with a view to enabling the reliability of scientific advice to be further improved. The regional database is a central tool for effective work within the RCG. The RCG consist of experts appointed by Member States, including national correspondents, and the Commission.

The RCGs shall:

- draw up and agree on rules of procedures for their activities;
- coordinate with each other and with the Commission, where issues affect several marine regions.
- invite representatives of relevant end-users of scientific data, including the appropriate scientific bodies, regional fisheries management organisations, Advisory Councils and third countries to attend the meetings of the regional coordination groups as observers, where necessary.

RCGs may prepare draft regional work plans. Those draft regional work plans may include procedures, methods, quality assurance and quality control for collecting and processing data, regionally coordinated sampling strategies and conditions for delivery of data in regional databases. They may also contain cost-sharing arrangements for participation in research surveys at sea.

Each RCG may develop Rules of Procedures and the Commission may adopt implementing acts laying down these rules.

At present, five RCGs are operative:

The Baltic Sea (ICES areas III b-d),

The North Sea & Eastern Arctic (ICES areas IIIa, IV and VIId), (ICES areas I and II), (ICES divisions Va, XII & XIV and the NAFO areas.

The North Atlantic (ICES areas V_X, excluding Va and VIId);

The Mediterranean Sea and the Black Sea, and

Long distance fisheries: regions where fisheries are operated by Community vessels and managed by Regional Fisheries Management Organisations (RFMO) to which the Community is contracting party or observer.

In addition to the rules and obligations for the RCGs given in the recast of the DCF (EU 2017), a number of rules for regional cooperation are given in the EU MAP (EU 2016a).

1.3 Next venue

RCG Baltic 2019 meeting will be organized in Lyngby, Denmark 10-14 June 2019 , LM 2018 agreed to test a new approach for RCG work in 2019 and agreed to split the RCGs in two sessions. This was not discussed in RCG Baltic but since it's no major difference for most of the participants it was decided to be tested. This means that:

The RCG Baltic meeting in June involves mainly scientists with the aim of reporting back the results from subgroup work, plan ahead, draft decisions, agreements and recommendations to be endorsed by all MS in September meeting. No mandatory participation of NCs.

A session of 1-2 days in September gathers NC's from all MS to discuss, make decisions, endorse all agreements and recommendations for all regions.

LM agreed to put this new framework on test in 2019.

2. Executive summary

The annual Regional Coordination Group (RCG) of the Baltic Sea region met in Klaipeda (Lithuania) between September 17th and 21st, 2018.

The RCG Baltic work was organized in 3 main subgroups covering a) End-user needs and data quality, b) Regional plans, recreational fisheries and by-catch c) cost-sharing of surveys. Detailed work on each TOR was undertaken in smaller groups and presented and endorsed in plenary. Furthermore, each ToR had a designated person responsible to lead and support discussions in the subgroup.

RCG Baltic received presentations of the follow up of LM 2017 recommendations and of the work of expert groups and end-users from 2017-18: PGDATA, WGCATCH, WGBIOP, SCRDB, WKRDB, STECF, ICES and the COMMISSION.

RCG Baltic 2017 agreed to establish a few intersessional groups. The major outcome from these groups were presented during the meeting and major outcome reflected in the report text.

Rules of Procedure (RoP) for RCG Baltic were established in September 2017. No particular problems or issues were detected during the first year of implementation. An approach for guidance in developing regional coordination was presented in the meeting and supported by the NC's.

Information on upcoming data calls and benchmarks was provided by ICES. RCG meeting addressed the issue list for the Central Baltic and Gulf of Riga herring stocks (to be benchmarked in 2020) and produced an overview of available data on the issues.

All Baltic RCG member states had uploaded landings, effort and sampling data on the RDB. The data subgroup improved and developed the data analysis scripts that were developed by the RCM Baltic in 2017. The subgroup produced overviews on regional fishery and several overviews on the sampling of the commercial fishing fleet.

The NCs for the RCG Baltic found the revision of the RDBES Data Policy document in line with the recast of the DCF and agreed to endorse the document.

The outcome of the STECF EWG 18-04 "Preparation for the evaluation of the list of mandatory research surveys at sea" was presented to RCG. RCG Baltic appreciated the proposed model and considered this method as an appropriate way forward. As it comes to survey cost sharing, RCG 2018 meeting decided not to take any action.

The meeting summarized information on pilot studies conducted by member states under DCF to collect recreational fisheries data.

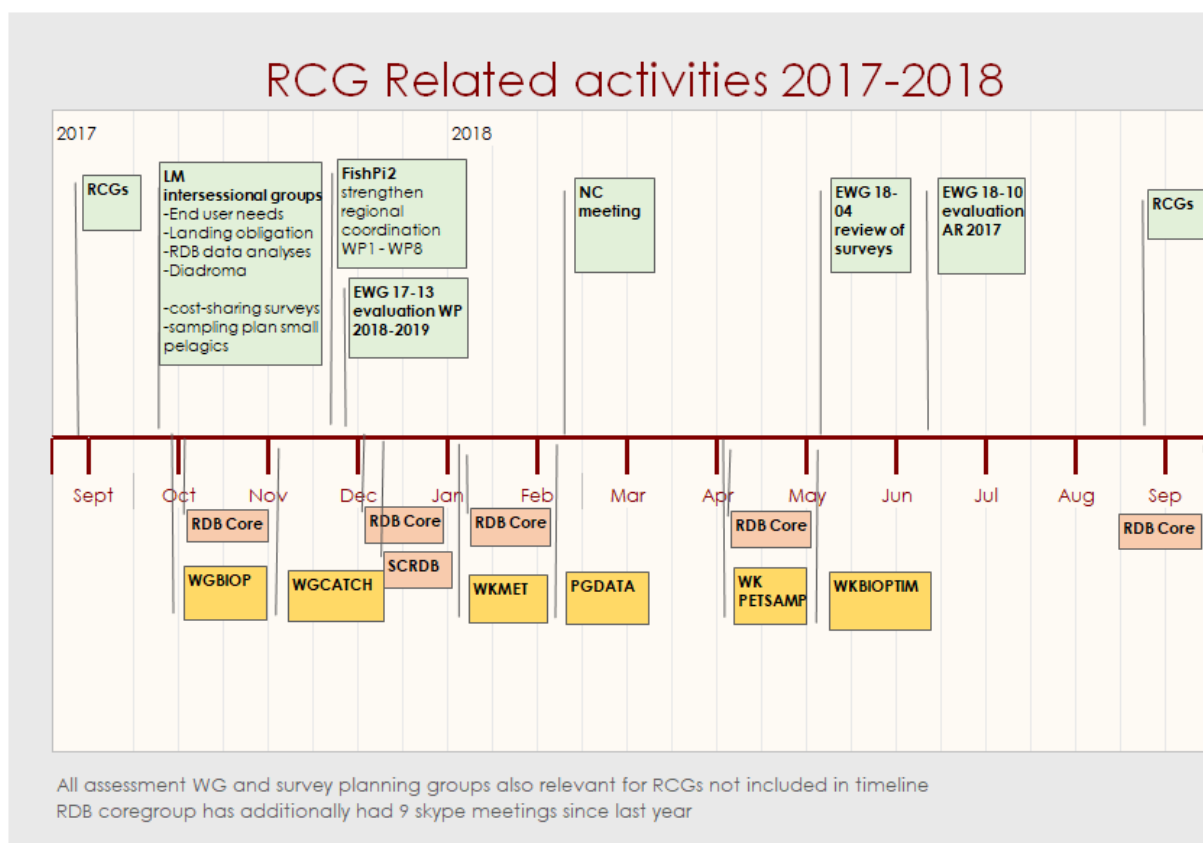
The pan-regional intersessional subgroup on the landing obligation concluded that the LO has no major effect on the fishing behavior. In the Baltic, the mismatches between official BMS landings and observer estimates are large and obvious since the implementation of the LO for both cod and plaice.

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

RCG Baltic 2017 report and report of the 14th Liaison meeting are available at <https://datacollection.jrc.ec.europa.eu/docs/rcm/2017>.

An overview on RCG related activities from 2017-2018 is shown in figure below, with EU related activities on the upper part and ICES related activities on the lower part of the timeline. The activities are of importance in developing data collection in different aspects and major outcome from each of the activities was presented during the meeting. Since many of these activities are independent of region, the same presentation and summary appear in several RCG reports.

The RCG Baltc received presentations of the follow up of LM 2017 recommendations and of the work of expert groups and end-users from 2017-18: PGDATA, WGCATCH, WGBIOP, SCRDB, WKRDB, STECF, ICES and the COMMISSION.



3.1 Feedback from intersessional subgroup work

RCG Baltic 2017 agreed to establish a few intersessional groups. The major outcome from these groups were presented during the meeting and major outcome reflected in text below or in sections

in this report. For groups that are pan regional parts of the summary text is a copy from the RCG NSEA report:

- ***Intersessional subgroup on cost sharing surveys (Baltic region subgroup)***
See section 8 of this report:
- ***Intersessional subgroup on Landing Obligation (Pan regional subgroup)***
See section 11 of this report
- ***Intersessional subgroup on End-users need (Pan regional subgroup)***

In the legal text of the DCF recast (EC) No 2017/1004 and EUMAP (2016/1251/EU), multiple references are made to data collected at regional level based on “end user needs” (see articles of EUMAP). This requires close collaboration between RCGs, tasked with the regional coordination of data collection and end users of the scientific data. In March 2017, the chairs of the Northern RCGs (BALTIC, NSEA and NA) initiated a dialogue meeting with ICES as their main scientific end-user to establish a framework that facilitates the feedback between data collection and data requirements. The objectives for this initial meeting was to:

start formalising a framework of communication between data providers (RCGs) and data end users (ICES);
see how best to improve on current interactions and communications with RCGs and ICES including using established mechanisms;
use the above to draft ToRs and intersessional work for the RCGs.

Following the meeting in 2017, it was agreed that the chairs of the RCGs continue this dialogue as a pan-regional and intersessional subgroup with the following ToRs as presented in the 2017 Liaison report:

The objective of the meeting 2018 between the RCG chairs and ICES was to continue the process between ICES and the RCGs to improve the dialogue and feedback between data providers (RCGs) and data end users (ICES) and specifically to review the agreed actions from the 2017 meeting on benchmark process, data calls and surveys and agree on next steps. The report of the end-user meeting can be found in Annex 2.

- ***Intersessional subgroup on Diadromous species (panregional subgroup)***
See section 9 of this report.
- ***Intersessional subgroup on Core RDB (Pan regional subgroup)***
The development of the Regional Database and Estimation System, RDBES, started in the spring 2017 and the Steering Committee of the RDB, SCRDB, established a Support Core Group, which should specify the needs, so ICES Secretariat could development the new RDBES according to the needs. The Core Group have since worked on specifying the data model for the sampling of the commercial fish species, which should be able to support all countries sampling of all species. Details can be found in section 7.8. Regional DataBase RDB and Regional DataBase and Estimation System RDBES.
- ***Intersessional subgroup on Data (Pan regional subgroup)***

According to the LM 2017 Report “The RCG data group is a loose grouping of individuals with skills in the statistical computing language R (R Core Team, 2015) which was assembled following initiatives in the RCMs in 2016. The aim of this grouping was to facilitating intersessional and pan regional work with regional data in the data formats used by the RDB (CS CL and CE data formats). Members of the group have been involved in RCM data work, the FishPi project and data uploads to the RDB, but not all are regular attendees of the RCM’s. Such a group broadens the pool of skilled people able to develop the RDB and the provision key statistical advice.”

Some ToRs were set forth by LM 2017 but intersessional progress was not achieved by the RCG Data subgroup. However, many of its members have remained active in the development of code for regional analyses within projects like fishpPi2 and/or, worked independently in the development of code used at different RCGs.

RCG Baltic 2018 continued this work improving the available functions and creating a general script that generates graphs and maps that can support RCG in the future (examples of output in Annexes 10 and 11). ToRs are set for the RCG pan-regional data group to coordinate code development across RCGs, ensuring that it is organized and readily available.

- **Regional sampling plan (Baltic subgroup)**

See section 6 of this report.

3.2 Feedback from the Commission, EUMAP 2020 and beyond

Stanislovas Jonusas from the EC held a presentation about the EUMAP 2020 & beyond.

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

Step 1. extension of EU-MAP: for one/two years (by 2021), No change of substance versus current EU-MAP; no consultations, COM needs, as per the new DCF Regulation 2017/1004, to split the EU-MAP text into a COM Delegated Act (EP and Council scrutiny on biological, environmental and socio-economic data) and a COM Implementing Act (thresholds for data collection and list of surveys). Aim to adopt the COM Delegated and Implementing act during 2019.

Step 2. revision of EU-MAP: as of next year. in parallel with the work on extension, launch of consultations with RCGs, PGECON, MS etc on EU-MAP contents; organise specific EWG on surveys list revision and overall on EU-MAP revision; aim to preserve the core requirements of EU-MAP + make adjustments on a case by case basis + work on pilot studies to convert them into data collection. Hope to be able to adopt the new EU-MAP (COM Delegated Act and COM Implementing Act) in 2020

RCGs are requested to:

- already discuss data needs at regional level which will need to be included in the future EU-MAP (will not include needs which can be defined at regional level)
- reply to the consultation on the EU-MAP: RCGs will receive a consultation document to reply to beginning of next year and finalise it during the next meeting in June 2019

- be flexible and proactive (organise themselves and produce clear, concise, well-argued documents) to facilitate the EU-MAP revision, considering the tight adoption schedule

The following requests are done to the EC:

The RCG requests/stress that a clear and profound consultation and feedback is sought from the RCG and MS, on revision on the tables.

The EC is requested to establish and sent a timeline to the NCs & RCG on how the EC sees the planning for EU MAP 2020. The RCG sees a clear link with the revision of the EMFF.

The RCG requests to have two months for writing a new WP, and therefore needs to have a final text at latest 2 month before the deadline of submission of the work plan.

The following points will be addressed at the LM:

- The RCGs suggests to establish a pan-regional subgroup 'RCG – EUMAP 2020 & beyond to revise the tables. One person per MS is requested to participate and the expertise relevant for the RCG need to be covered. The work will be done by correspondence with one physical meeting ex in January 2019 (depending on the final timeline established by the Commission).
- The Chairs of the RCGs will be asked to design ToR for SG EUMAP 2020 & beyond.

3.3 Work Plans and Annual Report

The STECF **EWG-17-13** on **Evaluation of DCF National Work Plan Amendments for 2018/19** met in Hamburg from 13 to 17 of November 2017.

STECF observes that 19 MS had submitted amended WPs. For 6 MS the amendments were found satisfactory by the EWG. The remaining 13 MS were contacted by the Commission during the EWG with the aim to solve the issues before the end of the EWG. For 8 of these, the issues could be solved. For the remaining 5 there were still outstanding issues at the end of the EWG.

In general, most shortcomings identified in the evaluation process was more of formal nature, i.e. incomplete descriptions, inconsistencies between tables etc. and could be solved during the EWG by correspondence between DG MARE and the MS.

The STECF **EWG 18-10** on **Evaluation of DCF 2017 Annual Reports & Data Transmission** was held in Brussels, Belgium, 25-29 June 2018.

Prior to the EWG assessment, MS' ARs for 2017 and DT issues raised in response to 2017 data calls underwent a pre-screening process. Automatic pre-screening of ARs was initially carried out using a newly developed software tool. The results from the automatic pre-screening were used as a basis for subsequent manual pre-screening. Overall, the level of achievement of the ARs 2017 appears unchanged overall. Countries in the region scored an overall judgement of either "Mostly" or "Yes". MS are encouraged to use the comments made for improvement when writing AR 2018.

Concerning data transmission failures there were no issues marked as unsatisfactory for the Baltic region.

3.4 Project Fish Pi (MARE 2016/22)– status and preliminary outcome

A general presentation of the project FishPi was presented by Katja Ringdahl during RCG Baltic 2018. The aim of the project is to "Strengthening Regional cooperation in the area of fisheries data

collection” and consists of 9 Workpackages. The project involves 50 scientists from 14 institutes, involving 10 Member States (13 countries and autonomous regions). Only a few MS from the Baltic region are involved in the project. The outcome from the project will improve and develop several areas within the RCG work and it’s of great importance that the findings that are applicable for the Baltic region also will be discussed and implemented in future.

The WP1 of fishPi2 is led by Katja Ringdahl and was presented in more depth than the other WPs. WP 1 aims at to understand and to agree on the general architecture of a regional work plan. This needs to be supported by shared and agreed documentation. The preliminary outcome shows that often it is assumed that a regional sampling plan is the same as a regional work plan, while it became clear that the latter has a much broader scope. Main obstacles identified during a workshop/meeting of WP1 were further limitations in time, resources and commitment for intersessional work. A problem that emerged is that intersessional work for the RCGs commonly is an “invisible” task at the national institutes which means that it might be difficult to prioritize when resources are limited. A proposal how to overcome these issues and how to improve the engagement from member states in the development of a regional work plan are described in Annex 3.

WP 7 is about training and is planned to take place the first quarter of 2019. This is an opportunity for all MS to join and get insight of the development achieved within the FishPi project.

3.5 Review of surveys EWG 18-04

See section 8 of this report

4. Governance model for the Regional Coordination Group (TOR 2)

4.1. Background

Following the adoption of the data collection basic regulation (Regulation 2017/1004, so called 'recast'), the Baltic Sea regional coordination group (BS RCG) and the Rules of Procedure (RoP) for that group were established in September 2017. The former Regional coordination meetings (RCM) were transformed into RCG meetings. Simultaneously new legislation provided RCG among other things more decision-making powers in coordinating regional data collection activities.

In order to carry out its duties successfully in accordance with the RoP, RCG needs to establish a governance model outlining e.g. how the RCG intends to organize its work, how the DFC related relevant bodies interact with the RCG and what kind improvements are needed in terms of visibility and efficiency of the RCG.

4.2 Discuss the role(s) of RCGs in the DCF environment

4.2.1 *Main findings*

RCG has an interface with several other institution, body or group such as the Liason meeting (group of experts to assist the European Commission), PGECON, several groups in ICES, STEFC and National Correspondent group as a European Commission Expert group. This interface varies in many ways and has a different nature depending on the organizations involved.

In accordance to the RoP, ICES, as an essential end user, has a permanent standing invitation to the RCG meeting which allows smooth and continuous cooperation in RCG meetings

It was noted, for the sake of clarity, that it may be necessary to address the role of different bodies, such as STEFC when the RCG work will commence more comprehensively.

PGECON has approached RCG Members asking advice on the future role and status of the PGECON.

4.2.2 *Actions in short term and long term*

As appropriate, NCs should coordinate among themselves before upcoming meetings such as the National correspondent meeting and already in autumn 2018. The chair(s) of the RCG will initiate this activity in due course before the meeting.

4.2.3. *Decision*

RCG agreed that PGECON should be seen as parallel body to the RCGs yet PGECON has a pan-European nature. Hence, it was felt that the PGECON should start formulating its own Rules of Procedure.

4.3. Feedback on Rules and Procedures for RCGs and proposed timing for adoption

4.3.1. Main findings

RoP were adopted for the BS RCG in 2017 (Annex 4). No particular problems or issues were detected during the first year of implementation or in preparation to the RCG meeting in 2018. However, it is apparent that future work might require addressing the RoP again with the view to analyze if RoP meet the necessary requirements of the demands the future work might impose.

4.3.2 Decision

RCG agreed to revert to the revision of the RoP when needed.

4.4. Present the outcomes of different EU projects (MARE/2016/22 grants Fish Hub)

4.4.1. Main findings

The first output of the FishPi2 WP1 was presented by Katja Ringdahl (see Annex3).

An approach for **guidance in developing regional coordination** was presented and requested for advice and agreement from the NCs, i.e.:

- Better consider the complexity of management of personal resources across MS in future RCG work
- Make institutes responsible to tasks to a larger extent (in contrast to individuals)
- Make RCG work more visible, traceable and career promoting
- We need to consider regional work plans in a broader perspective than regional sampling plans

All NCs present at the meeting agree and support the approach presented.

To have successful RCG work, the work needs to be e.g. structured and human resources, with time available to RCG work, allocated by Member States or relevant institutions. RCG work needs to be results orientated and driven.

Furthermore, there are projects being carried out which will contribute to the RCG orientation (e.g. FishPi2). Some results from these studies are already available, but fuller results will be available for the use in RCG in the near future.

At present, DCF activities lack appreciation and visibility at the national and EU-level. At institutional level, people involved in DCF activities are usually not appreciated to the level the challenges of the DCF activities would warrant from scientific work point of view too. Lack of visibility is partially due to the lack of DCF devoted webpages.

From the experience of the RCM and now RCG work and some common projects, it is evident that RCG work requires a substantial amount of unavoidable administrative work. In absence of appropriate secretary services in institutions for the RCG work, the scientific work suffers. This is underlined the foreseeable intersessional work to be carried out by the subgroups.

4.4.2 Actions in the short and long term

Establish a table of human resources allocated by the Member States to the subgroup work and initiate subgroup work, point leads, draft ToRs etc. after consensus is reached by all RCGs.

4.4.3 Decisions

RCG agreed to establish a table of human resources allocated by the Member States to the Subgroup work and initiate subgroup work, point leads, draft ToRs etc. A preliminary version of the table was produced the meeting (Annex 5). It will be finalized in due course, preferably in cooperation with the other northern RCGs.

RCG agreed that it is necessary to establish 8 Pan-European subgroups covering all northern Europe RCGs, including ToRs for such groups (Annex 5).

RCG agreed that Member States should make resources, with a minimum 40 hours per person, available for the established subgroups as appropriate.

RCG agreed to wait e.g. the results of the FishPi2 project before outlining a comprehensive set up of the subgroups, including practical aspects of subgroup such as report formats and other relevant issues.

RCG agreed to request from the European Commission for them to explore financial possibilities, e.g. in the framework of the direct funding possibilities of the EMFF, to finance a joint secretary services for the disposal of the all-northern RCGs.

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

4.5.1 Main findings

A proposal by the European Commission on a new EMFF was published in summer 2018. It contained changes influencing data collection. The magnitude of those changes, including financial, are not yet entirely clear as deliberations are ongoing by the relevant EU institutions.

It was also recognized, that other EU legislation under revision such as technical measures regulation, basic control regulation or legislation in force such as MSD influence or has an interface with DCF activities. All this has potentially an impact to costs involved in data collection activities.

The EU-MAP will face a two stage approach. In the first phase there will be an extension of the present EU-MAP, likely with only some minor changes to the essential substance. In the second phase, the EU-MAP will be revised most likely with substantial changes. These two processes will take place partially simultaneously.

4.5.2 Recommendations

RCG recommends Member States, especially relevant scientific institutions, to make their institutions and wider audience aware of the importance of the DCF activities and report these activities first time to the RCG in 2019 and after that as appropriate.

4.5.3 Decisions

RCG agreed that it is necessary to establish a Pan-European subgroup on EU-MAP revision. This group would be one of intersessional subgroups and it would mainly consist of NCs.

RCG agreed to request from the European Commission a timeline to be prepared swiftly by the European Commission to facilitate the work ahead and if possible, timing of different components. These components include e.g. other legislation in preparation influencing DCF activities

4.6 Revision of the control regulation

The RCG also highlighted proposed changes to the Control Regulation to make it more GDPR compatible. Article 112 (3) of the Commission Proposal limits the storage of personal data to 5 years, except in the case of data used for complaints, infringements and inspections in which case storage can be for 10 years. Where information is retained for a longer period it would need to be anonymised. These provisions and the duration will be discussed in European Parliament and Council and if the co-legislators consider that those periods are too short they may amend them.

The NCs will flag the need for a longer storage period to the national bodies involved in the revision.

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

5.1 Feedback from ICES

During RCG Baltic Henrik Kjems from ICES was giving a presentation regarding Benchmarks, Datacalls, Data transmission, Surveys and Recommendations.

Important info regarding upcoming Benchmarks and datacalls are listed below.

Benchmarks for 2019

1. WKBALTCOD2

Data Evaluation Workshop: 15-20 October 2018

Benchmark Workshop: 4-8 February 2019

Stocks included: cod.27.22-24, cod.27.25-32

2. WKUpNorth

Data Evaluation Workshop: tbc

Benchmark Workshop: January 2019

Stocks included: cod.27.1-2, had.27.1-2

3. WKHadRock (+Special Request MSE)

Data Evaluation Workshop: tbc

Benchmark Workshop: tbc

Stocks included: had.27.6b

Following list of planned Datacalls for 2018 and 2019 was presented:

Planned data calls 2018 and 2019 (#11 so far)



Data Call	WGs	Approximate date	Notes
Vulnerable marine ecosystems	WGDEC	November 2018	
Bycatch of protected species	WGBYC	December 2018/January 2019	A data call was issued in 2018 for the first time for this WG
Landings, discards and biological data	WGNAS (WG North Atlantic Salmon)	December 2018/January 2019	First time! useful example for Baltic Salmon in 2016: http://ices.dk/marine-data/Documents/Data_calls/20161021_Datacall_WKBaltSalmon_revision.pdf
Landings, discards and biological data (including data on length frequencies for proxies)	HAWG, WGBFAS	January 2019	WGBFAS requested to issue their data call early in advance
VMS/Log book data	WGSFD	January 2019	
Preliminary catch statistics 2018	-	February 2019	

Planned data calls 2018 and 2019



Data Call	WGs	Approximate date	Notes
Landings, discards and biological data (including data on length frequencies for proxies)	AFWG, NIPAG, NWWG, WGBIE, WGCSE, WGDEEP, WGHANSA, WGMIXFISH-advice, WGNSSK, WGWIDE	February/March 2019	
Landings, discards and biological data	WGCEPH	April 2019	
Landings, discards and biological data	WGEF	April	
Landings and biological data	WGEEL	July 2019	A data call was issued in 2018 for the first time for this WG
Landings, discards and biological data	WKCELTIC (Benchmark Celtic Sea roundfish stocks)	September 2019	

Science for sustainable seas

5.2 EU-MAP demands coordinated data collection based on end user needs.

According to several sections in Commission Implementing Decision (EU) 2016/1251 data shall be collected and coordinated based on end-user needs. An overview on all these demand together with an overview on how these are considered within the Baltic region is presented in table below.

EU-MAP 2016/1251		
section	description	suggestion for way forward
CH III; 1.3	Data shall be collected to enable valid estimates to be derived for the type of fisheries, temporal periods and areas based on end-user needs agreed at marine regional level . The frequency of data collection is to be coordinated at marine region level unless stated otherwise in this Annex and corresponding tables	Summary of data from RDB
CH III; 2 (a) (i)	for commercial fisheries, volume and length frequency.... The temporal resolution shall be coordinated at marine region level and based on end-user needs .	Summary of data from RDB
CH III; 2 (a) (ii)	for commercial fisheries, meanweight and age distribution.... The selection of stocks... and temporal resolution shall be coordinated at marine region level and based on end-user needs .	Summary of data from RDB
CH III; 2 (a) (iii)	for commercial fisheries, sex-ratio, maturity and fecundity The selection of stocks... and temporal resolution shall be coordinated at marine region level and based on end-user needs .	Summary of data from RDB
CH III; 2 (a) (iv)	for recreational fisheries, annual volume (numbers and weight or length) of catches and releases for the species listed in Table 3 and/or the species identified at marine region level as needed for fisheries management End user needs for age or other biological data as specified in paragraph i-iii shall be evaluated for rec fisheries at marine region level .	Review of Pilot studies. Structure metadata
CH III; 2 (c) (iii)	The designation of rivers to be monitored for eel and salmon shall be defined at regional level. The selection of stocks from which these variables have to be collected shall be coordinated at regional level based on end-user needs .	diadroma group
CH III; 3 (a)	...where data collected during observer trips are not considered to provide sufficient data on incidental by-catch for end-user needs, other methodologies, shall be implemented by MS. The selection of these methodologies shall be coordinated at marine region level based on end-user needs .	Review of Pilot studies.
CH III; 3 (c)	Data for estimating the level of fishing and the impact of fishing activities on marine biological resource and on marine ecosystem ... These data shall be first assessed within pilot studies. Based on the outcomes of these pilot studies, MS shall determine future datacollection specific for each marine region, coordinated at marine region level based on end-user needs .	overview stomach sampling VMS datacalls
CH IV; 3	Member states respective contribution to international research surveys shall be coordinated within the same marine region .	agreements cost-share of sur

5.3 The issue list for the 2019/2020 benchmark stocks produced by ICES EWG.

The benchmark issue list was provided to the RCG Baltic for the upcoming Benchmark and inter-benchmarks in 2019 and 2020. Central Baltic Herring (SD 25-29, 32), Gulf of Riga herring (SD 27-28) are planned to be benchmarked and Sole (SD 20-27) to be inter-benchmarked in 2020. The Central Baltic herring issue list identified data needs for maturity and mean weight of age data (Table 1). The RCG Baltic provided an overview of available data in number of total number of individual fish weights and total number of individual fish maturity determinations from the commercial fishery for years 2009-2017 (Annex 6) for the stock assessor to consider.

The overview data set in Annex 6 shows commercial data available in the Regional Data Base (RDB). The dataset goes further back in time but is presently not available in the RDB further back than 2009 (but e.g. Poland has a very long time-series). Data has been showed by month and year indicating that if maturity data is to be used the appropriate months can be selected for the analysis. March-June is considered spawning time for the herring and April would be an appropriate month to use the data for a maturity ogive. However, the full dataset can be provided for end-users to investigate the most appropriate time to use the maturity data.

Table 1. Issue list for the Benchmark for Herring (*Clupea harengus*) in subdivisions 25–29 and 32 (central Baltic Sea, excluding Gulf of Riga).

Herring (*Clupea harengus*) in subdivisions 25–29 and 32 (central Baltic Sea, excluding Gulf of Riga)

STOCK	HER-2532-GOR / HER.27.25-2932	
Benchmark	Year: 2018	Planned by EG /Agreed by ACOM
Stock coordinator	Name: Kristin Öhman	Email: kristin.ohman@slu.se
Stock assessor	Name: Mikaela Bergenius	Email: mikaela.bergenius@slu.se
Data contact	Name:	Email: kristin.ohman@slu.se

ISSUE	PROBLEM/AIM	WORK NEEDED / POSSIBLE DIRECTION OF SOLUTION	DATA NEEDED TO BE ABLE TO DO THIS: ARE THESE AVAILABLE / WHERE SHOULD THESE COME FROM?	EXTERNAL EXPERTISE NEEDED AT BENCHMARK	RCG FEEDBACK
Stock identity	Mixing of Western Baltic spring spawners and CBH in SD 24–26. To what extent is this occurring and do we have a way to account for this?	To test the separation function developed by Germany to separate the two stocks		Tomas Gröhsler, Valerio Bartolino	Workshop on Mixed Fisheries has been looking into the issue.
Tuning series	BIAS data. Do we have new bias data from SD 32 that could be used in the assessment?	WGBIFS, approach the chair, Niklas and Olavi	To be decided	Niklas Larson or Olavi Kaljuste	Informed Olavi
Discards	none				
Biological Parameters	Mortality. Investigate new estimates for natural mortality.	- Estimate M from life history traits and models - Update SMS model with new cod stomach data for recent years	To be decided	Max Cardinale Stefan Neuenfeldt	Outside the scope of the RCG
	Maturity. Currently maturity is held constant over the time series. Do	Analyses of maturity data and Sensitivity analyses of SAM model outputs to changing maturity	Maturity data – is it available??	Michele Casini/Mikaela Bergenius	BITS Q1 sampled for maturity (to be analysed) (Checking whether gear is suitable)

	we need to update this?				BITS Q4 Wrong timing BIAS Wrong timing Data from commercial catches available (2009-2017) see excel file for overview
	Mean weight in the stock. Equals currently mean weight in the catch! Do we have something better?	Do we have data?			BIAS and BASS Mean weight of herring (in grams) per age groups (see WGBIFS report). Data from commercial catches available (2009-2017) see excel file for overview

5.4 Sampling for maturity data collected in the surveys for assessment of Baltic Sea stocks

According to EU-MAP, data should be collected according to end user needs. An overview on the Baltic fish stocks sampled for maturity in surveys was done in RCG Baltic 2017. The overview was presented to stock assessors and stock coordinators in WGBFAS 2018, to get feedback if the sampled maturity data is used or not in the assessment. (Annex 7)

Generally, surveys conducted in quarter 1 are suitable for sampling maturity data and the data is used in the assessment. Maturity data sampled on Cod SD22-24 and Plaice SD21-23, Cod SD 21 (Kattegat) collected in surveys BITS q1 and IBTS q1 are used. Maturity data collected for Plaice SD24-32 in BITS q1 can potentially also be used.

Surveys conducted in quarter 3 and 4 have wrong timing in respect of maturity data and the data is not used in the assessment. According to Annex 7, stocks sampled for maturity in the surveys BITS q4, SOLES, BIAS, IBTS q3, AS, CODS are not used for stock assessment purpose. Stocks are; Cod SD 22-24, SD25-32, SD 21; Sole 3a, SD20-21, SD22-24; Plaice SD21-23, SD24-32; Herring SDs 25-27, 28.2, 29+32, SD28.1, SD3031, Sprat SD22-32 22; Flounder SD22-23, SD24-25, SD26-28, SD27, 29-32; Turbot SD22-32; Dab SD22-32; Brill SD22-32.

RCG Baltic agreed that the overview on maturity sampling will be sent to WGBIFS for information and possible update of manual. MS's may consider the intensity of sampling of maturity in quarter 3 and 4.

5.5 Cod liver sampling in the Baltic Sea

The Baltic MS are aware of the issue of partly high infestation of Baltic cod livers infested with the anisakid liver worm *Contracaecum osculatum*, especially in eastern Baltic cod (>30 cm). This phenomenon is known to Baltic MS at least since the last cod benchmark in 2015. Infestation can have adverse effects on individual fish health and, if a major part of a population is affected, potentially on stock health.

However, the causes and consequences as well as the spatio-temporal patterns and dynamics of cod liver infestations are still largely undescribed. Moreover, grey seals, a known final host of liver worms, are recovering in the Baltic and ecological consequences of the return of this top predator are under debate.

MS completed an overview table where past, present and planned activities involving cod liver parasite sampling, are summarized (Annex 8). Poland has collected Baltic cod liver infestation data since 2013, Germany has data from national surveys since 2011 and extended the sampling in 2015, Denmark started in 2018. Beyond national initiatives, a more coordinated monitoring approach is required to provide the scientific community behind the assessment working group with data for more detailed analyses of this phenomenon. The regular scientific surveys and the commercial samples collected within DCF provide a useful possibility to maximize the coverage of data on cod liver infestation levels.

Contact persons for cod liver sampling are: Uwe Krumme, Thünen Institute of Baltic Sea Fisheries and Jane Behrens, DTU-Aqua

5.6 National stomach sampling programmes in the Baltic Sea: an overview

WGBIOP 2018 requested an overview table showing the ongoing stomach sampling activities in the Baltic Sea by EU member state. The overview (Annex 9) shows that many countries conduct stomach sampling programmes, involving herring, sprat, cod and flatfish.

6. Regional plans (TOR 4)

Development and preparation of regional workplans are identified tasks for the RCGs ((EU) 2017/1004). The regional work plans may include procedures, methods, quality assurance and quality control for collecting and processing data, regionally coordinated sampling strategies and conditions for delivery of data in regional databases. They may also contain cost-sharing arrangements for participation in research surveys at sea. A regional work plan shall be considered to replace or supplement the relevant parts of the national work plans of each of the Member States concerned.

Preparation of regional workplans is an important task for the RCGs as such plans have been put forward as means to more cost-effective data collection. More cost-effective data collection are in turn essential to meet new requirements on data collection arising from broadening the scope of the CFP ((EU) 1380/2013) to also cover impact of fisheries on the marine ecosystem.

Regional workplans may also play an important role for establishing standards for e.g data quality across MS in a region

The RCGs and their predecessors, the RCMs, have been successful in improving collaboration between MS (MARE 2019/14 “Strengthening regional Cooperation in the areas of fisheries data collection in the North Sea and North East Atlantic (fishPi)”) but have gain less progress preparing regional workplans. Reasons for this lack of progress and ways to overcome them were discussed in fishPi2 WP1 and presented to RCG Baltic, where it was discussed further. This discussion is summarized below.

MS are currently to a considerable extent closely together and towards common goals. More MS in the Baltic region are for example moving towards implementation of statistically sound sampling designs and most MS have the technical expertise to run and develop tools for quality evaluation and assurance. All MS do further upload data to the regional database.

This high degree of cooperation constitutes good conditions for moving a more formal cooperation through regional workplans. A main obstacle to achive this is that we do not know what a regional work plan look like and how it shall be “phrased”. National workplans are structured and submitted to the Commission based on (2016/1701/EU) “Alaying down rules on the format for the submission of work plans for data collection in the fisheries and aquaculture sectors”, but it is unclear how this fits with regional workplans that might replace a part of a national work plan. It is thereby of importance to initiate work on the administration of a regional workplan. E.g How shall a regional workplan be submitted to the Commission? How can the tables, presently used to present national workplans be used?

Another explanation for the so far limited success on regional workplan is that MS and RCGs have put most of their effort into attempts for regional sampling plans. Fully integrated regional sampling plans are assumed to be complex and however require a very high and intense level of cooperation as well as substantial documentation. It is important to continue to work towards regional sampling plans, as RCG Baltic do in the subgroup “Towards a regional samplingprogramme – a case study of fisheries for small pelagics in the Baltic”. And it is important that all MS participate in that work.

A regional workplan may however include other elements (shared use of staff, agreed sampling protocols etc) that might be easier to grasp and implement. We need to identify such elements and work with them in a structured way with the aim to produce regional plans.

7. Data quality (TOR 5)

7.1. Background

The “Data call for commercial fisheries landing and sample data for the 2018 Regional Coordination Group Meetings” was sent to Member states (MS) 24th of April 2018. All countries represented in the regions Baltic Sea, North Sea and Eastern Arctic and North Atlantic were asked to ensure that all Commercial samplings (CS), Commercial Landing statistics (CL) and Commercial Effort statistics (CE) from 2017 was uploaded to the Regional Database (RDB) hosted by ICES prior to the deadline 25th June 2018. In case previous year data had been substantially changed or incomplete these data were asked to be uploaded as well. The Subgroup explored and displayed the uploaded data for both, the commercial fisheries data (CL and CE) and the commercial sampling (CS).

7.2 Data submissions to the RDB for the RCG Baltic Sea

Landing data

The overview of the number of species in the commercial landings uploaded to the RDB is shown below.

Vessel flag country (CL)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	50	59	49	51	54	57	55	63	64
Estonia	28	38	40	33	38	35	31	35	38
Finland	22	22	22	22	22	22	20	20	19
Germany	43	43	40	45	46	45	44	40	45
Latvia	30	12	12	12	12	33	34	34	32
Lithuania	12	11	13	26	12	25	23	22	24
Poland	36	38	36	34	36	34	33	32	36
Sweden	49	47	46	42	42	45	45	48	42

All countries have uploaded landings data for data year 2017. The numbers of species compared with the previous years’ values indicate that all data have been uploaded.

Landing data

The overview of the number of data records in the commercial landings uploaded to the RDB is shown below.

Vessel flag country (CL)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	40919	36057	33916	31473	29616	27835	27935	25901	24092
Estonia	641	3904	4010	15639	18422	20526	19586	19129	19937
Finland	8587	8574	8602	8321	8407	15683	15414	14446	13126
Germany	16699	14613	14511	15353	13409	14287	13469	12419	13019
Latvia	3632	2507	2579	2454	2522	3853	3912	3945	3284
Lithuania	187	131	374	479	507	686	856	1038	941

Poland	8244	7773	9557	11009	11249	12010	12260	12615	12323
Sweden	22034	17349	16568	15055	17091	15655	15871	14643	12138

The numbers of data records for landings for data year 2017 compared with the previous years' values indicate that all data have been uploaded.

Effort data

The overview of the number of metiers in the commercial effort uploaded to the RDB is shown below.

Vessel flag country (CE metiers)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	53	59	57	50	50	46	42	48	48
Estonia	3	2	2	2	2	2	2	1	3
Finland	14	15	14	15	13	14	14	14	13
Germany	49	49	49	44	46	42	43	44	36
Latvia	12	14	12	14	14	13	14	13	13
Lithuania	8	8	9	7	9	10	11	11	9
Poland	32	30	38	41	41	39	30	30	28
Sweden	46	52	52	50	48	45	47	47	44

All countries have uploaded effort data for data year 2017. The numbers of metiers for data year 2017 compared with the previous years' values indicate that all data have been uploaded.

Length samples

The overview of the number of species in the length samples uploaded to the RDB is shown below.

Sampling country (HL)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	37	45	38	29	39	42	31	39	32
Estonia	5	12	19	30	32	42	3	6	6
Finland	22	26	30	32	31	33	33	32	31
Germany	24	30	25	27	30	32	20	38	32
Latvia	4	6	16	13	14	17	16	19	26
Lithuania	4	4	4	4	9	15	13	8	16
Poland	29	29	40	44	46	47	50	40	35
Sweden	45	29	42	43	50	49	42	42	33

All countries have uploaded length data for 2017. The numbers of species for data year 2017 compared with the previous years' values indicate that all data have been uploaded.

Age samples

The overview of the number of species, which have been age red and uploaded to the RDB is shown below.

Sampling country (CA)	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	8	10	10	10	10	9	8	8	8
Estonia	4	8	7	7	11	9	3	5	5
Finland	6	6	6	7	5	5	6	8	7
Germany	8	8	9	10	11	8	8	8	8
Latvia	5	5	8	9	9	7	9	10	8
Lithuania	4	4	4	4	4	6	4	4	3
Poland	12	11	12	16	17	18	16	17	16
Sweden	6	5	5	6	6	6	5	5	5

All countries have uploaded age data for data year 2017. The numbers of species for data year 2017 compared with the previous years' values indicate that all data have been uploaded.

Conclusion on the data submission to the RDB for the RCG BS

- All countries have uploaded landings and effort data.
- All countries have uploaded age and length sample data.
- From the number of species uploaded for the years it looks like in general all data have been uploaded for all the uploading countries.

7.3 An overview from the RDB on; 1) regional fisheries and 2) sampling and quality

The data subgroup improved and developed the data analysis scripts that were developed by the RCM Baltic in 2017. The subgroup produced overviews on regional fishery and several overviews on the sampling of the commercial fishing fleet.

The data are taken from the RDB FishFrame and transferred into the COST-format <http://wwz.ifremer.fr/cost>. The R scripts are documented on the RCG Baltic sharepoint and should also be available at the sharepoint of the Liaison meeting or the RCG Data Group.

Please note that the graphs reflect the data status presently available in the RDB during the RCG. All MS are kindly requested to critically review the graphs and check whether the data make sense and in case errors are recorded on a national level, the errors should be corrected. Any corrections made should be stated in the respective upload logs and send to RCG Baltic. This is usually done annually as part of the data call for the most recent year.

7.3.1 Regional fishery

The regional fishery data were available from all MS and only minor changes were conducted during the meeting. Any changes in the data are recorded in the upload logs (see also “7.3 Upload Logs”).

The subgroup produced overviews on regional fishery which were either requested by the RCG or by end-user that were present at the meeting. All graphs and figures can be found in Annex 10 (Fisheries data overview).

7.3.2 Biological sampling

The data subgroup improved and developed the data analysis scripts that were developed by RCM Baltic in 2016. The subgroup produced overviews on biological sampling of two Baltic cod stocks and central Baltic herring stock (Annex 11). The stocks were chosen for the overview as all three of them are subject to a benchmark in 2019 (See also “7.4.1 Baltic cod benchmark 2019”). Identical overviews are provided for Baltic Sea eel (*Anguilla anguilla*) on special request in Annex 12.

7.4 Upload logs

All countries submitted upload logs according to data call. RCG Baltic 2018 compiled information from upload logs from all countries in the Baltic region to get an overview. (Table 2)

Table 2: Overview of MS responses to the 2017 RDB upload. Also re-uploads of previous data sets are stated.

country	2017 uploads in each datatype			previous data re-uploads reported	remarks
	CE	CL	CS		
DEU	nearly full	nearly full	full upload	no	Metier-area combination to be added by RDB admins for full CE, CL uploads
DNK	full upload	full upload	full upload	no	
EST	nearly full	full upload	full upload	no	EU LOCODE list don't cover SSF small harbours. Generic code EE999 used when harbour not in the LOCODE list
FIN	full upload	full upload	full upload	CE and CL data 2014-2009 updated, CS data 2016-2009	

				updated	
LTU	full upload	full upload	full upload	CE and CL data 2016-2015 updated	
LVA	full upload	full upload	full upload	no	
POL	full upload	full upload	full upload	CE and CL data 2016-2015 reuploaded.	
SWE	full upload	full upload	full upload	no	

According to information from the upload logs, the sent data from Baltic Sea 2017 have been fully or nearly fully uploaded to the RDB. Data call instructions to fill in the upload logs was interpreted slightly differently between countries, where successful uploads were not mentioned in the log-file or “NA” records were used. Missing information was gathered during the meeting and the tables were completed accordingly. Data were uploaded to the RDB in all cases even when upload records were not filled in or were just stated as an empty line.

Reasons for partial uploads included missing métier-area combinations (e.g. crustacean-targeted fisheries in the northern Belt area of SD 27.3.c.22) and shortages in EU LOCODE code lists regarding small harbors.

7.4.1 Conclusions on the Upload Logs

The template used for upload logs does not include a clear way to report the information about whether only last year data have been added or also updates to previous years data have been made. Some countries have issued the updates to earlier year time series but it remains unknown if those are the only updates. A simple yes/no variable to indicate this could be considered to clarify this issue.

In order to collect the log information more systematically, the upload logs could be pre-filled beforehand with all the datatypes CL, CE and CS in it.

7.5 EU-MAP data demands for the RCG

RCG Baltic has been requested to answer to the Commission Implementing Decision (EU) 2016/1251 about the temporal resolution of the collection of biological variables and how it can be coordinated at marine region level and be based on end-user needs:

(a) Catch quantities by species and biological data from individual specimens enabling the estimation

of:

- (i) For commercial fisheries, volume and length frequency of all catch fractions (including discards and unwanted catches) for the stocks listed in Tables 1A, 1B and 1C, reported at the aggregation level 6 as set out in Table 2. The temporal resolution shall be coordinated at marine region level based on end-user needs;*
- (ii) For commercial fisheries, mean-weight and age distribution of catches of the stocks listed in Table 1A, 1B and 1C. The selection of stocks from which these variables have to be collected and the temporal resolution shall be coordinated at marine region level based on end-user needs;*
- (iii) For commercial fisheries, sex-ratio, maturity and fecundity data for stocks listed in Tables 1A, 1B and 1C of catches at frequencies needed for scientific advice. The selection of stocks from which these variables have to be collected and the temporal resolution shall be coordinated at marine region level based on end-user needs;*

The RCG Baltic is the responsible organ to evaluate, plan and advice such spatiotemporal data collection at a regional level and in close exchange with the end user to define data needs and provide guidance.

7.5.1 Case study: cod in the Baltic Sea (WKBALTCOD2)

To meet the demands of the 2016/1251 regulation, the benchmark of the two Baltic Sea cod stocks (Western Baltic Cod WBC and Eastern Baltic cod EBC) in 2019 was chosen as an example on how the RCG can provide assistance. This includes overviews on the available biological variables (that are requested in the 2016/1251 regulation stated above) for the “Data meeting for Benchmark Workshop on Baltic Cod Stocks (WKBALTCOD2)”.

The objective of WKBALTCOD2 is to evaluate the appropriateness of data and methods to determine stock status and investigate methods appropriate to use in the single-stock assessment for the cod stock in SD 22–24 and cod in SD 25–32 in the Baltic.

Data needs were agreed with the end-users that were present at the RCG Baltic (i.e. stock coordinator and stock assessor). The subgroup provided the end user with the requested overviews on landing distributions and the respective spatiotemporal distribution of the sampling of several biological variables (Annex 13).

7.6 Use of RDB to answer data calls

7.6.1 Background

The data subgroup of the RCG Baltic worked with the RDB data of 2009-2017 and did some in-depth data explorations. The RDB, although slowly developing, is yet not fully operational.

The RCG recommends the following changes to improve the handling and quality of the data:

- Foreign key checks should be implemented between the FishFrame data files HL and CA (CA is so far only referencing to the TR table) to ensure that the length data of the biological data is contained in the total length measurements.
- The communication with the end-user should be improved. We suggest the implementation of a “newsfeed” on the RDB front page that informs end-user about e.g. downtimes and server work. Absence times of the RDB administrators would also be beneficial.
- Simple overviews on available data in the RDB. So far, no simple method is available to get quick overviews of the uploaded data and their condition / working status.

“Having knowledge of status of available data is crucial for auditing purposes, for quality control and for determination of usage of data to mention three objectives in the regional work. It also allows users, within reasons, to account for missing data in their estimates or reports. Therefore, RCM Baltic 2013 recommended that a system for administering and recording uploaded data and a facility to provide a clear reference for data users on how complete the data is should be developed in RDB Fish Frame and the RCM Baltic 2014-2017 all reiterated this recommendation.” (RCM Baltic 2017, final Report)

- Update and enable the different Pivot tables in the RDB (as stated in the RCM Baltic 2017 Report). Only the “sample overview” function was updated and is now operational and was used to compile the overview tables. Other Pivot function-based tables are still not functional and do not contain the current data sets. This includes functions like:
 - Species composition in commercial fishery
 - age distribution
 - catch per unit effort (weight)
 - length group distribution
- MS should be encouraged to submit CE and CL records on the highest spatial resolution (i.e. ICES rectangle) whenever it is possible. Although the rectangle field is not a mandatory field, it is already used as standard unit for data analysis in several stocks (e.g. WBC, EBC and EEL). If the rectangle is missing, landing and effort data will not be displayed. In 2017, more than 25% of the landings of Baltic Sea eel do not appear in the overview graphs, as they had no information about the rectangle of catch.

With a shifted data call for MS to upload recent fisheries and sampling data into the RDB (i.e. in the first quarter of the year, before the assessment working groups), the RDB can provide additional and more detailed information to the stock coordinators and stock assessor.

The group also discussed that it would be beneficial to include functions to the RDB that allow the direct download of benchmark standard tables. This would require the adjustment of several R scripts of the COST package. It was suggested that an intersessional Data group of the RCG should develop scripts and evaluate the feedback to implement such functionalities to the RDB. Standard graph functions (such as ALK, sample sizes, effort overviews, etc.) should be added as data compilation tools to the RDB output as well. However, it must be noted that the ALK data of Denmark and Sweden require corrections and weightings before they can be included in an analysis, this issue would need to be implemented in such tools.

7.6.2 Main findings

The screening and displaying of the data showed that also in RDB there are still data flaws (e.g. wrong rectangles, missing data and invalid métiers “MIS_MIS”). Especially the “rectangle” field should be mandatory again, as a majority of the end user demand data in the highest possible resolution.

The RCG is able to support end user with data, overviews and expert knowledge (on fisheries, data collection and regulation for example). Both, RCG and end-user groups should interact more.

7.6.3 Actions in short term / long term

Several actions on a short and long period are needed to improve the work of the RCG, where the recommended changes to the RDB (see 1.5), such as additional foreign key checks, can be easily implemented in short term.

On a longer term basis and in dialogue with end user and other RCGs, standardized overviews and output, i.e. “supporting information” should be implemented. Additionally, a feedback loop needs to be established, where end user report back their findings (e.g. undersampling in certain areas) to the respective RCG, which in turn can adjust regional sampling plans or define new data needs.

7.6.4 Decisions

The RCG subgroup decided that data should be uploaded to the RDB prior to the assessment working group to enable easy quality checks on the un-aggregated data and overviews on e.g. sampling intensity. However, this would require an earlier deadline for submission of data to the RDB and might conflict with the deadlines of the data in the InterCatch database. However, the group agreed that sooner or later (rather sooner when raising of sampling data is possible within the RDB) the data submission of RDB data will take place prior to the assessment working group and that MS should foster national developments towards this direction. This decision is supported by the fact that the RCG Baltic 2019 will take place in June to account for the adoption of the new Multi-annual-plans

7.7 RDBES Data Policy

7.7.1 Background

The Steering Committee for the Regional Data Base and Estimation System (SCRDBES) has updated the Data Policy Document due to the revision of the DCF regulation. This revised version of the Policy Document has been circulated to the RCG Baltic on the 31th August 2018 for endorsement by the RCG Baltic NCs (Annex 14).

Agreement: The NCs for the RCG Baltic found the revision of the document in line with the recast of the DCF and agreed unanimously to endorse the document.

When reviewing the Policy Document the NCs discussed whether it would be an idea to have a more open access to the RDBES data. At present the rules in the Data Policy Document are:

The DCF defines:

- i) **Detailed data** as data based on primary data in a form that does not allow natural persons or legal entities to be identified directly or indirectly*
- ii) **Aggregated data** as the output resulting from summarising the primary or detailed data for specific analytical purposes*

Data use for fisheries management:

Advice to Fisheries Management

- i) Countries grant permission for **aggregated** data, see Annex 2, to be used by ICES in the provision of scientific advice to the European Commission and other ICES clients of scientific advice. A list of the ICES groups that require access to aggregated data will be provided to the RCG's and ACOM members by **01 DEC** each year.*
- ii) EU Member States (MS) grant permission for **detailed** data to be used by the RCG's for the purposes of Article 9 of the DCF.*
- iii) An ICES entity on the approved list in (i), requiring **detailed** data from the RDBES, via the RDBES host can request access in writing to each country and EU MS¹. The EU MS will be obliged to respond within two months from the date of the request.*

Other uses

- iv) An entity requiring **detailed** or **aggregated** data from the RDBES, can request access in writing to each Country. The EU MS will be obliged to respond within two months from the date of the request.*

¹ The focal point in EU MS being National Correspondents in consultation with individual countries or autonomous data providers within member states. For non EU countries the ICES delegate is considered the focal point.

7.7.2 Agreements

The NCs for the RCG Baltic found the revision of the document in line with the recast of the DCF and agreed unanimously to endorse the document.

The NCs at the RCG Baltic 2018 agreed to grant ICES expert groups and related benchmark groups providing advice to fisheries management access to detailed data for the sub-division 22-32 (Baltic Sea) stored in the RDBES but only for the use by these groups.

For any other use the rules iii) or iv) have to be followed.

RDBES steering committee

The RCG Baltic agreed to adopt the new RDB steering group structure with two representatives from the RCG Baltic- Katja Ringdahl and Jörgen Dalskov. One representative from each ICES member countries are also allowed to participate.

Recommendation relating to review of control regulation

There are strong concerns about the stipulation that personal data can only be retained for 5 years – in the current draft of the new Control regulation. This lead to the recommendation to review the draft Control regulation and amend where required to allow retention of personal data for more than 5 year for scientific purposes, to fulfil data requirements under the DCF. MS to coordinate the review and make submissions during legislative negotiations based on the review.

7.8 Regional DataBase RDB and Regional DataBase and Estimation System RDBES

7.8.1 The need for the development of the RDBES

The data fundament for the RCG Baltic is the existing Regional DataBase, RDB, which is hosted and maintained by ICES Secretariat. The RDB have not been developed since it was given to ICES Secretariat in 2012 to support the RCG North Sea and Eastern Arctic, the RCG North Atlantic and the RCG Baltic Sea, but many maintenance improvements have been made to be able to use the strength of the RDB. The RDB is not only a database, is it also an estimation system, which can estimate discard and biological information. But because the existing RDB cannot store any statistical sound sampling information, the countries have not wanted use the estimation part of the RDB. Therefore there has been is a strong demand for developing a new Regional DataBase and Estimation System, RDBES, in which the statistical sound sampling information can be quality checked and stored and statistical sound estimations can be executed and documented. This is in line with the text in DCF 2016/1701, article 5 Quality assurance and quality control. Under point 3. “Where data are to be collected by sampling, Member States shall use statistically sound designs that follow guidelines for good practice provided by the Commission, the International Council for the Exploration of the Sea (ICES), STECF or other expert bodies to the European Commission”. Therefore it is important to be able to quality check, store and use the statistical information collected during sampling. The RDBES data model will meet previously identified needs in terms of database structure and sampling design content that have been preventing full usage and correct interpretation of the data on the existing RDB. The development of the Regional DataBase and Estimation System, RDBES, started in the spring 2017 and the Steering Committee of the RDB, SCRDB, established a Support Core Group, which should specify the needs, so ICES Secretariat could development the new RDBES according to the needs. The Core Group have since worked on specifying the data model for the sampling of the commercial fish species, which should be able to support all countries sampling of all species.

The new data model and hereby the database part of the RDBES will be by far more generic and complex than the existing RDB's database. As an example the existing RDB handle one way of sampling species where the new RDBES will be able to handle so far 32 different ways of sampling and more can be added. The intention is that the RDBES should be finished for the commercial species around summer 2019, but because of the complexity of all the countries different sampling methods and the sampling of many different species, the data model specifications and the development is delayed.

7.8.2 Main reasons for using the RDBES

Having a single system hosting the different regional databases appears as the best solution in term of harmonisation of procedures and from a cost-benefits point of view. The RDBES is also a tool that would allow improving the standardisation of quality among countries, and it would also allow responding to different calls without extra work when first developed.

There are many advantages of using the RDBES when it is implemented:

- Support the Regional Coordination Groups with harmonised sampling data for coordination
- Higher data quality by using common quality checks across all countries' data
- Ensure only approved standardised statistical and ratio methods are used for estimating data
- Reduces the workload for the countries in estimating data because the RDBES should contain all needed methods
- Document data to detailed data level and a transparent use of estimation methods
- One data call for upload of data to the RDBES for the RCGs and the ICES stock assessment expert groups, because the estimated data will be used for the ICES stock assessment
- The data handling is as efficient and easy as possible

7.8.3 Funding is needed

ICES Secretariat is funding the development of the RDBES, but the funding is ending after summer in 2019, therefore it is important to find funding for further development.

7.8.4. The development and specification of the data model

There has been a lot of progress on the Regional DataBase and Estimation System, RDBES. It is very complex to specify the data model for the RDBES, because it includes statistical sampling information and it should cover all countries sampling of all species. The data model should originally have been specified in March 2017, but the very dynamic data model have been developed continuously during 2017 and 2018 by the Core Group (a subgroup under the Steering Committee of the RDBES) lead by ICES Secretariat, through a set of web meetings and physical meetings. It is first in September 2018 where the data model is close to being finalised for implementation in the RDBES. The data model have in February 2018 been sent to the WGCATCH and the countries for feedback, after some changes it was sent in March to countries through the National Correspondents and ICES Advisory Committee. The latest updated data model was sent late June to the RCGs and countries for feedback, to ensure all countries are included in the specifications of the needs, and for the countries to have a possibility to change the data model to ensure their data can be included in the RDBES. This process takes time and it has never been done before. To make sure the countries gave feedback on the data model, the requested time to spend was limited to answer the following four questions:

1. Do the countries think their sampling programs/data will fit into a hierarchy in the data model? If not what needs to be added?
2. Does each country think it can populate the data model with data?
3. Do the RCG member states think any ongoing issues from the existing RDB upload logs will be resolved by this model?
4. The countries are strongly encouraged to try to populate the data model with national sample data. Please describe the outcome of populating the model.

Only the short answers are listed in the table below for each country just to have an overview, each column represent an answer to one of the four questions:

	1. Short answer. Do the countries think their sampling programs/data will fit into a hierarchy in the data model? If not what needs to be added?	2. Short answer. Does each country think it can populate the data model with data?	3. Short answer. Do the RCG member states think any ongoing issues from the existing RDB upload logs will be resolved by this model?	4. Short answer. The countries are strongly encouraged to try to populate the data model with national sample data. Please describe the outcome of populating the model.
Denmark	Yes.	Yes	We don't have any issues relating to the data model in the upload log	Able to populate fully with at-sea data - just need the last table with individual fish
Estonia	Yes	Yes	We had no RDB upload log issues at present	We populated the model with sample and biological data
Finland	Partly.	[Yes, concerning trawl fisheries]	We had no RDB upload log issues.	We were able to populate the model with example data (1 trip from trawl fisheries).
Germany	Yes.	Yes, because we can define sampling scheme, upper and hierarchy, as well as "helping" auxiliary tables.	Partially yes, since auxiliary tables can serve as "user-defined" parameters and don't need to be "system-defined".	At sea data have been test with no problems.
Latvia	Yes. Hierarchy 1 is fits with our sampling program.	Yes. It's possible.	We hope so, but in the past we didn't have any big issues.	This process is started.
Lithuania	Yes	Yes	We had no RDB upload log issues.	15th Sep. We will have populate the data model with selected national sample data.
Poland	Yes after own modification.	At-sea - Yes, but with some assumptions. On-shore - No, unless hierarchy 1 is applicable.	We had no RDB upload log issues.	We were able to populate the model with example data (1 trip at-sea sampling).

	1. Short answer. Do the countries think their sampling programs/data will fit into a hierarchy in the data model? If not what needs to be added?	2. Short answer. Does each country think it can populate the data model with data?	3. Short answer. Do the RCG member states think any ongoing issues from the existing RDB upload logs will be resolved by this model?	4. Short answer. The countries are strongly encouraged to try to populate the data model with national sample data. Please describe the outcome of populating the model.
Sweden	Yes.	Yes.	We had no issues in our RDB upload log.	At-sea (hierarchy 2) was tested with one year of data from one of our fisheries with no apparent problems.

Looking at the answers and the feedback in general all the countries are of the opinion, that the latest version of RDBES data model will be able encompass their needs for sample data.

The User Requirement Specification, URS, of the RDBES is not written yet. It was the plan that URS should have been written during the WKRDB-URS the 2-5 Oct. 2018. The Core Group meet at the WKRDB-URS, but the detailed feedback from the countries and the very small Core group of five persons, where only one participated all 4 days, makes very difficult to write the User Requirement Specification document. Beside the country feedback, the code lists and the frame for the user roles was written, meaning the RDBES development team at ICES Sec. can continue their development from the few specifications. But this means the Core Group still have to write the User Requirement Specifications.

7.8.5 Development of the RDBES system

Even though there is not a completely finalised data model for the RDBES, the development of the database development of the RDBES have been ongoing, that means that during this year it has been updated with continues changes. It is not optimal, but ICES Sec. need to make progress on the development of the RDBES even though there is not a final data model and User Requirement Specifications. During 2018 ICES Sec. has substantially developed the system, e.g., all import all tables with fields and relations were created in a test RDBES using the model in the entity framework; using Angular, the most modern client side framework, and REST, server side services were programmed in MVC. NET Core and Angular authentication was implemented. At the moment simple sample data test files for all the hierarchies can go through a simple data quality control and be imported into the test RDBES.

7.8.6 Presentations at the RCG BS

During RCG BS 2018 a presentations on the overall structure and status of the Regional DataBase and Estimation System (RDBES).

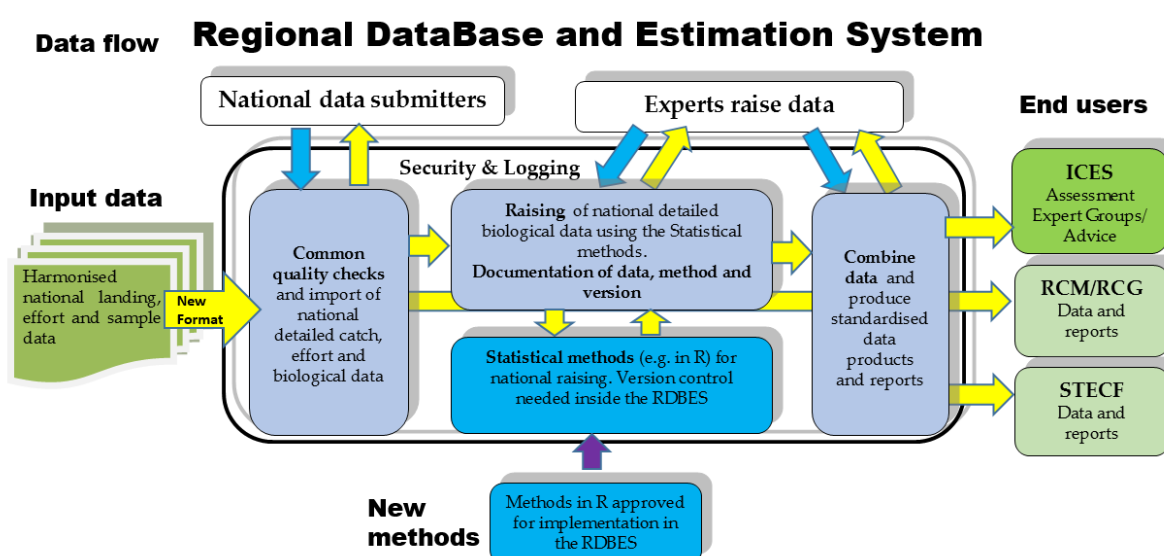
7.8.7 The RDBES system structure

The following is written focusing on the three RCGs which are using the existing RDB. WGCATCH, PGDATA, WKMERGE, WKPICS, SGPIDS, WKRDB and the fishPi 1 and 2 project recommend to collect and estimate data using statistical methods. The RDBES will therefore accommodate design based statistical data and statistical estimation methods. The raising/estimation of data should be based on approved statistical methods. Approved statistical methods are available in R, these methods should so far be encapsulated into the RDBES using version control. Having the raising methods defined in R would make the raising more transparent and easier for the experts to update, if needed. It should be possible to download both the data and the methods from the RDBES, so the experts easily can reproduce the estimations in the RDBES and further develop the methods.

When a group of experts have developed a new statistical raising method or updated an existing method, the group should approach the WGCATCH or a group of statistical raising experts, which have the task to test and approve raising methods. When the method has been approved, the method will be encapsulated into the RDBES, using the RDBES's version control of methods. The method can then be used to estimate/raise uploaded data, but the method cannot be manipulated/edited, and the raised data will be transparent and fully documented, regarding the data, the method and the version that was used.

To be able to document both the uploaded and the estimated data, the RDBES should log all processes regarding the data. According to the Data Policy of the RDB/RDBES the data are restricted, that will be taken care of by the security in the RDBES, where all users have to be known and given access to data and processing.

The figure below gives an overview of the flow of data in the RDBES from data uploads and the interaction with the national experts to the two main end users RCGs and ICES, but data could also be downloaded/exported for data calls for other relevant end users e.g. STECF or ICCAT.



The RDBES system structure

7.8.8 RCG Large Pelagic, recreational fisheries, diadromous and by-catch species

The focus for the development of the RDBES is to be able to support the three RCGs (BS, NS & EA and NA), which participate in specifying their needs and for now the focus is on the commercial species. But in parallel work with the RCG LP is ongoing. Five selected important and representative stocks have been selected for testing the RDBES data model, and a web meeting have been set up and the results should be presented at the Steering Committee of the RDBES, SCRDBES, the 4th December 2018 at ICES Sec.

At the RCG NA this year there was a subgroup looking into the recreational fisheries (with an overlap from WGRFS), they are also interested in using the RDBES for their data.

The Sub Group on Diadromous, SGD, which is an established pan RCG (BS, NS & EA and NA) sub group, with an overlap from WKEEL, WGTRUTTA and WGBAST, which this year meet at the RCG NS & EA are also interested in using the RDBES for salmon, sea trout and eel.

The Expert Groups on by catch WGBYC and WGPETSAMP are also interested in using the RDBES for their database.

There seem to be an understanding of the benefits of using the common RDBES platform for harmonising data across countries with quality checks across all countries' data for higher quality and standardisation with transparency and documentation as main drivers.

8. Surveys (TOR 6)

8.1 Background

In 2016 a “pan regional sub group on cost sharing of research surveys at sea” was established to focus on the development of a practical and simple model which could form the basis of future cost sharing agreements in the RCGs (RCM Baltic report 2016).

In the Baltic RCG 2017, survey cost sharing calculations for three main Baltic surveys (SPRAS, BITS and BIAS) were made using the 7-step procedure presented by the “Report of the pan-regional RCG subgroup on cost sharing of research surveys at sea”. RCG Baltic 2017 agreed to continue the intersessional work on cost sharing of surveys and agreed on actions to be taken in order to make progress prior to the RCG Baltic 2018 (see also below).

As a result of intersessional work within Baltic RCG, a document containing a suggestion on survey participation and share of survey days was circulated to National Correspondents prior to RCG 2018 meeting (Annex 15). Survey participation and number of survey days for each MS in the suggestion were based on initial TAC shares and thresholds in the DC-MAP (COM 2016/1251).

8.2. Decisions

After discussing the suggestion and survey cost share, the RCG 2018 meeting decided not to take any action and agreed not to apply any cost sharing of surveys in the Baltic for 2019.

8.3 Outcome of STECF EWG meeting on surveys

During the RCG Baltic meeting, Christoph Stransky presented the outcome of the STECF EWG 18-04 "Preparation for the evaluation of the list of mandatory research surveys at sea" (Varese, Italy, 14-18 May 2018) to the RCG Baltic. The EWG discussed and planned for a future EWG that will review research surveys of marine fish resources and propose surveys to be included on the list of mandatory surveys, as a revision to Table 10 of the EU MAP.

Past STECF survey reviews have taken an approach of scoring each individual survey proposed for inclusion on the mandatory list against a set of criteria laid out in the DCF or based on those criteria. After considerable discussion and considering the changed context of surveys under the 'DCF-recast' and the change from 'eligible' to 'mandatory' surveys, the EWG proposed a fundamentally different approach to reviewing the surveys. The new approach is driven from the viewpoint of the end-user needs, which is in principle the 'fish stocks' at the current stage, rather than from the viewpoint of the surveys. The new approach, called 'Decision Support Tool' (DST), considers each individual fish stock and various characteristics of any associated surveys to generate a Yes/No decision regarding whether the associated surveys should be placed on the list of mandatory surveys.

The DST starts with a specific stock for which advice is needed and couples that stock with each relevant survey and follows a sequence of questions leading either to (a) a proposal to include the survey in the list of mandatory surveys or (b) a proposal to terminate data collection for that specific stock by the particular survey. Prior to ending up at either of these extremes, questions must be answered to address the following criteria for each stock and its associated surveys:

- Fishery management advice is provided for the stock.
- Indices from the survey are used in the assessment or TAC calculation for the stock.
- The survey is internationally coordinated and is harmonized.
- Data from the survey are accessible and available for scientific use.
- The survey provides the basis for the assessment or management advice for the stock.
- The survey provides adequate coverage for the stock.
- There is no duplication of this survey with another survey for this stock.

Embedded in the DST are various loops allowing for end-user input (through associated expert groups) and the possibility of improving and adjusting a survey before taking a “drastic” decision to terminate the data collection.

Two databases are needed for application of the DST and for use by the proposed surveys review group. The proposed **Stocks** database would provide general information about each fish stock and the surveys at sea that provide information to support the assessment or provision of management advice for the stock. The proposed database, by design, would contain information for all fish stocks of interest to the Commission, as listed in Tables 1A and 1C of the EU MAP. Stocks for which there are no surveys at sea would be included in the database to assist the future review of surveys in identifying potential needs for additional surveys (e.g., stocks for which there are no or limited surveys). The proposed Stocks database would be the primary source of information to which the DST would be applied for evaluating whether surveys should be included in the future proposed list of mandatory surveys. The Stocks database would also be used to identify possible duplicate surveys and stocks that are not covered by surveys.

The proposed **Surveys** database would provide detailed information about the characteristics of EU surveys at sea used to collect data needed for stock assessment or the provision of management advice, either with respect to fisheries or to the ecosystem. The proposed database would contain information for all surveys at sea listed in Table 10 of the EU MAP and any additional surveys proposed by Member States and the RCGs. The proposed database would contain one entry (row of information) for each survey and associated information such as the type of gear/methodology used in the survey, the areas covered, the time period covered by the existing data series, coordination and standardization of survey, and some of the types of data collected. The Surveys database would provide information to the DST on whether a survey is internationally coordinated and harmonized and whether its data are accessible. Also, this database would be the primary source of information for identifying surveys that provide ecosystem information to support the Marine Strategy Framework Directive (MSFD) as well as to identify needs for expanding the area and time coverage of existing or new proposed surveys.

One important discussion by the EWG focused on how to evaluate objectively the 'importance' of a survey to any given stock assessment. While the stock assessment experts who conducted the assessments are the most qualified individuals to gauge the importance of the information provided by any given survey, there is no clear approach for quantifying the importance of information to an assessment, nor is there an easy mechanism for collecting such information in the short-term. The EWG was of the opinion that in the short-term, the survey review can operate using the default assumption that a survey is important if it provides information that is used in a stock assessment or in the provision of advice. In the longer-term, it would be beneficial if benchmark stock assessments

included formal evaluations that gauge the importance of an individual survey; these formal evaluations could be included in future applications of the DST.

The EWG proposed ToRs for the full survey review in spring 2019 and a (revised) roadmap for the completion of tasks until that review meeting.

Filling stocks and survey databases

As part of the EWG presentation summarised above, the Commission requested the RCG Baltic to try to run the DST during the meeting which was done.

In general, RCG Baltic appreciated the proposed model and considers this method as an appropriate way forward. After the meeting, all MS will receive a request to update the two databases and send to the RCG chairs.

9. Diadromous species (TOR 7)

The Diadromous Fish Subgroup (DSG) met at the Regional Coordination Group North Sea & Eastern Arctic (RCG NSEA) in Lyngby, Denmark, from September 4-6 2018. The sub group was attended by 12 experts on Atlantic salmon and sea trout, plus one expert who joined the meeting on Wednesday September 5th via Skype.

Due to the scheduling of WGEEL in the same week as the RCG NSEA the DSG eel experts met at the RCG Mediterranean in Kavala, Greece, September 18th-20th 2018. The subgroup was attended by 12 experts on eel.

The Diadromous Fish Subgroup/Salmon produced a first draft of a list of data needed to assess status and provide scientific advice for salmon stocks in the North Atlantic and the Baltic Sea. The preliminary compilation needs input to give a complete picture of the data requirements and is therefore directed to WGNAS and WGBAST for their feedback to the RCG meeting in 2019.

RCG NS & EA recommended that WGNAS and WGBAST define the rivers to be monitored and river selection criteria for Atlantic salmon at regional level, and that WGNAS and WGBAST suggest a selection of stocks from which salmon variables (juveniles, smolts, ascending adults) have to be collected, and advise on temporal frequency (annual or not) and sampling level of the collection of variables for salmon.

Furthermore, the RCG recommended that WGBAST and WGNAS comment on current quality assurance in their data, and recommend actions to improve QA in future and finally, that WGBAST and WGNAS should be encouraged to consider adopting the RDBES database as their primary data resource.

The report of the DSG salmon and trout experts is attached as Annex 16 into this report. The report of the DSG eel experts was not available at the time of publishing this report.

10. Recreational fisheries (TOR 8)

10.1. Background

According to EU-MAP (2016/1251) in Baltic region member states have to collect recreational fishery data on salmon, sea trout and eel (marine and inland waters) and cod (marine waters) for the fisheries management purposes. A need to sample more species targeted by recreational fishery can be decided on regional level. On the other hand, on the regional level, thresholds for recreational fishery data collection can be applied, but it shall take into account the recreational share of total catches and end-user needs. General descriptive background of marine recreational fishery can be found in RCG Baltic 2017 report. ICES Working Group on Recreational Fisheries Surveys (WGRFS) is advising member states how to improve their recreational surveys methodology design. Description of how member states collect their recreational data can be found in WGRFS reports annexes.

10.2 Main findings

Quality and length of time series on data concerning recreational fishery varies a lot between member states. Recreational fishery catch estimates are based on recall surveys, on-site surveys or collected through compulsory reporting system. Pilot studies conducted by member states under DCF are described below. As some data is already collected on regular bases, list of pilot studies does not give the total overview of the recreational fishery data.

DENMARK

Aim of the pilot Study: To improve the accuracy of the catch estimates for western Baltic cod and Baltic salmon (trolling). Hereunder verify and potentially tune the estimated reported landings in the Danish recall survey and to include biological parameters (length, weight and age) for cod in the Sound

Duration of the pilot study/year concluded: The pilot study runs from 1/1 - 2017 to 1/1 2018 and includes data from another study ending in march 2019.

Outcomes or expected outcomes: Catch data from the Danish Baltic salmon trolling fishery was included in the stock assessment for Baltic salmon during the WGBAST meeting in 2018. The expected outcome (inclusion in stock assessment and a detailed report) will be available in march 2019.

Significant Issues encountered/conclusions drawn: -

Incorporation into NWP - progress or plans: The pilot salmon trolling and Baltic cod survey (private boat and charter boat) he will be continued as an annual survey within the Danish recreational fisheries sampling programme.

ESTONIA

Aim of the pilot Study: Pilot study will be directed to get better estimate of total catch taken by recreational fishermen from the sea and have an estimate of release.

Recreational fishery with commercial gear from sea and fishermen targeting sea trout and salmon in the rivers must have a licence and have to report back the catches. Only angler and rod fishermen catches from the sea need to be covered by the pilot study

Duration of the pilot study/year concluded: There will be a telephone survey conducted at the end

of 2018 or the beginning of 2019 (regular survey, last one was 2015). On-site survey to cover ice-fishery outtake in Pärnu Bay area will be conducted.

Outcomes or expected outcomes: Questionnaires and on-site evaluation of catch composition and size distribution. This study will show the impact recreational fishery has on stocks compared with commercial fisheries

Significant Issues encountered/conclusions drawn: -

Incorporation into NWP - progress or plans: Pilot study is rescheduled for 2018/2019.

Marine recreational catches, made with commercial gear, and salmon/sea trout catches taken from "salmon" rivers are covered with compulsory reports as both fisheries are licence based.

FINLAND

Aim of the pilot Study: The aim of pilot study in 2017 is to produce up-to-date estimates of the recreational catches and their volume as compared to commercial catches

Duration of the pilot study/year concluded: Survey in 2017, which collects data on recreational fishery during 2016.

Outcomes or expected outcomes: The accuracy of the catch estimates will increase, while the sample size gets larger. The marginal benefit will decrease while increasing the sample size.

Significant Issues encountered/conclusions drawn: Salmon, cod and eel are caught by relatively very few fishermen, and in addition, the variation of these uncommon catches by fishermen is relatively high. Because of these facts, the confidence intervals of those catch estimates are always quite wide even in the case of large sample sizes (sample size several thousands). The post-sampling for non-respondents helps to correct the bias resulting from the differences between respondents and non-respondents.

Incorporation into NWP - progress or plans: To increase the accuracy of catch estimates, targeted sampling on the recreational fishing of salmon on coastal areas is planned.

GERMANY

Aim of the pilot Study: To estimate total numbers of marine recreational fishers and effort according to fishing platforms (boat, charter boat, shore fishing). Further estimates of caught and released components for all target species (concurrent/multispecies survey) in the recreational fishery will be conducted.

Duration of the pilot study/year concluded: 1-year-telephone-diary survey conducted in 2014-2015 with the final analysis and weighting procedure conducted in 2017. Further on-site surveys conducted annually to obtain time series data on CPUE and collect catch composition data. Also a remote camera survey will be conducted to monitor salmon trolling fishing effort in the Baltic Sea.

Outcomes or expected outcomes: All objectives of the 1-year-telephone-diary survey and salmon trolling survey were achieved. The expected outcome of the pilot study (a detailed report) will be available by the end of 2018.

Significant Issues encountered/conclusions drawn: Weighting and estimation procedures took an exceptional amount of time and bootstrapping methods to obtain generalized precision estimates are planned to be carried out in summer 2018

Incorporation into NWP - progress or plans: The pilot 1-year-telephone-diary study provided updated estimates of the total numbers of marine recreational fishers and effort according to fishing platforms which will be used to extrapolate catches using the annual German onsite intercept survey. A follow-up national survey (as the 1-year-telephone-diary study) is planned every 3-5 years to update effort data depending on the availability of funds. The pilot salmon trolling survey will be

continued as annual survey within the remits of the German recreational catch sampling programme.

LATVIA (1)

Aim of the pilot Study: To estimate total catch of cod, salmon, sea trout in angling in the Baltic Sea. Recreational fishery with commercial gear (self-consumption) is covered with compulsory reporting system.

Duration of the pilot study/year concluded: Pilot study was started in 2018. Data for self-consumption fishery is available since 2004.

Outcomes or expected outcomes: Selected company is collecting catch and biological data from their surveys. In the end of the year "snow ball" method will be applied to estimate a total catch. For self-consumption fishery total catch by species is collected.

Significant Issues encountered/conclusions drawn: Low activity of anglers due to lack of traditions, high expenses of rented boat and low catches.

Incorporation into NWP - progress or plans: The total estimates of cod, salmon and sea-trout will be reported to WGRFS. The pilot study is planned to continue in 2019.

LATVIA (2)

Aim of the pilot Study: To estimate total catch of eel in inland waters of Latvia

Duration of the pilot study/year concluded: 1 year internet questionnaire (available in www.makseresanaskarte.lv) was started in 2018. Questions include an information about angling habits in inland waters and specific questions about eel angling in Latvia.

Outcomes or expected outcomes: Expected outcome of survey will be available in the start of 2019.

Significant Issues encountered/conclusions drawn: -

Incorporation into NWP - progress or plans: The total estimates of eel will be reported to WGRFS and WGEEL.

LITHUANIA

Currently there is no pilot study in Lithuania.

POLAND (1)

Aim of the pilot Study: The aim of this work is development of methods for future monitoring of recreational fisheries targeting salmon, sea trout and eel in Polish marine waters. Pilot study covers only salmon trolling and shore fishing.

Duration of the pilot study/year concluded: The duration of Pilot study covers 24 months (1 Jan 2017 - 31 Dec 2018). It includes both on-site and off-site survey targeting sea recreational fisheries, analysis of catch volume and species composition and CPUE. In addition, size and composition of trolling fishery fleet is analysed. Also a remote camera survey will be conducted starting January 2018 to monitor salmon trolling fishing effort in Polish part of the Baltic Sea region.

Outcomes or expected outcomes: Tested and next developed methods should be able to provide information about fishing areas, CPUE, fishing seasons for particular fish species (salmon, sea trout, eel). Furthermore, spatial and temporal distribution of the salmon, sea trout and eel recreational fisheries in Polish marine waters should be defined. In addition, socio-economic information on Polish sea recreational fishery should be delivered.

Significant Issues encountered/conclusions drawn: Very low response rate regarding to web-based survey compared to high number of issued fishing licenses could provide not fully satisfying back

information about characteristic of sea recreational fisheries in Poland. Furthermore, planned sampling (on-site) frequency of shore recreational fisheries probably will not provide proper effort data to estimate CPUE and catch for sea trout and eel. Preliminary findings suggest that CPUE for trolling fisheries changes within the fishing season. This implies continuous monitoring of trolling catches.

Incorporation into NWP - progress or plans: Depends on the final results of the pilot study, appropriate methods will be recommended and incorporated into National Work Plan for next years. Plan includes among others, the salmon trolling survey with remote cameras that could be continued as annual survey within the recreational catch sampling programme. Furthermore, on-site surveys regarding to trolling and shore fishery could be conducted to gather current effort and CPUE data.

POLAND (2)

Aim of the pilot Study: The aim of this pilot study is to implement a set of actions enabling gathering and development of reliable data on angling catches of sea trout and salmon in the selected rivers of the northern Poland.

Duration of the pilot study/year concluded: Study (on-site survey) covers all year-fishing period except closed season. It is planned to conduct direct interviews in 2017-2018 and it is anticipated that it will last 9 months each year. Analysis of data gathered from on-site survey, angling catch statistics and Internet sources is planned on end of 2018. Calibration of a method based on data from fish counters and river fish catches is planned on end of 2018.

Outcomes or expected outcomes: Development of methods for data collection and verification of angling catches on the basis of direct on-site surveys and through online queries. Calibration of a method based on data from fish counters and river catch statistics.

Significant Issues encountered/conclusions drawn: None

Incorporation into NWP - progress or plans: Study on the possibility of extending developed methods to further sea trout rivers in Poland.

SWEDEN

Aim of the pilot Study: The aim of the study is primarily to collect size-based catch (including released fish) and effort information on cod but data on all species (including salmon, sea-trout and the by-catch of those fisheries) will be collected. Such information is input knowledge for an ecosystem based approach to fisheries management and governance according to best available advice and broad stakeholder involvement. Socio-economic information and demographics on fisher's population will also be collected as a complement.

Duration of the pilot study/year concluded: The pilot study initiated in subdivisions 23 and 24 in 2017 and is continuing during 2018. The aim is to extend the pilot to subdivisions 25 and 27 and obtain first estimates for all subdivisions in 2019.

Outcomes or expected outcomes: During 2018 first estimates of effort and catches (western Baltic cod) were obtained for the components "private boats". These have been added to existing and ongoing estimates of "tourboats" component and presented at WGRFS 2018.

Significant Issues encountered/conclusions drawn: Biological sampling in sd 25 and sd 27 is particularly difficult given the vast geographic area, dispersed fishing effort and absence of a fishers registry in SWE. Accordingly data from the fishery will, for some time longer, depend on the mail questionnaire. In sd23 and sd24 the fishing is more concentrated and the sampling is working according to plan with estimates being obtained. Sampling design and effort on the "private

component" were tuned in early 2018 by incorporating knowledge collected from the 1st year of the pilot. Still, considerable inefficiencies persist that result from a still early stage of the knowledge in the fishery and the need to keep covering not only sd23 but also sd24 (where effort and cod catches are extremely low). Several methods were/are being tested to improve the cost-efficiency and monitor the remote areas of sd 25 and sd27 such as RDS, cameras and passive acoustics.

Incorporation into NWP - progress or plans: Results obtained so far will be evaluated during Q3 and Q4 of 2018 and a decision made on what components of the pilot can be incorporated

10.3 Actions in short term / long term

Before the pilot studies are finished, the RCG is not in the position to do any coordination on recreational data collection on regional level.

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

11.1 Background

A **pan-regional intersessional subgroup on the landing obligation** was formed after the 2017 RCGs.

The subgroup had four terms of reference:

1. ToR 1: Evaluate the implication of the landings obligation on national and regional catch sampling programmes
2. ToR 2: review and analyse 2017 BMS CS and CL data on the RDB and source and review other available metrics (e.g. refusal rates)
3. ToR 3: contribute to and review ToRs and outcomes of WGCATCH 2017
4. ToR 4: Explore other data sources to evaluate implication of the landings obligation such as last-haul data from control agencies

The outcomes of the subgroup work were summarized, with special focus on the Baltic Sea. The full report of the pan-regional subgroup is provided in Annex 17.

Regarding ToR 1: The overall perception of MS is that BMS landings are rare but registered on sampling sheets and databases. MS reported that usually there are no issues to get onshore access to BMS landings in the ports. However, access problems arise when it comes to at-sea sampling and getting observers on board of commercial vessels. At least three MS reported higher refusal rates. 14 MS have logs of the contacts with the fishery where refusals are recorded, some have been already implemented in 2005, others started in 2018, some MS have not started yet.

The perception of MS is that the LO has no major effect on the fishing behaviour of the captains, neither was an observer effect perceived; however, few countries have performed detailed analyses. The very limited BMS landings that have been recorded so far, give little incentive for scientific analyses. A few countries analysed the “last-haul data” collected by their national control authorities and pilot studies using CCTV have been carried by several MS. A large international project (“discardless”) is ongoing and several MS have published desk top studies on LO issues (e.g. on plaice and cod as potential choke species in the Baltic Sea).

There is confusion with different exemptions, however outside the Baltic region. Specific to the Baltic is the confusion of **Baltic anglers** about the **landing of BMS cod**. According to the CFP and interpretations of the juridical service of the COM, both commercial fishers AND anglers have to land BMS cod. However, the LO applies only for TAC-species. Even though cod is a TAC-species, there is no TAC for recreational fisheries targeting cod. This inconsistency also applies for example for sea bass. There is widespread incomprehension of this rule by the anglers. As a solution to the perceived dilemma, the RCG Baltic strongly suggests that the national anglers associations approach **BALTFISH** and ask for a **high survival exemption** based on scientific evidence published by the Thünen Institute of Baltic Sea Fisheries.

The perceived complexity of the LO and the new set of catch categories leads to errors in the logbooks, which propagate into the data provided to stock assessment. For example, in some MS the logbooks until recently were unable to hold all the information, but logbooks have been improved. Other measures related to the introduction of the LO are that harbour facilities have been upgraded, and some countries have adapted their quota allocation system (e.g. transfer between active and passive fleet in Sweden for cod in SD24). Some MS have conducted selectivity and survival studies, and there were meetings with the fishing industry about the LO.

Regarding ToR 2: The RDB analysis revealed that in the Baltic most countries have reported BMS landings of cod and plaice, Finland had minor records of salmon. There were some inconsistencies between the WGBFAS reports and the RDB and **MS are requested to double-check their data bases**. Most countries reported sampling of discards at sea. LTU and SWE consistently reported sampling of BMS landings of cod at the market

Regarding ToR 3: WGCATCH considered that the RCG's are the best place to keep a watching brief on the impact of LO on sampling programmes and recommended that members of all RCGs to **fill in the questionnaires on an annual basis**.

Regarding ToR 4: The RCG Baltic 2018 recommends that the last-haul data from the control authorities should be made available to the national DCF data collectors.

9.2 Main findings

In summary, in year 4 after the start of the LO for cod and year 2 for plaice the discarding of cod and plaice in the Baltic Sea continues. There is no change to the situation already described in last years RCG Baltic 2017 report on the LO (p. 88-93). This means that we have **IUU fishing in the Baltic Sea**. The COM has a clear view of IUU fishing: "Illegal, unreported and unregulated fishing (IUU) depletes fish stocks, destroys marine habitats, distorts competition, puts honest fishers at an unfair disadvantage, and weakens coastal communities, particularly in developing countries" (https://ec.europa.eu/fisheries/cfp/illegal_fishing_en). Despite these official statements virtually no progress has been achieved in implementing the LO in the Baltic Sea.

Ultimately, it is, however, the responsibility of the national control authorities to keep a check on the compliance with the LO. During the meeting all Baltic countries verified (and partly corrected) the official numbers of landed BMS of cod, plaice and salmon available since 2015. The mismatches between official BMS landings and the observer estimates are large and obvious since the implementation of the LO in 2015 for both cod stocks and plaice (table 3-5). In cod, only 4-9% and 7-11% of the total estimated discards were landed as BMS in western and eastern Baltic cod, respectively. For plaice, only 2% of the total estimated discards were landed as BMS in 2017. It is noteworthy that the mismatches occur irrespective of country, i.e. none of the countries' control authorities is presently able to control the compliance of the LO in their demersal fisheries. The available data of the two salmon stocks are given in Table 6 and 7.

Table 3: Official Below-Minimum-Reference-Size (BMS = cod <35 cm total length) of western Baltic cod (cod2224) by country and year (upper left); landings by country and year (upper right); and WGBFAS estimates of total discards, landings, BMS and proportion of official BMS (from control

authorities) on total estimated discards (estimated from observer trips) (bold lower row in lower sub-table).

cod2224	BMS (t) from landing declarations		
Country	2015	2016	2017
Denmark	7	2	2
Finland	0	0	0
Germany ¹		7	15
Poland	2	7	18
Sweden ²	48	25	4
sum	58	41	38

cod2224	landings (t)		
Country	2015	2016	2017
Denmark	7361	5556	2858
Finland	28	29	0
Germany	2915	2390	1267
Poland	755	657	926
Sweden	2351	1998	783
sum	13410	10630	5834

1: 2015 was a transitional year, no data

2: data from logbooks in 2017, from sales notes in 2015 and 2016

cod2224	Year		
estimates WGBFAS (t); all countries	2015	2016	2017
Discards	1361	449	405
Landings	13410	10630	5834
BMS (landings)	58	41	38
BMS/discards (%)	4	9	9

Table 4: Official Below-Minimum-Reference-Size (BMS = cod <35 cm total length) of eastern Baltic cod (cod2532) by country and year (upper left); landings by country and year (upper right); and WGBFAS estimates of total discards, landings, BMS and proportion of official BMS (from control authorities) on total estimated discards (estimated from observer trips) (bold lower row in lower sub-table).

cod2532	BMS (t) from landing declarations		
Country	2015	2016	2017

cod2532	landings (t)		
Country	2015	2016	2017

Denmark	126	35	29
Estonia	0	0	0
Finland	0	0	0
Germany ¹		9	10
Latvia	117	61	21
Lithuania	129	62	14
Poland ³	41	42	75
Sweden ²	189	194	89
sum	602	403	238

Denmark	9652	6756	6140
Estonia	189	2	1
Finland	388	57	191
Germany	1477	918	347
Latvia	2586	2717	2079
Lithuania	1974	1698	1726
Poland	12937	9583	6483
Sweden	4628	4189	4405
sum	33831	25920	21372

1: 2015 was a transitional year, no data

2: data from logbooks in 2017, from sales notes in 2015 and 2016

3: values comprise OTB, PTB and OTM, PTM (pelagic fisheries)

cod2532	Year		
estimates WGBFAS (t); all countries	2015	2016	2017
Discards	6328	3620	3238
Landings	33831	25920	21372
BMS (landings)	602	403	238
BMS/discards (%)	10	11	7

Table 5. Official Below-Minimum-Reference-Size (BMS = plaice <25 cm total length) of plaice (plaice 2232) by country; landing obligation for plaice started in 2017; landings by country (upper right); and WGBFAS estimates of total discards, landings, BMS and proportion of official BMS (from control authorities) on total estimated discards (estimated from observer trips)(bold lower row in lower sub-table).

plaice2232	BMS (t) from landing declarations
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plaice2232	landings (t)
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Country	2017
Denmark	9
Estonia	0
Finland	0
Germany	5
Latvia	0
Lithuania	0
Poland	3
Sweden	2
sum	20

Country	2017
Denmark	1687
Estonia	
Finland	
Germany	1080
Latvia	
Lithuania	
Poland	296
Sweden	32
sum	3095

plaice2232	Year
estimates WGBFAS (t); all countries)	2017
Discards	867
Landings	3095
BMS (landings)	20
BMS/discards (%)	2

Table 6: Official Below-Minimum-Reference-Size (BMS) of salmon (salmon2231) reported by country and year. Note: in numbers, not in tonnes.

salmon2231	<u>BMS in numbers</u>		
Country	2015	2016	2017
Denmark	0	0	0
Estonia	0	0	0
Finland ⁵	0	0	6

Germany ¹		9	2
Latvia	0	0	0
Lithuania	0	0	0
Poland	1	4	0
Sweden	0	0	0
sum	1	13	8

1: 2015 was a transitional year, no data

5: 55 kg

Table 7: Official Below-Minimum-Reference-Size (BMS) of salmon (salmon32) reported by country and year. Note: in numbers, not in tonnes.

salmon32	<u>BMS in numbers</u>		
Country	2015	2016	2017
Estonia ⁴	0	0	0
Finland	0	0	0
Sweden	0	0	0
	0	0	0

4: official zero is not certain, maybe higher

9.3 Short- and mid-term actions

The group suggested as a **short-term actions** that

- (i) MS try to get hold of the national last-haul data in order to analyse them.
- (ii) The DCF at-sea observer programmes will continue.
- (iii) MS should double-check their Intercatch and RDB entries of BMS and logbook registered discards for inconsistencies.
- (iv) MS should document the LO status annually following the WGCATCH recommendation.

- (v) The WGBFAS data call regarding BMS and logbook registered discards should be improved.

Possible mid-term to the problem of ongoing discarding in the cod fisheries are:

- (1) Observer coverage could become obligatory.
- (2) The use of Electronic Monitoring could become obligatory, i.e. a random subset of the fleet could be equipped with CCTV; and the CCTV recordings could be randomly analysed.
- (3) The COM could reserve the discard-top up or any proportion of the annual TAC; this share could only be fished by vessels with onboard observers or CCTV installed.

9.4 Recommendations

The RCG Baltic 2018 agreed that the last-haul data from the control authorities should be made available to the national DCF data collectors.

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

The MS were asked to prepare an update to an assigned table (see Annex 18) on the implementation of pilot studies on environmental impacts (i.e. incidental bycatch of marine birds and mammals from fishing gear).

Most MS (FIN, EST, LAT, LIT, POL) had not or did not perform any pilot studies on the issue, but the bycatches were monitored during the sampling and/or reported with the logbooks.

DEU has developed alternative management approaches, fishing gear and techniques towards minimizing and resolving existing or potential conflicts between the activities of passive fisheries (mainly gill-net fishing) and the conservation of marine birds and marine mammals in the EEZ of the Baltic Sea (STELLA). More information <https://www.thuenen.de/en/of/projects/fisheries-environment-baltic-sea/gill-net-fisheries-development-of-alternative-management-approaches-stella/>.

In addition to the registration of incidental by-catch of sea birds and marine mammals during the standard observer programme, DNK is running a pilot project outside the DCF with the aim of estimating incidental by-catches of bird and marine mammals, and also for assessing the impact of fisheries on marine habitats (for more details, see Annex 18).

SWE has initiated a pilot study to generate knowledge of by-catches of birds and mammals in cod fisheries with gillnet and longlines in subdivisions 23, 24 and 25 as well as on shallow gillnet fisheries in areas identified as important for birdlife in subdivision 27 and 29.

13. Recommendations, agreements and decisions

RCG Baltic 2018. Availability of last-haul data	
Recommendation 1	The RCG Baltic 2018 recommended that the last-haul data from the national control authorities (from the beginning until the end of 2018) should be provided to the National DCF Correspondents.
Justification	The last-haul data provide a unique data set, both with methodological strengths (e.g. no refusal, coverage, standardized data collection) and weaknesses (ad hoc sampling, no length distributions). However, it is an alternative data source that MS would like to explore and compare with the data collected within the DCF to evaluate its potential usefulness beyond control purposes (e.g. to supplement DCF samples, improve DCF data quality and hence, ICES fish stock assessments).
Follow-up actions needed	COM should forward this request to national control authorities which should make these data available to the National Correspondents. Alternatively, National Correspondents could approach their national fisheries control authority directly and convey the request for last-haul data of RCG Baltic.
Responsible persons for follow-up actions	Liaison meeting National Correspondents
Time frame (Deadline)	National last-haul data should be provided by the control authorities to the National Correspondents two months before the next RCG Baltic, i.e. latest in March 2019

RCG Baltic 2018. Establish and finance a secretariat for supporting RCG work	
Recommendation 2	RCG Baltic agrees to request from the European Commission for them to explore financial possibilities, e.g. in the framework of the direct funding possibilities of the EMFF, to finance a joint secretary services for the disposal of the all-northern RCGs.
Justification	In order to make the regional work effective a secretary service was discussed. The RCG Baltic support this idea which is an outcome from FishPi2, WP1.
Follow-up actions needed	Build upon the final outcome from FishPi2, WP1.
Responsible persons for follow-up actions	Commission for finance aspects RCG Baltic to pick up outcome.
Time frame (Deadline)	RCG Baltic meeting June 2019

<i>RCG Baltic 2018. Development of the Regional Database and Estimation System (RDBES).</i>	
Recommendation 3	The RCG Baltic recommends the development and use of the RDBES to store and analyse sampling data
Justification	The Regional Database and Estimation System (RDBES) is currently in development and will be the new version of the RDB. The RDBES will also store statistical sampling information and statistical estimations, as well as acting as a database. The RDBES will: support the Regional Coordination Groups with relevant sampling data for coordination Raise data quality by using common quality checks across all countries' data Ensure only approved standardised statistical methods are used for estimating data It is important that the RDBES have only approved estimation methods and it is transparent regarding the processing and estimation of data.

Follow-up actions needed	SCRDB should steer the development and use of the RDBES and ensure MS are giving feedback about the development
Responsible persons for follow-up actions	SCRDB MS to follow the development and give input upon request
Time frame (Deadline)	2018

<i>RCG Baltic 2018. Funding of RDBES development</i>	
Recommendation 4	The RDBES is a key tool for RCGs to coordinate regional sampling and its further development should be continued.
Justification	The RDBES is a key tool for RCGs to coordinate regional sampling. The European Commission currently pays for the maintenance and hosting of the RDB under an administrative agreement, but not for any development. ICES have provided 2 years funding to begin developing the RDBES, which is the successor to the existing RDB. However the development of the RDBES will not be completed during this time period so further funding for the development must be found. There are 3 sources that this funding could come from: 1) Direct funding from the European commission, 2) Funding from MS, 3) Funding from ICES. These funding sources aren't mutually exclusive and should all be investigated.
Follow-up actions needed	ICES to provide a cost estimate for the remaining RDBES development work.
Responsible persons for follow-up actions	Henrik Kjems-Nielsen will produce the cost estimates. RCG recommendations will be submitted and discussed in the Liaison meeting.
Time frame (Deadline)	2018

<i>RCG Baltic 2018. Review and amendment of proposed control regulation to ensure DCF data requirements are met</i>	
Recommendation 5	The RCG Baltic recommends that the draft Control regulation is reviewed and amended where required to allow retention of personal data for more than 5 year for scientific purposes, to fulfil data requirements under the DCF.
Justification	Articles 110, 111, 112, 113 There are strong concerns about the stipulation that Personal data can only be retained for 5 years –under the GDPR there are allowable derogations from the normal Data Subject rights when data is used for scientific purposes. The proposed full anonymisation of VMS and log book data after 5 years will heavily restrict the utility of this data for the purpose of scientific analysis under the DCF. Time series of longer than five years are required for analysis and the provision of scientific advice to support the CFP.
Follow-up actions needed	MS to coordinate review and comments on articles 110, 111, 112, 113 and amend where appropriate, to ensure full data functionality to implement DCF. MS to make coordinated submission during legislative negotiations based on review.
Responsible persons for follow-up actions	Com, Member States
Time frame (Deadline)	2018/2019

Agreement	Suggestions for intersessional subgroups
Reference	
When	Lithuania, September 2018
What	RCG Baltic agrees to establish 8 intersessional subgroups. Tasks for intersessional groups are defined in annex 6. Suggested participants in each subgroup are presented in table 1 of that annex. Names to be confirmed at the latest 28 September 2018. MS to plan for at least 1 week of work for each task / person.
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 4

Agreement	Cost share of surveys
When	Lithuania, September 2018
What	RCG Baltic agrees not to apply any cost sharing of surveys in the Baltic for 2019.
Who	NCs of Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 8

Agreement	RDB steering group structure
When	Lithuania, September 2018
What	The RCG Baltic agrees to adopt the new RDB steering group structure with two representatives from the RCG Baltic- Katja Ringdahl and Jörgen Dalskov. One representative from each ICES member countries are also allowed to participate.
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 7

Agreement	RDB Data Policy #1
When	Lithuania, September 2018
What	The RCG Baltic agrees to adopt the new RDB ES data policy as circulated to all NCs on the 31th August 2018.
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 7

Agreement	RDB Data Policy #2
When	Lithuania, September 2018
What	The NCs at the RCG Baltic 2018 agreed to grant ICES expert groups and related benchmark groups providing advice to fisheries management access to detailed data for the sub-division 22-32 (Baltic Sea) stored in the RDBES but only for the use by these groups
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 7

Agreement	RDB upload of 2018 data – datacall with deadline 1 March 2019.
When	Lithuania, September 2018
What	RCG Baltic agreed to prepare all steps of data to be able to upload the data collected in 2018 in March 2019, to make intersessional work and RCG meeting in June possible
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 7

Agreement	Governance model for the RCG
When	Lithuania, September 2018
What	RCG agreed that PGECON should be seen as parallel body to the RCGs yet PGECON has a pan-European nature. Hence, it was felt that the PGECON should start formulating its own Rules of Procedure.
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 4

Agreement	Governance model for the RCG
When	Lithuania, September 2018
What	RCG agreed to request from the European Commission for them to explore financial possibilities, e.g. in the framework of the direct funding possibilities of the EMFF, to finance a joint secretary services for the disposal of the all-northern RCGs.
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 4

Agreement	Governance model for the RCG
When	Lithuania, September 2018

What	RCG agreed to request from the European Commission a timeline to be prepared swiftly by the European Commission to facilitate the work ahead and if possible, timing of different components.
Who	Denmark, Finland, Estonia, Germany, Latvia, Lithuania, Poland, Sweden
Supporting Documentation	Section 4

Annex 1. General RCG TORs, meeting agenda, participants and responsibilities

TORs RCG 2018

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

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

TOR 2. Governance model for the regional coordination group.

- Discuss the role(s) of RCGs in the DCF environment (EU MAP 'regional approach based on end user needs') and their relations with other 'DCF groups' (for e.g. STECF, PGECON)(there was a similar point in the TORs last year under 'data quality' section)
- Feedback on Rules and Procedures for RCGs and proposed timing for adoption
- Present the outcomes of different EU projects (MARE/2016/22 grants Fish Hub) - Based on outcome from FishPi2 and STREAM regarding intersessional groups, how to proceed ? Which ones to stay ? Pan regional vs regional? ToRs?
- Information on DCF legal framework and related legal acts: adoption of AR template; upcoming work on EU-MAP after 2020 preparation.
- Next steps and actions

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

- Feedback of end-user needs from ICES/GFCM, JRC, STECF, other end users to the RCGs. Mapping of end user needs and information on end user meeting on the margins of the next Liaison meeting (1/10).
- Produce an overview from the RDB on regional fisheries
- Review issue list for the 2019/2020 benchmark stocks (by region) and produce an overview of sampling and quality on the stocks to be benchmarked in 2019
- Review of 2018 (2019) data calls and feedback from the RCGs to ICES/JRC/GFCM
- Next steps and actions

TOR 4. Regional plans

- Feedback from EU projects (FishPi2 WP1, STREAM); Clarification regional plan vs regional sampling plan. What has already been established and can be used in setting up regional plans?
- Regional sampling plans for marine habitat and ecosystem monitoring, feedback from WKPETSAMP
- Feedback from intersessional work on establishing regional sampling plan
- Regional work based on results from 2018 RCG Med&BS Data Call
- Next steps and actions

TOR 5. Data quality (assurance and control)

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

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

TOR 6. Surveys

- Feedback from the intersessional group on cost sharing
- Feedback from STECF meeting (EWG 18-04). Discuss proposal of EWG 18-04 to use stocks in Tables 1A and 1C of EU MAP as a starting point for the DST. Does the RCG want to include additional stocks?
- Review 2018 regional coordination (MEDITS, MEDIAS)
- Next steps and actions

TOR 7. Diadromous species

- Review progress since last year report
- Review data transmissions
- RDB development
- Next steps and actions

TOR 8. Recreational Fisheries

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

TOR 9. Impact of management measures on data collection

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

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

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

TOR 11. Next venue and chairs

TOR 12. AOB

AGENDA

RCG BALTIC

Klaipeda, Lithuania 17-21 September 2018

General time schedule: Starting time Monday 15.00. Tuesday-Thursday 09.00-18.00 – meeting time.

Friday ending at 12.00. Lunch 13:00-14:00. Coffee 10:30-11:00: 16:00-16:30

Monday 17 September

15.00	Welcome and introduction Welcome, introduction of the participants, organization & house rules, adoption of the agenda, sub groups, ToRs responsibility, format of the report, notification of AOB	Hosts and chair
15.30 – 19.00	Review progress since 2017 RCG's (TOR 1) - Brief summary of RCG related activities 2017-2018 - Liason meeting, recommendations End user feedback (TOR 3) - Feedback from ICES, issue lists, RDB datacall - Intersessional group, End-users (RCG chairs) EU-MAP demands - actions from RCGs ?	Maria Jörgen Henrik Maria
Coffee break ~ 16.30-17.00	Data Quality (TOR 5) - Outcome and feedback from PGDATA - Intersessional group Data analysis - Feedback from SC-RDB - Feedback WKMET Feedback from COM - Future DCF Legal framework, AR template, EU MAP 2021 (TOR 2)	Christoph Sven Jörgen Maria Stanislovas

3 Sub groups:

End user needs (TOR3), TOR 6 (stock and survey database), Data quality (TOR 5)

- Review the issue list (for the 2019/2020 benchmark stocks (by region)) produced by ICES. RCG to comment on what is doable from issue list and identify data needs.
- Produce overview of sampling and quality in data on the stocks that will be benchmarked in 2019 for the Baltic using the developed R codes from all RCGs.
- Review of 2018 (2019) data calls and feedback from the RCGs to ICES/JRC/GFCM. Compilation of input from all RCG countries
- Next steps and action
- Based on the outcome from EWG 2018-04, Make sure that data on stocks and surveys listed in the two databases are correct. Surveys missing? filling in of empty cells etc. Plan for next step and action.
- Overview of the sections in EU-MAP referring to regional coordination and describe actions taken.
- Stomach sampling overview
- Cod liver sampling overview

Data quality (TOR 5)

- Produce overviews from the RDB on regional fisheries, using the developed R codes from all RCGs
- Compile summary of upload logs
- Status of making Table 1a automatic? use of RBD to answer datacalls, AR etc.
- Next step and actions for this work

A. Regional plans (TOR 4), RecFish (TOR 8) and BYC (TOR 10)

- Based on outcome and suggestions from Fish-Pi2 WP1 and other input What is already in place regarding documentation of quality procedures (examples from Table 5A) which could be listed as coordinated actions within the region, forming the basis for a regional plan.
- Next step and actions
- Review progress of Recreational fisheries pilot studies in the Baltic region. Compilation of input from all RCG countries. Clarify the role of RCGs in connection to this sampling. Next step and actions.
- Review progress on bycatch pilot studies in the Baltic region. Compilation of input from all RCG countries. Clarify the role of the RCGs in connection to this sampling, next step and actions.

B. Surveys (TOR 6) (cost sharing of surveys); TOR 2 (RoP)

- Discuss and agree on cost-sharing of surveys in the Baltic region, based on suggestion from intersessional Sub Group
- Rules on Procedures, feedback and/or amendments
- Endorse the updated RDB Data Policy
- Protected data VMS –suggest on common agreement

Tuesday 18 September

9.00 – 9.30	Surveys (TOR 6) • Intersessional Group - cost sharing surveys • Presentation outcome STECF meeting (EWG 2018-04) • Presentation stock and survey database	Ari Christoph Rie
9.30 –10.30	Regional plans (TOR 4) • Outcome FishPi WP1. • Intersessional Group - sampling plan small pelagic • Outcome FishPi WP2-WP8	Katja Katja/Rie Katja
10.30 –11.00	Coffee break	
11.00 –13.00	Working in the 3 subgroups A. End user needs & Data Quality B. Regional plans, By-catch, Rec fish C. Surveys and RoP (NC)	
13.00 –14.00	Lunch	
14.00 –16.00	Working in the 3 subgroups A. End user needs & Data Quality B. Regional plans, By-catch, Rec fish C. Surveys and RoP (NC)	
16.00 –16.30	Coffee break	
16.30 –18.00	Working in the 3 subgroups A. End user needs & Data Quality B. Regional plans, By-catch, Rec fish C. Surveys and RoP (NC)	

Wednesday 19 September

9.00 - 10.30	Plenary session	
	• Impact of Management measures (TOR 9) Feedback from Intersessional group - Landing obligation. Next step and action	Uwe
	• Feedback from subgroup C (TOR 2, TOR 6) - Agree on update/adjustment on RoP - Report status on cost sharing agreements	
	• Feedback from subgroup A, B (by TOR) Highlight issues and agreements that needs to be made.	

10.30 –11.00	Coffee break
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11.00 –13.00	Plenary session
	• Governance model for RCGs (TOR 2) - discussion, suggestions, decisions forward

13.00 –14.00	Lunch
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14.00 –16.00	Cont. plenary Continue working in subgroups
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16.00 –16.30	Coffee break
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16.30 –17.00	Continue working in subgroups
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17.00-18.00	Plenary
	• Overview on sampling • Cod stomach / liver sampling (Uwe) •

Thursday 20 September

9.00 - 10.30	Plenary session
	• Cont. Data quality • Recreational fisheries (TOR 8)

	Feedback from WGRFS; next step and action	Elo
	• Intersessional subgroups – tasks and persons • Updated RDB data policy – proposal • RDBES Steering Committee • Discussion future funds RDBES • Summary outcomes from subgroup work	Katja
	Compile conclusions, decisions taken, recommendations, planned actions and next step	Ari
		Maria
		Maria
		Jörgen
		Ari
10.30 –11.00	Coffee break	GROUP PHOTO
11.00 – 13.00	Plenary session / start writing text • Compile conclusions, decisions taken, recommendations, planned actions and next step	
13.00 –14.00	Lunch	
14.00 –16.00	• Stomach sample table Write text	
16.00 –16.30	Coffee break	
Friday 21 September		
9.00 - 10.30	Plenary session • Staff BITS Q4 Sweden ? • Finalize outcomes • Discuss open issues • Announce next venue • AOB	
10.30 –11.00	Coffee break	
12.00	Closure of meeting	

Participants – Baltic RCG 2018

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Term of Reference		Responsible person
ToR 1	Review progress since 2017	chair
ToR 2	Governance model	Heikki Lehtinen (rules of procedures) chair + chair TOR 4 (governance)
ToR 3	End-user interaction	Marie Storr-Paulsen
ToR 4	Regional plans	Katja Ringdahl
ToR 5	Data quality	Sven Stötera
ToR 6	Surveys	Jörgen Dahlskov (agreements Surveys) Marie Storr-Paulsen (compilation of survey/stockdatabases)
ToR 7	Diadromous species	Ari Leskelä
ToR 8	Recreational Fisheries	Elo Rasmann
ToR 9	Impact on management measures	Uwe Krumme
ToR 10	Incidental by-catch	Jukka Pönä
ToR 11	Next venue and chair	chair
ToR 12	AOB	chair and relevant persons

Annex 2. Minutes from end-user meeting between ICES and RCG chairs

The meeting was held in ICES, Copenhagen the 12-13 of March 2018 and 13 persons participated.

Name	Email address	Affiliation
Maria Hansson	maria.hansson@slu.se	RCG Baltic Co-chair
Marie Storr-Paulsen	mstp@dtu.aqua.dk	RCG North Sea and Eastern Arctic (RCGNSEA) co-chair
Els Torreele	Els.Torreele@ilvo.vlaanderen.be	RCGNSEA co-chair
Joel Vigneau	Joel.Vigneau@ifremer.fr	PGDATA chair
Sieto Verver	sieto.verver@wur.nl	RCG Long distance fisheries chair
Jon Elson	jon.elson@cefas.co.uk	RCG North Atlantic (RCGNA) co-chair
Leonie O'Dowd	leonie.odowd@marine.ie	RCG NA co-chair
Christoph Stransky	christoph.stransky@thuenen.de	STECF rep
Lotte Worsøe Clausen	Lotte.worsoe.clausen@ices.dk	ICES secretariat
Neil Holdsworth, ICES	NeilH@ices.dk	ICES secretariat
Rui Catarino	rui.catarino@ices.dk	ICES secretariat
Ruth Fernandez	ruth.fernandez@ices.dk	ICES secretariat
Henrik Kjems-Nielsen	henrikkn@ices.dk	ICES secretariat (afternoon)

Background to the pan-regional RCG subgroup on end user needs

In the legal text of the DCF recast (EC) No 2017/1004 and EUMAP (2016/1251/EU), multiple references are made to data collected at regional level based on “end user needs” (see articles of EUMAP). This requires close collaboration between RCGs, tasked with the regional coordination of data collection and end users of the scientific data. In March 2017, the chairs of the Northern RCGs (BALTIC, NSEA and NA) initiated a dialogue meeting with ICES as their main scientific enduser to establish a framework that facilitate the feedback between data collection and data requirements. The objectives for this initial meeting was to:

- start formalizing a framework of communication between data providers (RCGs) and data end users (ICES);

- see how best to improve on current interactions and communications with RCGs and ICES including using established mechanisms;
- use the above to draft ToRs and intersessional work for the RCGs.

Following the meeting in 2017, it was agreed that the chairs of the RCGs continue this dialogue as a panregional and intersessional subgroup with the following ToRs as presented in the 2017 Liaison report:

Pan Regional subgroup on end user needs	
Initial ToRs	• To work closely and intersessionally with ICES to improve communication; establishing common references for standard processes and information and identifying effective processes for meeting end-user needs. • act as a point of contact for data end users, a framework for feedback and allow the RCG to prioritise its activity relating to future data collection, storage and transmission functions.
Workplan 2018/next steps	• RCG chairs to establish end-users subgroup (Initial members RCG chairs). • RCG Chairs in consultation with endusers to draft ToRs and deliverables. • RCG subgroup to report regularly to members.
Responsible persons for follow-up actions	Chairs of RCGs, end - users (ICES, STECF, other RFMOs)

Objectives and ToRs of 2018 meeting

The objective of the meeting between the RCG chairs and ICES was to continue the process between ICES and the RCGs to improve the dialogue and feedback between data providers (RCGs) and data end users (ICES) and specifically to review the agreed actions from the 2017 meeting on benchmark process, data calls and surveys and agree on next steps.

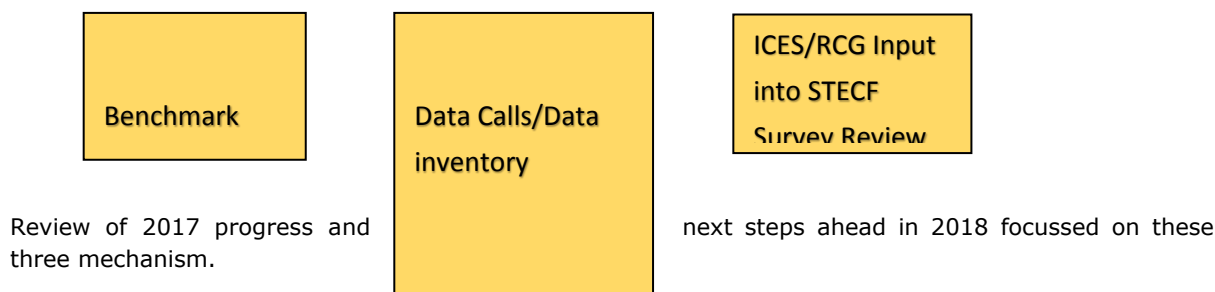
ToRs

1. Review progress since 2017
To see how best to improve on current interactions and communications with RCGs and ICES including using established mechanisms particularly in reference to:
 - a) STECF mandatory survey list
 - b) Benchmark process
 - c) Data inventory
 - d) Data calls
2. AOB:
 - a) Sharepoints
 - b) RDB data call

RCG chairs met on the 12th March 2018, to finalise the terms of reference and agenda for the meeting with ICES on the 13th.

Progress 2017 and next steps in 2018

In, 2017 at the first meeting between ICES and the RCG chairs, three main mechanisms were identified to improve the feedback between data endusers and data providers:



Benchmark

2017 agreed actions: ICES are reviewing the benchmark cycle with reference to the number of stocks, potential bottle necks. RCGs to be included after the 'evaluation' cycle.

RCG to provide an inventory of relevant data collected under DCF to data compilation workshops (DCW). Template to be designed by RCGs

Outcome: Data Summaries were produced by RCGs in 2017, See Annex 14 RCGNSEA report (Whiting) and Annex 8 RCGNA report (Lophius spp) for draft Stock Data Summaries. The following limitations were highlighted when interpreting data summaries for benchmark purposes:

- Data is only presented for EU countries
- Not raised and potentially incomplete (Upload logs)

Irrespective of these concerns, RCGs can play an important role in assisting with the data evaluation process for benchmarks by highlighting issues with the data – for example retrospective differences.

2018 Next steps:

- ICES will provide the RCGs with a list of stocks to be benchmarked and data compilation workshops timetabled for 2018/2019.
- ICES is developing an Issue list database which will be live and available to RCG.
- RCGs to provide feedback on the process as well as the stocks to be benchmarked.
- Issue list to include a column categorising the data needs and justification (eg. category 3 to category 1)

Data usage categories

Used

collected, needed but not currently used

not used

not collected yet

- ICES will include a mandatory field in the issue list on future data needs. RCG can use this information to prioritise future data collection and identify data sampled but not used. Link this to the ACOM Benchmark scoping process. At RCG annual meeting, RCGs can provide feedback on the Issue list directly through the database.
- Data summaries- RCG through data group, continue to develop data summaries for stocks to be benchmarked and present at 2018 RCG annual meeting. Agree on minimum data products for benchmark work shops. Consider information in the data summaries, which RCGs can provide to ICES to assist with the data evaluation. Can the intersessional DATA group be tasked with this and develop a package with the tasks, code and references to data.
- Stock Annex: Currently free text, standard table to include more details on data parameters (longer term).

Assessment Data Call and Data Inventory:

2017: RCG/ICES to compare Fisheries assessment data call (Excel sheet) to ICES stock list database and the NWP's Table 1ABC, DATRAS+, RDB (and National DBs).

Feedback to ICES for information on potential gaps, help form a process of prioritising data needs and manage expectations.

2018 Next steps:

- Data Call Review: the assessment working groups will already develop the data calls for next year at the working groups, and comment on the previous data calls. This information will be compiled by ICES and send to the RCGs for their annual meeting.
- RCG will review the data call at their annual meeting and feedback to ICES, deadline is Liaison meeting so information can be incorporated into data call for following year.
- RCG scan also compile list of issues MS encountered when responding to the data call. RCG chairs will ask MS to collate any concerns and issues in time for the RCG meeting and compile at the meeting to feedback to ICES.
- Feedback on format- use existing format but add column to state what data is used from surveys.
- Data needs vs Data availability: ICES is developing a data call module for stock coordinators to identify data variables and communicate with data provider. Use the data call module, rather than the SID to provide feedback on data needs vs data availability.
Assume all data parameters requested by stock coordinator will be used in assessment and advice, and that stated requirements are not wish lists . Data submitters can comment on data request- ie is it collected, should it be collected.

Surveys:

2017 agreed actions and outcome:

- ICES to provide coding for inventories from DATRAS (and other survey DBs) and RDB with ref to DCF AWP. A survey list was produced from the ICES secretary and delivered to the RCG.
- RCGs to compare Annual Work plan survey names with DATRAS names - WGCHAIRS. STECF review group of surveys December 2017 – ToRs still to be finalized but preparation is required. ICES working Document to be reviewed by RCG Surveys subgroup.
- ICES provided RCG with summary on which surveys are used in ICES, their codes/names and which stocks they are used for.
RCGs designed spreadsheet to compare table 10 surveys with national workplan and ICES surveys
Spreadsheets were send out to National correspondents to check surveys included in national work plan and related to table 10, how they should be named, what additional surveys should be included.
RCG re updated information on which surveys are used for which stocks based on ICES advice sheets.
- RCG made an inventory on what MS has listed in annual work plan, and when possible match to table ten.
- RCG proposed naming convention: this ensures the consistency between table 10 and ICES,
- ICES agreed with some tweaks (eg international coding) will include this in the "Vocabulary" to ensure consistency with advice sheets and DATRAS.

2018 Next steps:

- Shortterm steps ahead: RCGs will provide tidied up version to ICES for quality check - ICES will quality check the information on what surveys are used as basis of advice.
- Requirements for Table 10 surveys: All data on table 10 will need the data housed in international Databases, ie ICES databases (DATRAS/Acoustic/Egg & Larvae, UWTV – under review).
- STECF survey review and scoping meeting: As the survey review still requires extensive preparation, change review meeting into scoping meeting to prepare for the review, agree on evaluation criteria, what information should be used in the review and what information should be presented in table 10. The outcome of the scoping meeting would allow commenting by different parties such as ICES, and consultation with Member States, ie National Correspondents before actual review meeting. Survey evaluation criteria need to be carefully considered as they now need to address the following question: "why should DCF surveys be mandatory". The information linked to surveys and reflected in table 10 also need to be carefully considered in the light of mandatory surveys and legal requirements

of task/cost sharing. The criteria for grouping and/or categorising surveys in table 10 also needs to be considered

AOB:

Recipients of Data calls: ICES provide the National Correspondents and ACOM with the data calls problems arose in some Institutes that were not copied in. Some data calls were not received by the right recipients. E-mail receipts have been set up and the Data calls tool is now on the sharepoint.

ICES sharepoint support for RCG Intersessional work: ICES agreed to set up SharePoint and GitHub for RCG intersessional subgroup work. RCG members can get access to ensure platform for intersessional work of various regional and pan regional subgroups.

Recommendations database: The ICES recommendation database can be used for the RCG-ICES recommendations. RCGChairs can put it in or ICES secretariat will put it in the DB.

RDB data call: No change although highlight and improve on the text in relation to BMS fraction and Unregistered discards. Upload logs should be used to register whether BMS fraction has been uploaded or is not available. Include references to the links on the ICES website. JE to prepare and circulate a draft data call for release mid April with a deadline of mid June.

Access to RDBES: JRC have requested access. EC can have access to the data but all other requests should come via NCs to member states rather than through RCGs or ICES. This also applies to requests from scientists at JRC. Datras is open access. Open access means that the data can be used incorrectly. Data protection could be an issue. Would prefer a portal so that we can provide aggregated data at a certain safer level (even raised).

GITHUB for RCG: How to maintain metier lists when RDB access. ICES sharepoint on the RDB already has a list but has to be maintained by the administrators. RCGs could control the list on GITHUB. Metier lists and other code lists are available and accessible to the public on ICES website. Metier workshop could create a GITHUB for storing documents with links to the ICES website and page with code lists.

Annex 3. First Output FishPi2 WP1

The National Correspondents present at the meeting, were given an presentation about the first output coming from FishPi2 – WP1.

Do the RCG agree on the statements from WP1 that we need to

- Better consider the complexity of management of personal resources across MS in future RCG work
- Make institutes responsible to tasks to a larger extent (in contrast to individuals)
- Make RCG work more visible, traceable and career promoting
- We need to consider regional workplans in a broader perspective than regional sampling plans

Do the RCG agree with WP1 suggestions that to achieve this we need to have

- A more formal structure of pan-regional (NS&EA, NA, Baltic) subgroups.
- The subgroups should have an appointed chair(s), clear tasks decided by the RCGs and personal resources shall be made available in communication with the heads of the institutes.
- The subgroups should have a clear road-map with milestones.
- The subgroup should produce short reports were the participants should be listed as authors. Reports should be made available (website) and should be traceable.
- Do the RCG think the 7 subgroups suggested by WP1 are relevant and covering the RCG work?
 - Subgroup on implication of management measures on data collection
 - Subgroup on effective interaction between end-users and RCGs
 - Subgroup on data analysis to support RCG work
 - Subgroup on design and implementation of regional sampling plans
 - Subgroup on surveys
 - Subgroup on diadromous species
 - Subgroup on regional database
- Establish a webpage supporting internal communication (incl storage of reference lists, tools etc), consultation with end-users, information to stakeholders. The webpage should also have links to national DCF webpages, other relevant groups and sources of information
- A logo :)
- A discussion on building blocks, other than regional sampling plan, that can be included in a regional workplan.
- Go ahead with a limited RWP.

Annex 4. Rules of Procedure for the Baltic Sea Regional Coordination Group

1. Scope

1.1. These Rules of Procedure are valid for the Regional Coordination Group (RCG) for the Baltic Sea in the framework of the Regulation (EU) 2017/1004 of the European Parliament and of the Council on the establishment of a Union framework for the collection, a management and use of data in fisheries sector and support for scientific advice regarding the Common Fisheries Policy and repealing Council regulation (EC) No 199/2008 (recast).

1.2. These Rules of Procedure are established based on the Article 9(5) of the above mentioned Regulation.

1.3. These Rules of Procedure are established 6th September 2017 by the following EU Member States coordinating their data collection activities in the Baltic Sea: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden.

2. Working language

2.1. The working language of the RCG is English.

3. Meetings of the RCG

3.1. To perform its duties, the RCG shall hold at least once a year an annual meeting unless agreed otherwise by the RCG. An annual meeting shall consist of plenary sessions and may include work in groups.

3.2. The RCG may hold additional meetings to the annual meeting. The duration, form, meeting venue, terms of reference and other relevant elements for such an additional meeting may be agreed at the RCG annual meeting or in a written procedure initiated by the RCG Chairperson. The venue of the RCG annual meeting rotates between Member States coordinating their data collection activities in the same marine region. The order of the rotation is based on the alphabetical order in English language of the Member States unless otherwise agreed by the RCG.

3.3. Based on a written invitation from a third country, the RCG may agree to hold its annual or additional meeting in a venue provided by the third country.

3.4. No later than one month before the annual or additional meeting, the Member State or a third country organizing the annual or additional meeting shall be responsible for providing details of accommodation, travel and other organizational information relevant for the meeting.

3.5. Each Member State coordinating the data collection activities in the same marine region and the European Commission shall nominate their participants to a RCG meeting and may choose the number of their participants to a RCG meetings with due regard of the items on the agenda at the relevant RCG meeting. The information of the nominations should be communicated to the chair of the RCG.

3.6. Member States not listed in point 1.3., may nominate a national correspondent or an expert to participate a RCG meeting.

3.7. Only nominated persons may participate to the RCG meetings.

4. RCG groups

4.1. To carry out its duties as set out in the Article 9 of the Regulation 2017/1004, the RCG may agree to establish permanent or temporary bodies, groups, subgroups or other arrangements (hereafter called *groups*). The RCG may provide terms of references for these groups and appoint the chairperson(s), coordinator(s), rapporteur(s), secretary, or any other role(s) or working practices necessary for these groups. The RCG may mandate these group(s) to appoint the chairperson(s), coordinator(s), rapporteur(s), secretary, or any other necessary role(s) and the terms of reference for such group(s).

4.2. These groups may carry out their duties during and between the RCG meetings, as appropriate. The form, duration, participants, participating bodies and other relevant elements of such work may be agreed by the RCG. The chairperson or a person named by the chairperson of such group shall keep the RCG informed on the progress of such work at appropriate intervals.

4.3. When a group is mandated to prepare a draft regional work plan in the sense of Article 9 of Regulation 2017/1004, relevant Member States shall send expert(s) with the necessary expertise related to that draft regional work plan to participate in the group's work. National correspondents, European Commission and ICES may participate in the group's work at all stages.

5. RCG recommendations for further work, work plans and preparation of a draft regional work plan in accordance with the Article 9 of the Regulation 2017/1004

5.1. The RCG may give recommendations for further work to be carried out by the Member States on all issues related to the scope of the Regulation 2017/1004. The recommendations should provide, but are not limited to, clear and understandable stand-alone guidance on the recommended work to be carried out, its justification, a foreseen time frame for fulfillment and to the extent possible, person(s) or institution(s) responsible for the follow up of such recommendation.

5.2. When a group has been mandated to prepare a draft regional work plan, the chairperson of that group or a person mandated by that group, shall keep the RCG and may keep scientific institutions referred to Article 26 in Regulation 1380/2013 informed of the progress of such work at intervals agreed by the RCG. Such procedures may include e.g. requests or any other type of action, including timeframes for such action, to the national correspondents and/or scientific institutions referred above, relevant to the drafting of the draft work plan.

5.3. If the group mandated to prepare a draft regional work plan has not reached unanimity in preparing the draft regional work plan, Member States' experts or national correspondents participating in the group's work, may indicate their difference of opinions with appropriate justification in the group's report to the RCG meeting where the draft work plan is to be discussed and/or decided upon. European Commission and ICES may indicate in the group's report its concerns.

6. Decision making on a draft regional work plan

6.1. Member States referred to in para 1.3. shall make a decision on a draft regional work plan by consensus at the RCG annual meeting. Member States shall take all necessary steps to ensure that they are represented with a person mandated to take a decision on the draft regional work plan.

6.2. A national correspondent may give a mandate to agree on its own behalf on a draft regional work plan to another national correspondent from a different Member State present at the annual meeting where the decision on the draft regional work plan is to be taken. This shall be done by the national correspondent giving a written confirmation outlining the details of the mandate transferred. The confirmation needs to be done in advance of the RCG annual meeting and it shall be provided to the chairperson(s) of the RCG.

6.3. The chairperson of the RCG may request, if necessary, observers at the annual meeting to be absent during the discussion intimately linked to the decision on a draft regional work plan.

6.4. A decision on a draft regional work plan may be taken at exceptional situations by a written procedure. The chairperson of the RCG may initiate such a written procedure after a

mandate with the necessary details to organize and proceed with a written procedure has been given to the chairperson at the RCG annual meeting.

6.5 The chairperson of the RCG shall notify the RCG on the results of the written procedure within two weeks after the written procedure has ended.

6.6. The RCG shall make every effort to reach consensus on a draft regional work plan. If after serious and numerous attempts by the RCG, consensus cannot be reached and no decision on a draft regional work plan by the Member States can be taken, Member State(s) not in a position to support the draft regional work plan, shall provide a written justification to the RCG reasoning its divergent view within one month after the end of the RCG annual meeting where the divergent view was expressed. The written justification for a divergent view shall contain a detailed description of an alternative and comparable plan to the draft regional work plan, including science based justification for such an alternative action to be taken by that Member State(s) to achieve the same deliverables and effect as the draft regional work plan in question.

6.7. Member States, who were in a position to support the draft regional work plan, may take into account in their national work plans to content of the draft regional work plan as appropriate.

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

7.1. The chairperson of the RCG and/or other person(s) mandated by the RCG annual meeting may participate and represent the RCG in coordination referred to in Article 9(6) of Regulation 2017/1004.

7.2. The chairperson of the RCG and/or other person(s) mandated by the RCG annual meeting may participate and represent RCG in other relevant regional bodies, arrangements or meetings.

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

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

8.2 Observers referred to in article 9 of the Regulation 2017/1004 may indicate interest to participate in the RCG by sending the following information to the chair of the RCG.

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

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

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

8.4 The RCG shall decide by consensus of the Member States present at the annual meeting which observers shall be invited to the RCG meetings.

8.5 With the exception to what is said above, the International Council for the Exploration of the Sea (*ICES*) has a permanent possibility to participate all RCG meetings.

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

8.7. Observers are bound with the conditions referred above. If there are justified reasons to consider , that one or more of the conditions set by the RCG in the written confirmation or otherwise, are violated repeatedly or seriously by the observer, the necessity of the observer to participate or the conditions for the participation may be re-evaluated. The observer/organisation shall be informed of this, including the results of the re-evaluation, by a letter from the RCG chairperson after consulting and in consent with the national correspondents of the RCG responding to the chairperson's consultation.

9. Terms of Reference for the RCG

9.1. The RCG may agree the Terms of Reference for the RCG taking into account necessary contributions and information deemed relevant by the RCG. This may include consultation with appropriate bodies or institutions prior or during the decision making to approve the Terms of Reference for the RCG.

10. Agenda and submission of documents

10.1. A draft agenda for the annual RCG meeting shall be made available no later than one month in advance to the meeting.

10.2. A draft regional work plan, where a decision is expected to be taken in accordance with the draft agenda of the RCG annual meeting, shall be made available to the national correspondents one month in advance to the meeting where the decision is expected to be taken. A draft regional work plan for a decision in the RCG annual meeting made available later than one month before the RCG annual meeting, may be considered and decided upon at that meeting in case of consent of all the national correspondents present at the RCG meeting.

10.3. When it is evident from the draft agenda of the RCG annual meeting that the draft regional work plan is not to be decided upon at that RCG annual meeting, the draft regional work plan can be made available to the national correspondents no later than two weeks in advance to the RCG annual meeting. Draft regional work plans made available later than two weeks in advance to the meeting may be decided upon at that meeting in case of consent of all the national correspondents present at the RCG meeting.

10.4. Other documents than the draft regional work plans for the RCG meetings shall be made available no later than two weeks in advance to the RCG meetings. Documents made available later than two weeks in advance to the RCG meetings, may be dealt at the meeting in case of consent of all the national correspondents present at the RCG meeting.

11. Election of the RCG chairperson(s)

11.1. The Chairperson may be elected or agreed upon without a vote by the RCG. A national correspondent, an expert from a Member State or European Commission may act as a chairperson of the RCG. National correspondents or European Commission may suggest nominees for a chairperson. Unless agreed without a vote by the RCG, the election of a nominated chairperson(s) shall take place by voting in a form suggested by the resigning chairperson after consulting the national correspondents and European Commission present at the RCG annual meeting. National correspondents present and European Commission representative present has the right to vote and each has one vote. The vote is decided by a simple majority.

11.2. One term for a chairperson covers the period of two years. A chairperson may serve a two consecutive terms without limiting the total number of terms for the same person to act as a chairperson of the RCG.

11.3. RCG may decide to have co-chairperson(s). The same procedures and conditions as to the chairperson(s) elections apply.

12. The chairperson(s) responsibilities and agenda

12.1. The chairperson(s) of the RCG shall facilitate effective and productive work of the RCG. The chairperson(s), an institution or a person indicated by the chairperson shall be responsible for making the documents and information available in time and shall take all necessary action to that effect.

12.2. The chairperson(s) is responsible for preparing agendas for the RCG annual or additional meetings after consulting the national correspondents of that RCG and other institutions/bodies, as appropriate.

13. Reporting from a RCG meeting

13.1. The chairperson of the RCG shall be responsible for drawing up a report from a RCG annual meeting. The report may contain, but is not limited to, recommendations of the RCG, a summary of the RCG intersessional progress and of the RCG discussions, future work directions, the intended work to be carried out before the next meeting, the list of foreseeable RCG meetings and list of participants, their contact information, role and institution.

13.2. The report shall be made available to the participants of the meeting and publicly, as appropriate, within two months after the RCG annual meeting has ended. Reports from other RCG meetings shall be distributed within one month after the meeting has ended unless otherwise decided by the RCG.

14. Amending rules of procedure

14.1. These Rules of procedure may be amended at the RCG annual or additional meetings by consensus of the national correspondents present at the annual or additional meetings.

Annex 5. Regional and pan-regional subgroup work 2018-2019

Subgroups	Governance		Implication of management measures on data collection	Data analysis and quality			
Regional/pan regional	Pan regional		Pan regional	Pan regional			
task	Development of Draft Regional work plan	Revision of EUMAP	Implications of the Landing Obligation	Facilitate the production of regional overviews of fisheries and sampling	Develop / continue to develop codes tools	Metier issues	Facilitate quality assurance of data and sampling programmes
RCG chair follow up	Leonie	Els	Leonie	Maria	Els	Maria	
chairs	Joel VIGNEAU <Joel.Vigneau@ifremer.fr>	'Jørgen Dalskov' <jd@aqu.dtu.dk>	Helen McCormick <Helen.McCormick@Marine.ie> Harriet van Overzee (harriet.vanoverzee@uwr.nl)	Nuno.Prista@slu.se sven.stoetera@thuenen.de tzaraz@azti.es	laurent.dubroca@ifremer.fr	jsv@aqu.dtu.dk	David.Currie@Marine.ie
participants	jon.elson@cefas.co.uk	Elo.Rasmann@envir.ee	uwe.krumme@thuenen.de	kih@aqu.dtu.dk	kih@aqu.dtu.dk	Elo.Rasmann@envir.ee	Malin.werner@slu.se
	Verver, Sieto <sieto.verver@wur.nl>	remigijus.sakas@apc.ku.lt	Didzis.Ustups@bior.lv	perttu.rantanen@luke.fi	perttu.rantanen@luke.fi	Maksims.Kovsars@bior.lv	Alastair.Pout@scotland.gsi.gov.uk/L.Clarke@MARLAB.AC.UK
	Leonie O'Dowd <leonie.odowd@marine.ie>	Heikki.Lehtinen@mmm.fi	irina.jakovleva@zuv.lt	msuska@mir.gdynia.pl	Ivo.sics@bior.lv	irina.jakovleva@zuv.lt	vincent.badts@ifremer.fr
	Jens Ulleweit <jens.ulleweit@thuenen.de>	Jorgen Dalskov	m.bell@marlab.ac.uk	Alastair.Pout@scotland.gsi.gov.uk/L.Clarke@MARLAB.AC.UK	Maksims.Kovsars@bior.lv	madamowicz@mir.gdynia.pl	
	David Currie <David.Currie@Marine.ie>	Matt Elliot	jon.elson@cefas.co.uk	Gwladys Lambert	marijus.spegy@gmail.com	katia.noren@slu.se	
		Leonie O'Dowd; leonie.odowd@marine.ie		Hans Gerritsen <hans.Gerritsen@Marine.ie>	Nuno.Prista@slu.se	matt.elliott@marinemanagement.org.uk	
		Els Torrele	Sofia.carlshamre@slu.se	emilie.leblond@ifremer.fr	Joni.Tiainen@luke.fi	Gareth.Burns@afbini.gov.uk	
						Alastair.Pout@scotland.gsi.gov.uk/L.Clarke@MARLAB.AC.UK	
		Christoph Stransky			msuska@mir.gdynia.pl	ana.ribeirosantos@cefas.co.uk	lies.vansteenbrugge@ilvo.vlaanderen.be
		Joel Vigneau	sofie.vandemaële@ilvo.vlaanderen.be		bart.vanelslander@ilvo.vlaanderen.be		
		Maria Hansson			Alastair.Pout@scotland.gsi.gov.uk/L.Clarke@MARLAB.AC.UK	Claire Moore <claire.moore@marine.ie>	sofie.vandemaële@ilvo.vlaanderen.be
		Irek Wojcik			Hans Gerritsen <hans.Gerritsen@Marine.ie>	Edwin van Helmond ur.nl	
		Sieto Verver			Joel.Vigneau@ifremer.fr	sebastien.demaneche@ifremer.fr	
ICES	henrikkn@ices.dk	Estanis Mugerza		henrikkn@ices.dk	henrikkn@ices.dk	henrikkn@ices.dk	henrikkn@ices.dk
		Dennis Ensing or Allan Walker			Julia.Wischniewski <julia.wischniewski@thuenen.de>		
		Marie-Storr paulsen					
		Maria Moset Martínez					
		Evelina Sabatella					Kieran Hyder
		Simona Nicheva					
		Camille Dross					
		Constantin Stroie					
		Kieran Hyder					

Subgroups Regional/pan regional	End-users and RCGs Pan regional	Diadromous Fishes Pan regional	Regional databases Panregional		Regional NA	Regional sampling plans Regional NA	Regional Baltic	Surveys
task	Review and streamline dialogue between data providers (RCGs) and Endusers (ICES)		RDB-Steering Group	RDB Core group	Update of Risk Assessment for bycatch in the North Atlantic	Towards a regional sampling plan for the freezer trawler fleet exploiting pelagic fisheries in the Northeast Atlantic	Towards a regional sampling programme – Case study of fisheries for small pelagics in the Baltic	Placeholder until STCF review is completed
RCG chair follow up	Maria/Els	Els	NA	NA	Leonie	Leonie	Maria	
chairs	msp@aqu.dtu.dk jon.elson@cefas.co.uk	alan.walker@cefas.co.uk Dennis.Ensing@afbini.gov.uk	Katja.ringdahl@slu.se David.Curie@Marine.ie	henrikkn@ices.dk	'Estanis Mugerza' <emugerza@azti.es>	'Jens Ulleweit' <jens.ulleweit@thuenen.de> Andrew Campbell <andrew.campbell@marine.ie>	msp@aqu.dtu.dk Katja.ringdahl@slu.se	
participants	Maria.hansson@slu.se Ari.Leskela@luke.fi	Antanas.Kontautas@ku.lt tapani.pakarinen@luke.fi	jd@aqu.dtu.dk Alastair.Pout@scotland.gsi.gov.uk	Nuno.prista@slu.se kih@aqu.dtu.dk	stuart.hetherington@cefas.co.uk Bram.Couperus@wur.nl	pia.schubert@afbini.gov.uk Alastair.Pout@scotland.gsi.gov.uk/L. Clarke@MARLAB.AC.UK	kristina.hommik@ut.ee jukka.ponni@luke.fi	Ruth.Fernandez@ices.dk
	iwojck@mir.gdynia.pl romas.statkus@zv.lt	Jaakko.Erkinaro@luke.fi iwojck@mir.gdynia.pl		msuska@mir.gdynia.pl madamowicz@mir.gdynia.pl	Leonie O'Dowd <leonie.odowd@marine.ie>	Harriet.vanOverzee@wur.nl Helen McCormick <Helen.McCormick@Marine.ie>	iwojck@mir.gdynia.pl remijus.sakas@agc.ku.lt	
	Mathieu.Lundy@afbini.gov.uk	ida.ahlbeck.bergendahl@slu.se		Alastair.Pout@scotland.gsi.gov.uk				
	zeynep.hekim@slu.se Matthias.Bernreuther@thuenen.de	johan.dannewitz@slu.se		David.Curie@Marine.ie laurent.dubroca@ifremer.fr				
			emilie.leblond@ifremer.fr sofie.nimmegeers@ilvo.vlaanderen.be	twan.leijzer@wur.nl				
	els.torreale@ilvo.vlaanderen.be							
ICES	Lotte Worsøe Clausen <Lotte.worsoe.clausen@ices.dk> henrikkn@ices.dk Rui Catarino <rui.catarino@ices.dk> Ruth Fernandez <ruth.fernandez@ices.dk> Kieran Hyder	henrikkn@ices.dk		Kieran Hyder				

Annex 6. An overview of available weight and maturity data for Central Baltic Herring

Total number of individual fish weights from commercial fishery for Central Baltic Herring (her-2532(-GOR) years 2009-2017).

	1	2	3	4	5	6	7	8	9	10	11	12	sum
2009	1657	2690	1919	1385	2376	1439	434	429	1747	1625	2135	1490	19326
27.3.d.25	108	263	453	218	626	69		320	306	184	215	353	3115
27.3.d.26	330	499	295	111	402	222		106	186	117	494	114	2876
27.3.d.27	127	657	154		154				392		176	229	1889
27.3.d.28	110	457	500	412	246	392	95	3	462	467	373	381	3898
27.3.d.29	474	418	121	275	385	271	104		305	362	428	18	3161
27.3.d.32	508	396	396	369	563	485	235		96	495	449	395	4387
2010	1825	1787	1828	2549	2759	1410	256	494	1242	1522	1537	1000	18209
27.3.d.25	462	274	400	148	476	318		206	250	397	28	32	2991
27.3.d.26	301	333	401	449	304	113	166	67	105	66	337	277	2919
27.3.d.27	147	320	75	116	347					98			1103
27.3.d.28	66	367	373	820	521	142	89	135	389	205	644	136	3887
27.3.d.29	458	294	326	491	428	302	1	65	194	302	171	212	3244
27.3.d.32	391	199	253	525	683	535		21	304	454	357	343	4065
2011	1745	1290	1312	2521	2974	1436	372	785	1887	1333	1832	782	18269
27.3.d.25	169	505	516	150	424	150	63	404	150	400	230	140	3301
27.3.d.26	350	221	415	670	418	250	160	167	258		105	37	3051
27.3.d.27	250	173	145	500					382		439		1889
27.3.d.28	338	91	3	762	380	325	111	150	484	286	362	271	3563
27.3.d.29	202	51	111	203	926	104			244	179	247	34	2301
27.3.d.32	436	249	122	236	826	607	38	64	369	468	449	300	4164
2012	2013	1584	1542	2590	3802	1206	1182	3474	1466	1443	1362	1669	23333
27.3.d.25	686	323	187	181	571	212	49	419	498	156	285	150	3717
27.3.d.26	385	544	305	542	463	102	61		120	200	107	151	2980
27.3.d.27		1	477									316	794
27.3.d.28	130	283	340	419	561	174	1057	104	618	350	317	353	4706
27.3.d.29	176	272	18	356	475	416	15	1	6		284	252	2271
27.3.d.32	636	161	215	1092	1732	302		2950	224	737	369	447	8865
2013	3263	1191	1866	2088	2908	1070	280	596	1250	920	2329	940	18701
27.3.d.25	492	110	230	467	138	162	62	46	557		200	200	2664
27.3.d.26	259	390	405	442	168	50		263			141	156	2274
27.3.d.27	720	50	50	235	68					109	171		1403
27.3.d.28	267	24	594	281	719	219	18	4	331	206	509	209	3381
27.3.d.29	693	94	237	178	465				166	277	701	99	2910
27.3.d.32	832	523	350	485	1350	639	200	283	196	328	607	276	6069
2014	1839	1892	2677	3200	2455	992	1348	1242	1130	2118	2428	2046	23367
27.3.d.25	17	266	689	455	574	229	48	45	52	564	150		3089
27.3.d.26	216	275	634	348	15	27	200	128	55	232	357	424	2911
27.3.d.27	261	26	315		216					25	25	512	1380

27.3.d.28	228	529	254	442	616	348	1000	63	742	487	475	181	5365
27.3.d.29	701	261	285	703	395				99	446	819	553	4262
27.3.d.32	416	535	500	1252	639	388	100	1006	182	364	602	376	6360
2015	1684	2927	1924	2634	2706	1286	123	495	2231	2204	1758	831	20803
27.3.d.25	274	764	88	502	497	187	16	278	412	589	217	25	3849
27.3.d.26	51	358	406	343	282	96		118	109	535	263	234	2795
27.3.d.27		320	185	100	450				521		78		1654
27.3.d.28	33	425	257	250	275				568	456	220	225	2709
27.3.d.28.1	42	30	20	151	197	72	7	2	1	1	10	19	552
27.3.d.28.2		84	1	81	2	38			97	2	101	85	491
27.3.d.29	475	368	430	507	36				148	249	430	143	2786
27.3.d.32	809	578	537	700	967	893	100	97	375	372	439	100	5967
2016	1746	2909	2152	2758	2073	1009	67	641	1453	1910	1625	920	19263
27.3.d.25	179	789	126	443	109	62		521	125	558	437	114	3463
27.3.d.26	707	447	675	649	282	165	63		93	71	168	594	3914
27.3.d.27		386	204	95	56				125	340	62		1268
27.3.d.28	167	335	698	351	250				258	400	150		2609
27.3.d.28.1	27	43	12	303	177	60	4	2	1	11	13	12	665
27.3.d.28.2	147		136			46		88		82	130		629
27.3.d.29	225	418	50	425	329	76			291	208	359		2381
27.3.d.32	294	491	251	492	870	600		30	560	240	306	200	4334
2017	2907	1832	2234	3020	1603	1138	285	797	1293	1417	1577	749	18852
27.3.d.25	321	353	231	488	175	249	105	498	150	598	330	49	3547
27.3.d.26	113	172	417	191	271	197	133	62	190	19		63	1828
27.3.d.27	60	349	158	25					112		37		741
27.3.d.28	1413	275	437	740	250				257	275	175	125	3947
27.3.d.28.1	44	2	24	430		1	3	9	9	5	6	51	584
27.3.d.29	518	347	267	546	172	191		27	95	320	318	161	2962
27.3.d.32	438	334	700	600	735	500	44	201	480	200	711	300	5243

Total number of individual fish maturity determinations from commercial fishery for Central Baltic Herring (her-2532(-GOR) years 2009-2017.

	1	2	3	4	5	6	7	8	9	10	11	12	sum
2009	943	1077	1079	518	1375	507	82	425	1171	575	1282	695	9729
27.3.d.25	68	236	441	140	620	69		319	304	184	214	353	2948
27.3.d.26	328	470	285	105	402	222		106	186	117	494	114	2829
27.3.d.27	68	225	150		154				387		176	228	1388
27.3.d.28	99	97	197	97	98	198			265	230	263		1544
27.3.d.29	170	49	6	175	101	18	45		16	26	88		694
27.3.d.32	210			1			37		13	18	47		326
2010	1291	1150	840	1072	1126	331	166	338	794	705	658	243	8714
27.3.d.25	448	263	173	148	400	241		206	249	393			2521
27.3.d.26	301	320	266	322	11	61	166	67			200	147	1861
27.3.d.27	146	320	74	116	346					97			1099
27.3.d.28		247	246	195	187				387	97	300		1659
27.3.d.29	304		81	291	65	3		65	58	71	71	53	1062
27.3.d.32	92				117	26			100	47	87	43	512
2011	782	984	1162	1875	1075	458	223	712	980	549	910	308	10018
27.3.d.25	168	432	478	149	416	148	63	397	149	399	223	121	3143
27.3.d.26	215	179	414	665	414	158	160	167	70		105	37	2584
27.3.d.27	249	173	144	498					377		435		1876
27.3.d.28	150			297		148		148	384	150	147	150	1574
27.3.d.29		50	106	103	229	4							492
27.3.d.32		150	20	163	16								349
2012	1407	1111	1291	1026	1285	335	109	413	892	579	531	855	9834
27.3.d.25	675	292	185	162	562	212	49	413	496	155	279	149	3629
27.3.d.26	295	544	303	539	318	100	60		118	200	107	151	2735
27.3.d.27			475									316	791
27.3.d.28	124	135	249	122	370				278	224	145	129	1776
27.3.d.29	144	140	18	203		23						110	638
27.3.d.32	169		61		35								265
2013	2090	677	987	1376	705	212	62	306	929	306	708	450	8808
27.3.d.25	439	75	223	450	124	162	62	46	551		200	199	2531
27.3.d.26	218	380	311	437	163	50		260			139	153	2111
27.3.d.27	715	48	50	234	68					108	171		1394
27.3.d.28			403	177	182				224	198	198	98	1480
27.3.d.29	586	85		78	168				154				1071
27.3.d.32	132	89											221
2014	591	541	741	658	492	256	247	173	107	436	294	424	4960
27.3.d.25		222	108	49	374	229	48	45	52	164			1291
27.3.d.26	216	275	633	348	15	27	199	128	55	227	294	424	2841
27.3.d.27													
27.3.d.28													
27.3.d.29	180	44		261	103					45			633
27.3.d.32	195												195

2015	743	2029	1125	1561	1700	392	23	393	1697	1320	1128	547	12658
27.3.d.25	238	759	74	419	428	186	16	275	410	584	214	25	3628
27.3.d.26	51	358	397	341	282	96		118	109	535	262	234	2783
27.3.d.27		320	185	99	449				518		78		1649
27.3.d.28	33	423	198	249	274				563	199	219	164	2322
27.3.d.28.1			20	151	197	72	7						447
27.3.d.28.2		84	1	81	2	38			97	2	101	85	491
27.3.d.29	213	85	250	221	1						254	39	1063
27.3.d.32	208				67								275
2016	1679	2628	1978	2628	1957	1009	67	604	1246	1673	1276	893	17638
27.3.d.25	147	612	114	396	66	62		516	124	446	249	100	2832
27.3.d.26	699	424	591	619	282	165	63		93	71	168	593	3768
27.3.d.27		385	131	95	56				125	337	61		1190
27.3.d.28	167	301	694	345	247				245	397	150		2546
27.3.d.28.1			12	303	177	60	4						556
27.3.d.28.2	147		136			46		88		81	130		628
27.3.d.29	225	415	49	425	329	76			159	141	300		2119
27.3.d.32	294	491	251	445	800	600			500	200	218	200	3999
2017	2860	1777	2202	3009	1507	1069	237	681	1245	1363	1393	641	17984
27.3.d.25	320	349	208	479	173	246	103	493	148	590	328	49	3486
27.3.d.26	111	170	409	191	271	197	133	62	190	19		63	1816
27.3.d.27	60	328	158	25					112		36		719
27.3.d.28	1413	249	437	738	249				256	272	175	124	3913
27.3.d.28.1			24	430									454
27.3.d.29	518	347	266	546	172	126		27	59	282	259	105	2707
27.3.d.32	438	334	700	600	642	500	1	99	480	200	595	300	4889

Annex 7. Maturity data and surveys used in stock assessments in the Baltic Sea

Maturity data collected by the surveys used in the assessment for Baltic Sea fish stocks. The table provides the maturity data used in the assessment and comments from the end-users on what maturity data they use and if they don't use the reason behind this.

STOCK	SURVEY	QUARTER	AREA/SD (SAMPLED)	YEARS	YEARS EXCLUDED	Maturity sampled	Database	Maturity used in assessment	Maturity basis in assessment	Comments from end-users	Feed back from RCG
Cod SDs 22–24	BITS	1	22, 23, 24	2001-2017	-	All ages	DATRAS	Annually	Ages 1-7	22, 23, Only 24 area 1 used	Satisfied
		4	22, 23, 24	2001-2016	-		DATRAS	Not used	Ages 0-4	Wrong timing	Not used
Cod SD 21 (Katte gat)	IBTS	1	21	1997-2017	-	All ages	DATRAS	Annually 1-6 ages	Ages 1-6	Combined sexes	Satisfied
		3	21	1997-2016	-		DATRAS	Not used	Ages 1-4	Wrong timing	Not used
	BITS	1	21	1997-2017	-	All ages	DATRAS	Potential	Ages 1-3		Potential
		4	21	1997-2016	-		DATRAS	Not used	Ages 1-3	Wrong timing	Not used
	CODS	4	21	2008-2016	Not conducted in 2012		National database SLU Aqua, DTU Aqua	Not used	Ages 1-6	Wrong timing	Not used
Cod SDs 25-32	BITS	1	25-28	1991-2017	-	All ages	DATRAS		CPUE (kg/h), ≥ 30 cm	Not used in 2018	Potential. Suggested another survey!! Add line= CoBALT
		4	25-28	2001-2016	-		DATRAS	Not used	CPUE (kg/h), ≥ 30 cm	Wrong timing	Not used
Sole 3a (SDs 20-21) & SDs 22-24	SOLES	4	20-21	2004-2016	2012-2013	All ages	National database DTU Aqua	Knife-edge constant maturity used in assessment	Ages 1-9	Wrong timing	Not used
Plaice SDs 21-23	combined	IBTS	1	21-23	1992-2017	-	All ages	DATRAS	Ages 1-5		Satisfied
		BITS	1	21-23	1992-2017	-	All ages	DATRAS	Ages 1-5		Satisfied
	com	IBTS	3	21-23	1998-2016	-		DATRAS	Ages 1-5	Wrong timing	Not used

		BITS		4	21-23	1998-2016	-		DATRAS	Ages 1-5		Wrong timing	Not used
Plaice SDs 24-32	BITS	1	24-26		2002-2017	-	All ages	DATRAS	Plaice SD 21-23 maturity data used	CPUE (N/h), ≥ 20 cm	Potentially BITS Q1 can be used	Plaice SD 21-23 maturity data used	
		4	24-26		2002-2016	-		DATRAS		CPUE (N/h), ≥ 20 cm	Wrong timing	Not used	
Herrin g SDs 25-27, 28.2, 29+32	BIAS	4	25—27, 28.2, 29		1991-2016	1993, 1995, 1997			Historical data	Ages 1-8+	Wrong timing	Not used	
	BITS	1					All ages		Checking wether gear is suitable (if not forget it)		To be analysed	Potential	
		4									Wrong timing	Not used	
Herrin g SD 28.1	AS	3	28.1		1999-2016	-			Knife-egde constant values. George is happy with current	Ages 1-8+	Wrong timing	Not used	
Herrin g SD 3031	BIAS	4	30		2007-2017		All ages			Ages 1-10+	Wrong timing	Not used	
	TRAP NET SD30	2	31		1994-2006		Sampled		Historical data	Ages 3-9+ (incl. effort)	Not updated	Used	
Sprat SDs 22-32	BIAS	4	22-29		1991-2016	1993, 1995, 1997	All ages			Ages 1-8+	Wrong timing	Not used	
	BITS	1					All ages				Not suitable	Not used	
		4									Wrong timing	Not used	
	BASS	2	24-26, 28		2001-2016	-	All ages			Ages 1-8+	Potential	Not used	
Flound er SDs 22-23	combine d	BITS		1	22-23	2001-2016	-	All ages	DATRAS	CPUE (kg/h), ≥ 20 cm		Females	Used
				4	22-23	2001-2016	-		DATRAS	CPUE (kg/h), ≥ 20 cm		Wrong timing	Not used
Flound er SDs 24-25	combine d	BITS		1	24-25	2001-2016	-	All ages	DATRAS	CPUE (kg/h), ≥ 20 cm		Females	Used
				4	24-25	2001-2016	-		DATRAS	CPUE (kg/h), ≥ 20 cm		Wrong timing	Not used
Flound er	com E	BITS		1	26, 28	2001-2016	-	All ages	DATRAS	CPUE (kg/h), ≥ 20 cm		Female	Used

SDs 26-28			4	26, 28	2001-2016	-		DATRAS	CPUE (kg/h), ≥ 20 cm		Wrong timing	Not used
Flounder SDs 27, 29-32	combined	Muuga	4	32	1993-2016			National database SLU Aqua	CPUE (kg/day)		Wrong timing	Not used
		Küdema	4	29	2000-2016			National database SLU Aqua	CPUE (kg/day)		Wrong timing	Not used
		Muskö	4	27	1992-2016			National database SLU Aqua	CPUE (kg/day)		Wrong timing	Not used
		Kvädö-fjärden	4	27	1989-2016			National database SLU Aqua	CPUE (kg/day)		Wrong timing	Not used
Turbot SDs 22-32	combined	BITS	1	22-28	2001-2016	-	All ages	DATRAS	CPUE (N/h), ≥ 20 cm		Females	Used
			4	22-28	2001-2016	-		DATRAS	CPUE (N/h), ≥ 20 cm		Wrong timing	Not used
Dab SDs 22-32	combined	BITS	1	22-28	2001-2016	-	All ages	DATRAS	CPUE (kg/h), ≥ 15 cm		Females	Used
			4	22-28	2001-2016	-		DATRAS	CPUE (kg/h), ≥ 15 cm		Wrong timing	Not used
Brill SDs 22-32	combined	BITS	1	22-24	2001-2016	-	All ages	DATRAS	CPUE (N/h), ≥ 20 cm		Females	Used
			4	22-24	2001-2016	-		DATRAS	CPUE (N/h), ≥ 20 cm		Wrong timing	Not used

Annex 8. Cod liver sampling in the Baltic Sea

Table 1. Overview of past, present and future activities on cod liver parasite sampling in the Baltic Sea by country (status: 2018).

Country	Ongoing research (Y/N) (Topics)	Expected date of project completion.	Cod liver sampling during				
			BITS q1	SPRAS (May)	BIAS (Oct)	BITS q4	commercial samples
DNK	FP7, Copenhagen University Parasite A survey of zoonotic nematodes of commercial key fish species from major European fishing grounds	finished	since 2018	No	No	since 2017	No
DNK	Horizon2020, Copenhagen University - Parafishcontrol - Advanced tools and research strategies for parasite control in european farmed fish	1.4.2020					
DNK	EMFF, DTU Aqua: 'Seal-related liver worm in Baltic cod: Status, effects and biological input for management (TESLO)'. Effects of liver worm on cod energy content, effect of worms on cod liver structure, spatial levels of infection with liver worm in a transect from Skagerrak to the central Baltic and establish a routine visual inspection on Danish monitoring surveys for liver worm in cod, to measure effects of liver worm on cod stress levels, to refine existing bioenergetic model for cod.	Parts of project finished, whole project finished December 2019					
DNK	EMFF, DTU Aqua and Copenhagen University: 'Effects of seal-related liver worm on Baltic cod growth and mortality': The project aims to make controlled infections of cod with liver worm and subsequently investigate effects of liver worm on cod energetics, growth, and immune responses. The data is	July 2019					

	expected to feed into bioenergetic modelling of cod growth.						
DNK	DTU Aqua: Monitoring cod liver infestation from scientific surveys, data covering SD25 (Bornholmsdybet) and western part of SD26 in Q1 and Q4. Besides that joint effort with NMFRI Gdynia on SD 25 in Q2						
GER	Thuenen Institute of Fisheries Ecology (Bremerhaven, Thomas Lang): Monitoring of the effects of dumped chemical warfare agents on the health status of fish in the Baltic Sea. Sampling involves cod and flatfish. Data collected during 2-3 surveys per year covering SD 22, 24, 25, 26; data available since approximately 2011. Not finished - ongoing monitoring.		since 2015	intend ed to start in 2019	intend ed to start in 2018	since 2015	Yes
GER	Thuenen Institute of Baltic Sea Fisheries (Rostock, Uwe Krumme): Monitoring of cod liver infestation from German commercial samples and scientific surveys. Data covering SD 22, 24, 25 are available since 2014/15. Not finished - ongoing monitoring.						
GER	Thuenen Institute of Baltic Sea Fisheries (Rostock, Uwe Krumme): Sampling of cod livers for a joint project with DTU-Aqua (Jane Behrens).	finished					

EST	None		No	No	No	planned for 2018	No
LAT			since 2018	No	No	since 2018	test runs plans
LIT	None	None	No	No	No	No	No
POL	Polish National Marine Fisheries Research Institute is conducting research on fish parasites on daily basis.	No date set at this point.	since 2013	No	No	since 2013	Yes
POL	BIOSTRATEG2/296211/4/NCBR 2016. "Seafood safety and quality in terms of the zoonotic and toxicological hazard: risk assessment, monitoring and mitigation".	31. 12. 2019					
FIN	None	None	No	No	No	No	No
SWE	None	None	intended to start 2019	No	start in 2018	start in 2018	No
RUS							

Experience of Germany and Denmark showed that the additional effort to collect cod liver infestation data is minor, i.e. it is a fast and inexpensive process to visually assess the livers. More specifically, cod livers are processed during the standard analysis (e.g. liver weight) and given a simple category scale based on external inspection of the liver (Table 2).

Table 2: Infestation categories of Baltic cod livers inspected externally. Scale used by Germany.

Category	Number of externally visible liver worms
0	0
1	1-10
2	11-20
3	>20

Denmark further divides the German category III (>20 worms) into two additional categories (III: >20-30, IV: >30; Table 3).

Table 3: Infestation categories of Baltic cod livers inspected externally. Scale used by Denmark. Categories 3 and 4 of this scale = category 3 of the German scale.

Category	Number of externally visible liver worms
0	0
1	1-10
2	11-20
3	21-30
4	>30

An example of the a haul-wise distribution of cod liver infestation levels is given based on data collected during a part of the BITS survey (Figure 1).

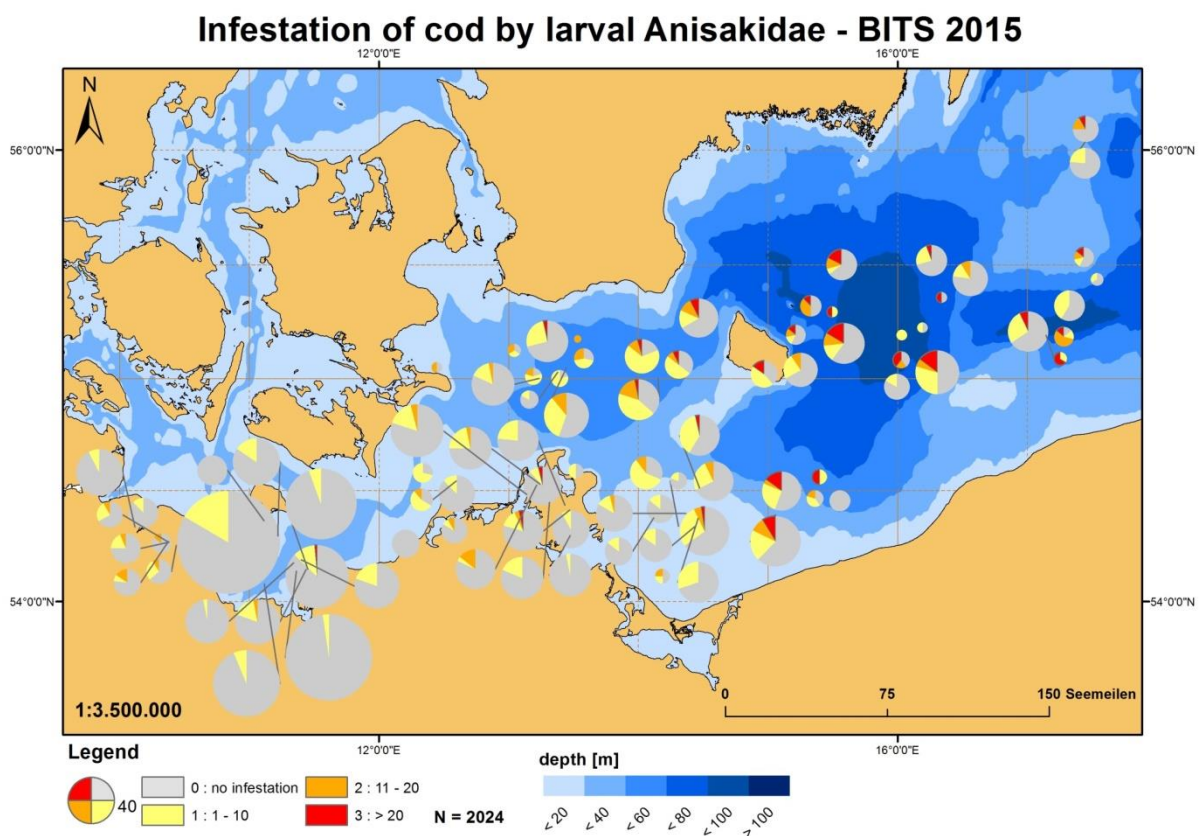


Figure 1: Infestation of cod livers by larval Anisakidae during the quarter 1 BITS 2015. Haul-wise proportions.

Recent genetic analyses showed that in SD24-26 nearly all worms were *C. osculatum* (Sokolova et al., in press). Notably however, analyses by Denmark/Germany and Poland suggest that the simple categories based on external inspection tend to underestimate the true number of livers worms (the true number of worms being all worms counted in a liver, including the ones not visible on the surface) Presently, a model is being developed to predict the ‘true numbers’ from the visual inspections.

MS were invited to contribute to the ongoing cod liver sampling activities. If a MS decides to contribute, this will take place on an entirely voluntary basis. Data should be stored in a way that ensures access to individual fish and haul data for future cooperation in scientific analyses. Details about designated contributions are given in Table 1.

Contact persons are: Uwe Krumme, Thünen Institute of Baltic Sea Fisheries, uwe.krumme@thuenen.de and Jane Behrens, DTU-Aqua, jabeh@aqu.dtu.dk

Literature cited

*Maria Sokolova, Kurt Buchmann, Bastian Huwer, Per W. Kania, Uwe Krumme, Anders Galatius, Jakob Hemmer-Hansen, Jane W. Behrens. Spatial patterns in infection of cod *Gadus morhua* with the seal-associated liver worm *Contracaecum osculatum sensu stricto* from the Skagerrak to the central Baltic Sea. Marine Ecology Progress Series, in press.*

Annex 9. Stomach sampling programmes carried out by the Baltic countries (status: 2018)

MS	Estonia	Latvia	Lithuania	Poland	Germany	Denmark	Sweden	Finland
	GRAHS, BIAS, BITS	BITS surveys		BITS	BITS, commercial samples, national surveys	BITS	BITS	BIAS
Aim of the pilot Study	Sampling of sprat and herring stomachs has been performed during the surveys to continue the respective data series from 1980-1990-s				stomach samples of cod and flatfish; use in feeding ecology, food-web and multi-species analyses	Stomach samples to be used in multi-species analysis	Stomach samples to be used in food-web analysis and multispecies analyses	
Duration of the pilot study/year concluded?	Collection of stomachs of pelagic species started in the 1980s. EST is collecting stomach samples of herring and sprat during the GRAHS since 1999, during BIAS since 2014. During BITS (q4) sampling of cod stomachs takes place	Cod stomach samples are collected during BITS Q1 and BITS Q4 surveys.	No stomach sampling performed	2006-2007; since 2012 annually	since 2015; BITS q1, q4; commercial samples; national surveys (2018/19)	Denmark started to conduct stomach samples as a routine sampling in the Baltic Sea BITS survey in 2012. The sample has been conducted on all aged cod (1 fish/ cm/ haul)	Sampling started in 2012 has been ongoing since then with the exception of Q4 2014 and Q1 2015.	2014-2016
Outcomes or expected outcomes	Collected information has been used in food web analyses and is partly published in scientific papers.	Latvia is collecting cod stomach samples during cod demersal surveys from the 1960's. Now sampling is conducted during international BITS Q1 and Q4		Cod stomach samples collected during BITS Q1 and Q4 surveys, 2006-2007, and each year from 2012 except BITS Q4 in	more detailed understanding of feeding ecology of cod and flatfish (e.g. flounder and plaice)	Data has been used in the multispecies analysis and to analysis predator - prey relationships in the Baltic to be used in the benchmark for increased natural mortality. The samples has further been used in scientific publications	Knowledge of species interactions will increase. Important for advice underlying fisheries management and science	Finland reported that altogether 9 stomach samples of salmon were taken from control hauls in SD30 in 2014-2016

		surveys.		2014)				
Significant Issues encountered/conclusions drawn					analysis ongoing, conclusions pending	Presently the most costly part of the process is to analyse the data and not the sampling. Therefore the sampling has been continued but the data analysis is only conducted if projects can pay for the labor	The costly part is the analysis of samples and not the sampling itself. Future continuation of the sampling might be dependent on funds to do the analysis.	
Incorporation into NWP - progress or plans					extra-effort to sample stomachs is relatively small, however, stomach content analysis only within the scope of projects; sampling intensity to be decided after data analysis	As the time used in connection with the sampling is considered minor, this is conducted within the present sampling.		

Annex 10. Overview of commercial fisheries data

The commercial fisheries in the Baltic Sea target only a few stocks. The pelagic fisheries, which account for the largest catches (by weight) in the region, are the mid-water trawl fisheries for sprat and for herring. The most important demersal fisheries are the bottom-trawl fisheries for cod and flatfish. The demersal fisheries are concentrated in the south and west of the Baltic Sea, while the pelagic fisheries are more widespread. Basin-wide, commercial fishing effort has declined in recent years. Fishing vessels from nine nations operate in the Baltic Sea, with the highest number of large vessels (>12 m) coming from Sweden, Denmark, and Poland. The principal species targeted in the commercial fisheries are cod, herring, and sprat, which together constitute about 95% of the total catch. The fisheries for cod in the Baltic use mainly demersal trawls and gillnets, while herring and sprat are mainly caught by pelagic trawls.

The data are taken from the RDB FishFrame and transferred into the COST-format (<http://wwz.ifremer.fr/cost>). The R scripts are documented on the RCG Baltic sharepoint and should also be available at the sharepoint of the Liaison meeting.

Please note that the graphs reflect the data status presently available in the RDB during the RCG. All MS are kindly requested to critically review the graphs and check whether the data make sense and in case errors are recorded on a national level, the errors should be corrected

-general overview:

- Landings 2009-2017 by Flag country (all species)
- Landings 2009-2017 by flag country and vessel length class (all species)
- Landings 2017 per rectangle (all species)*
- Effort data 2017 by country, vessel length and métiers

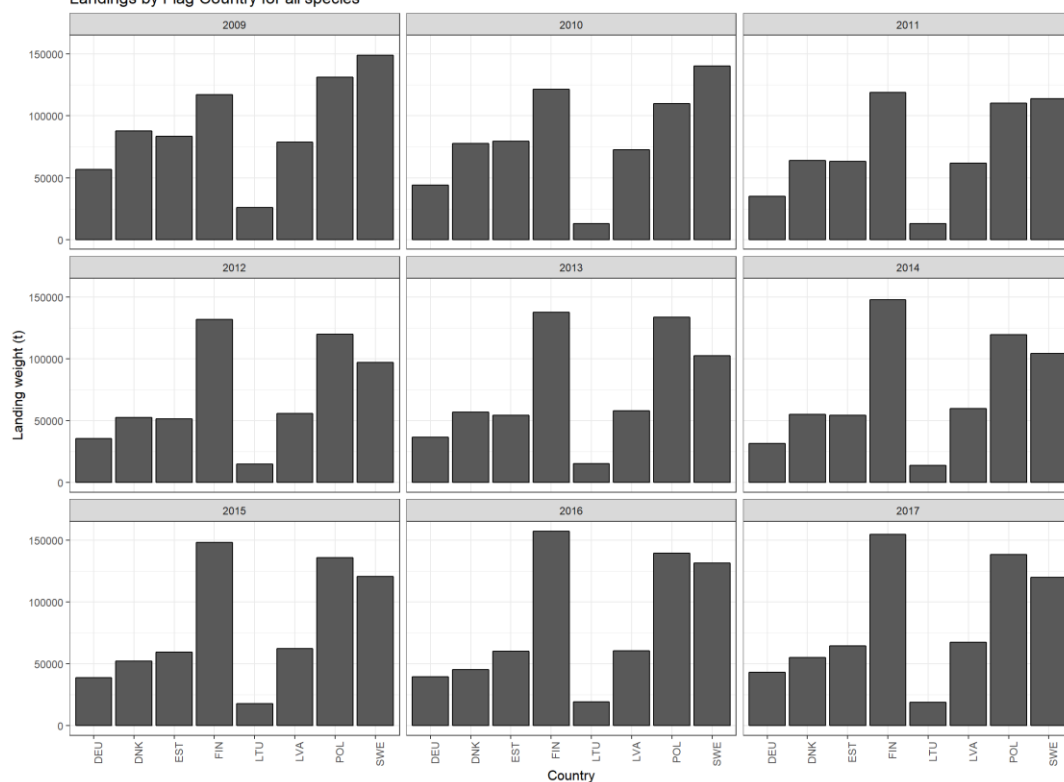
- fisheries overviews for selected stocks:

- Cod fisheries (demersal)
- Herring and sprat fisheries (pelagic)
- Salmon in the Baltic

**Not all MS submitted commercial fisheries data on a rectangle-resolution. Those data were excluded from the overview graphs that display data on a rectangle basis.*

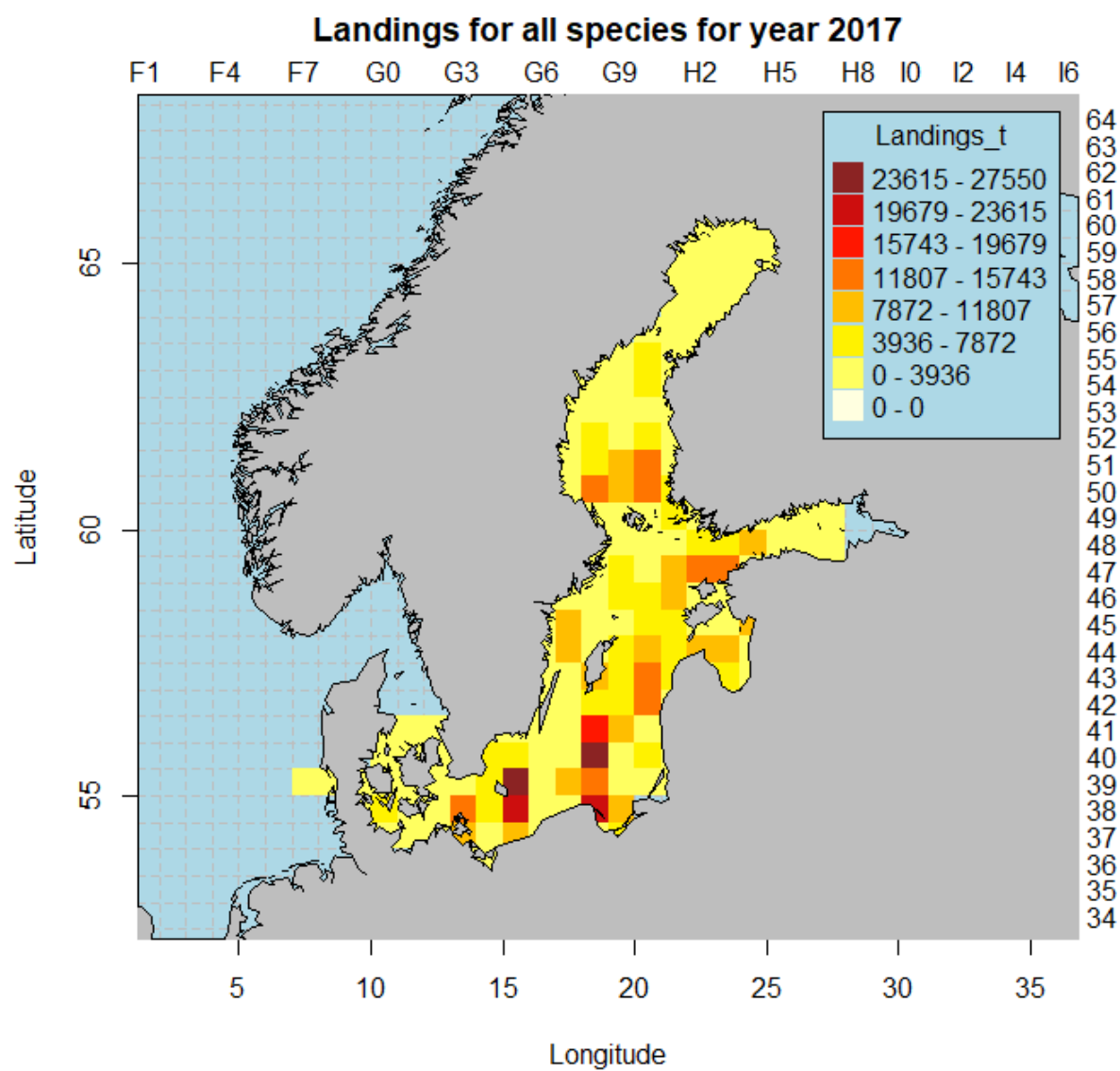
➔ General overviews

Landings by Flag Country for all species

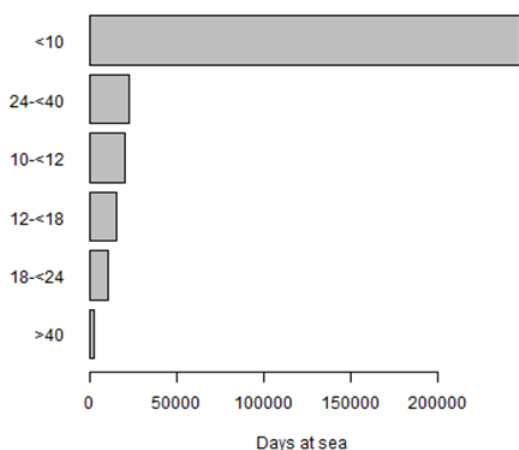


Landings by Flag Country and Vessel Length Category for all species

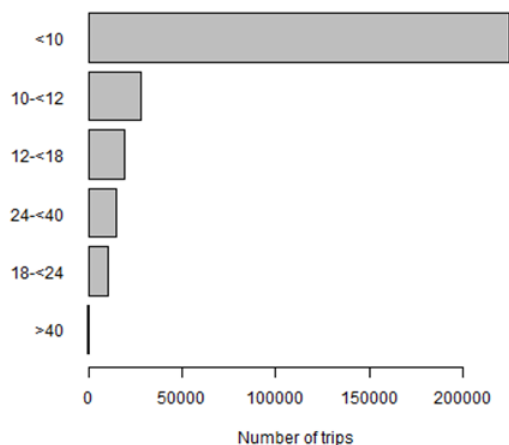




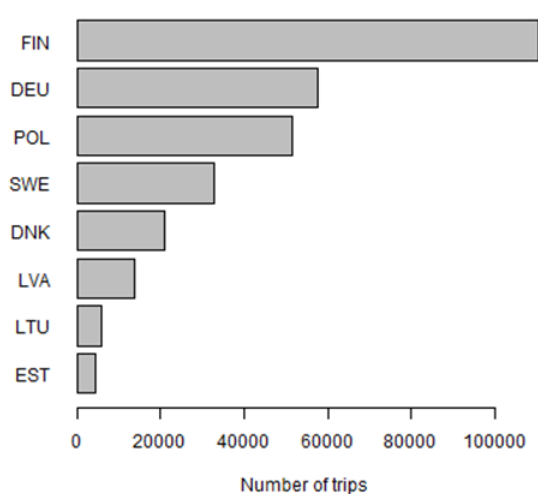
**Effort data: Days at sea
by vessel length category in 2017**



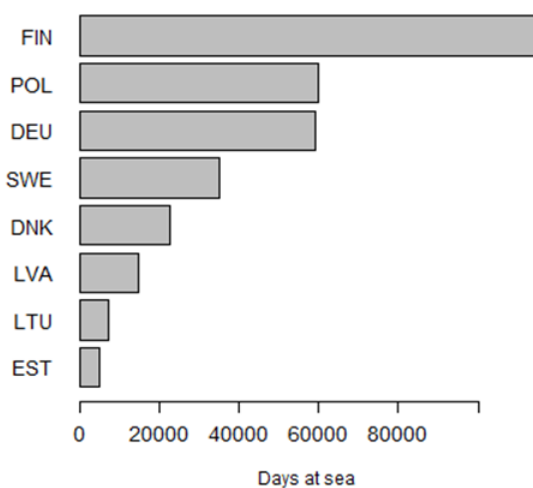
**Effort data: Number of trips
by vessel length category in 2017**



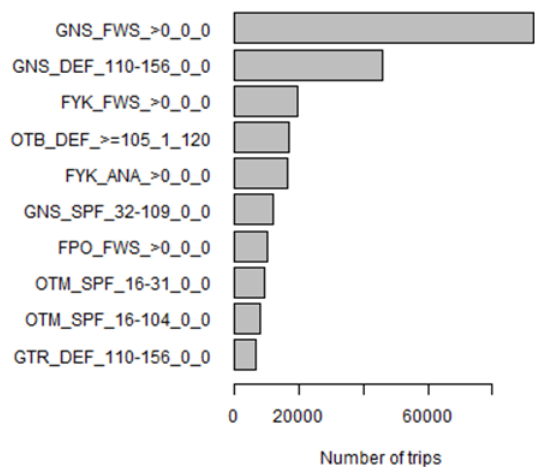
**Effort data: Number of trips
by vessel flag country in 2017**



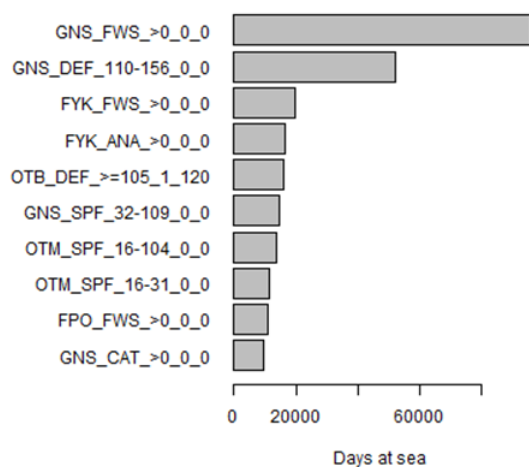
**Effort data: Days at sea
by vessel flag country in 2017**

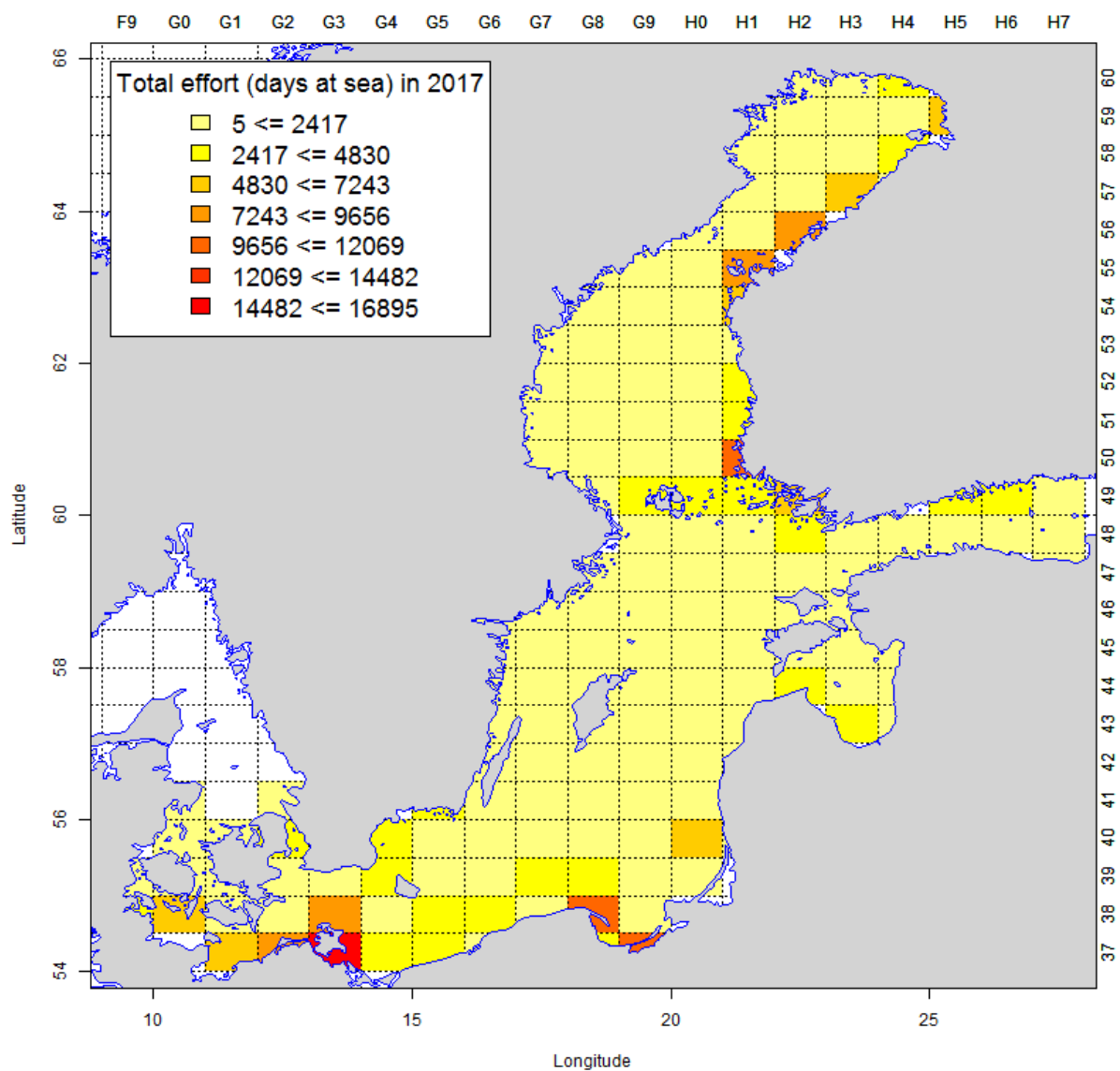


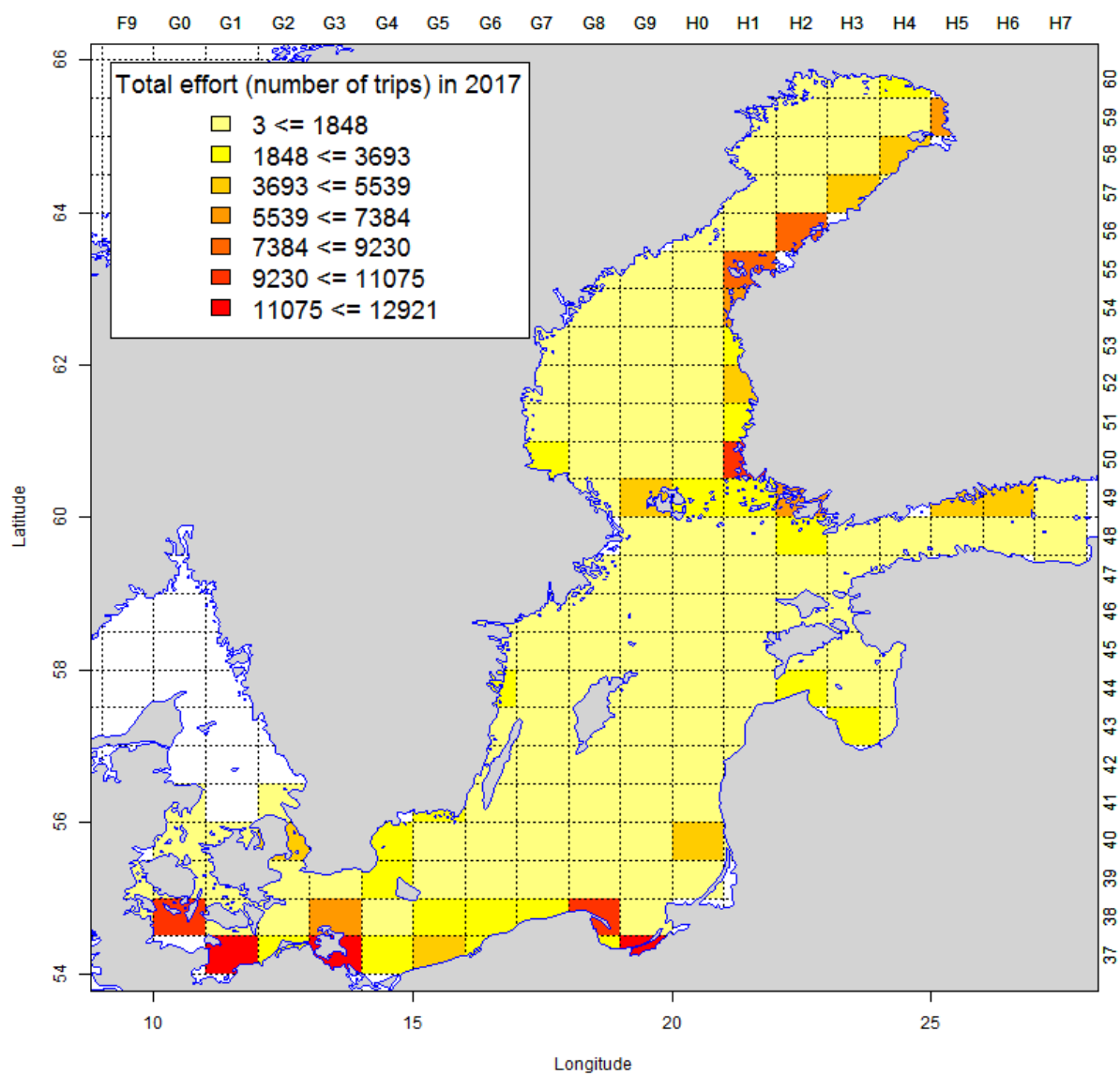
**Effort data: Number of trips
by top 10 metiers in 2017**



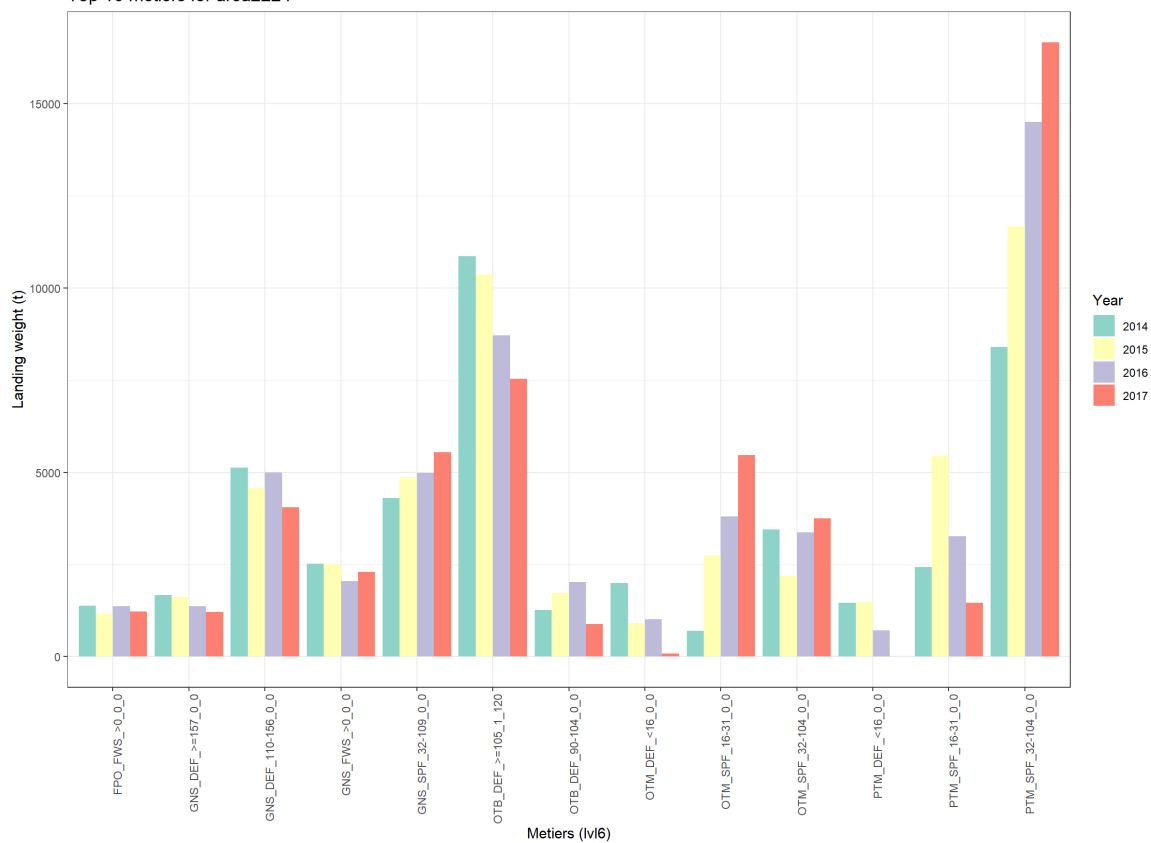
**Effort data: Days at sea
by top 10 metiers in 2017**



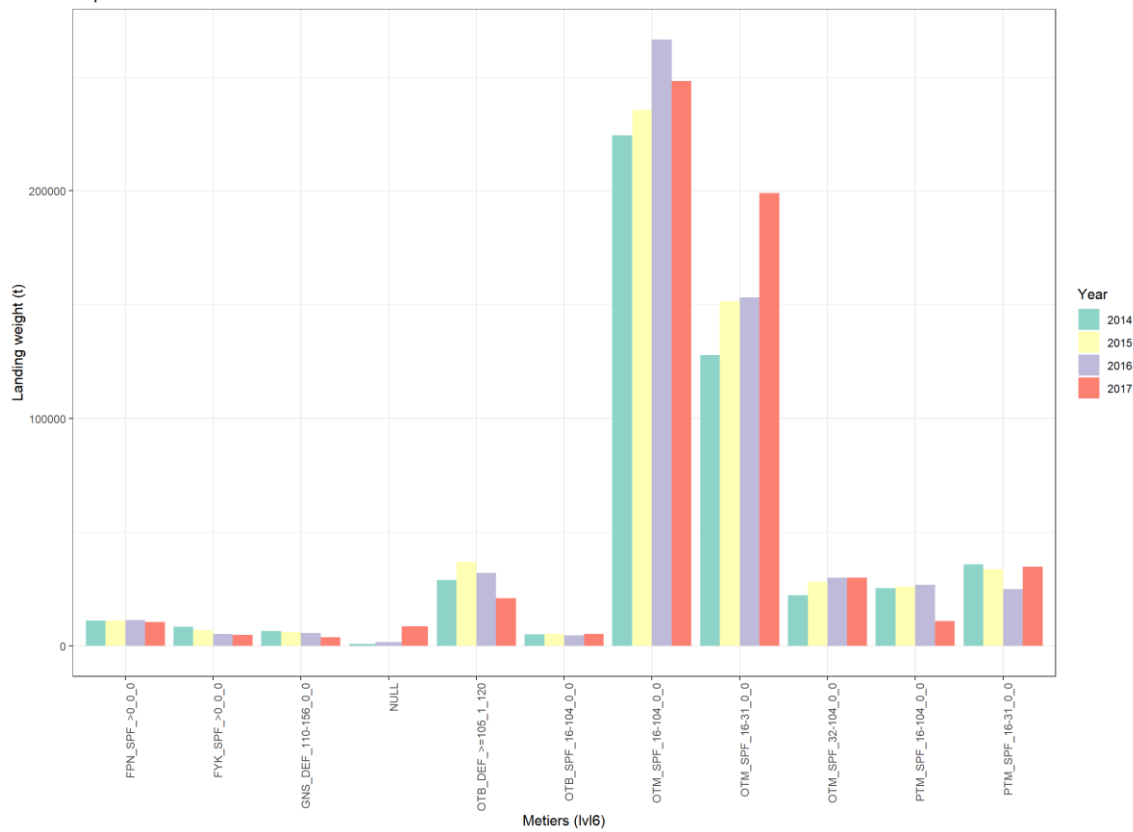




Top 10 metiers for area2224

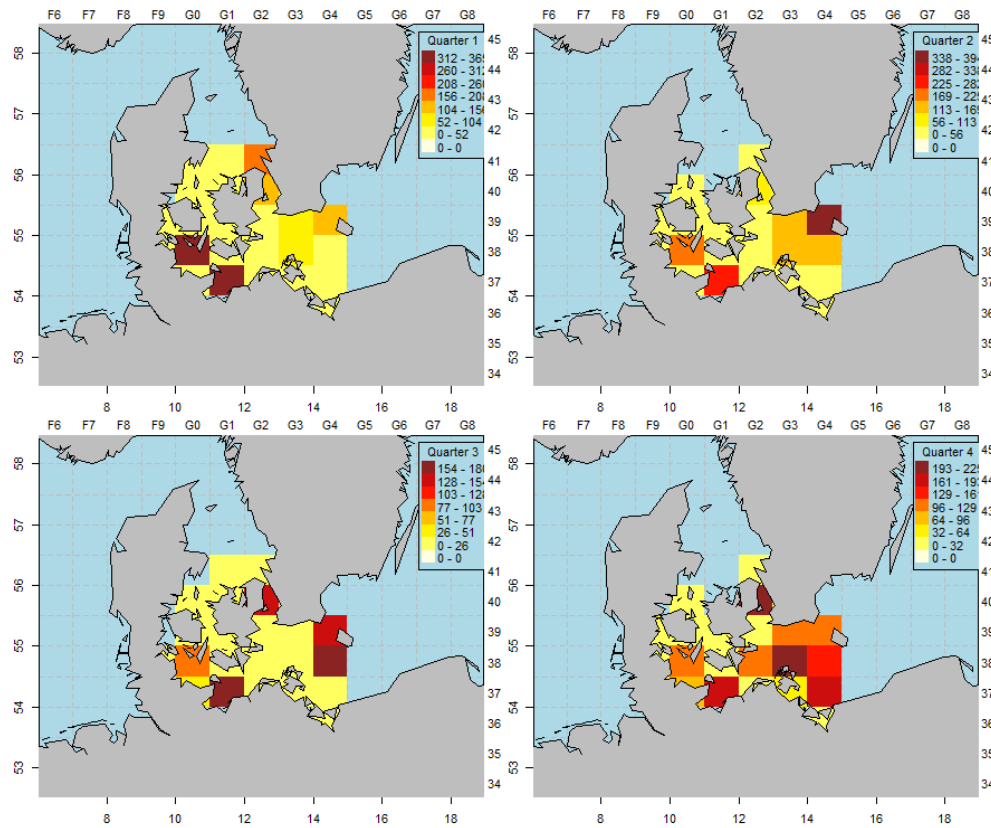


Top 10 metiers for area2532

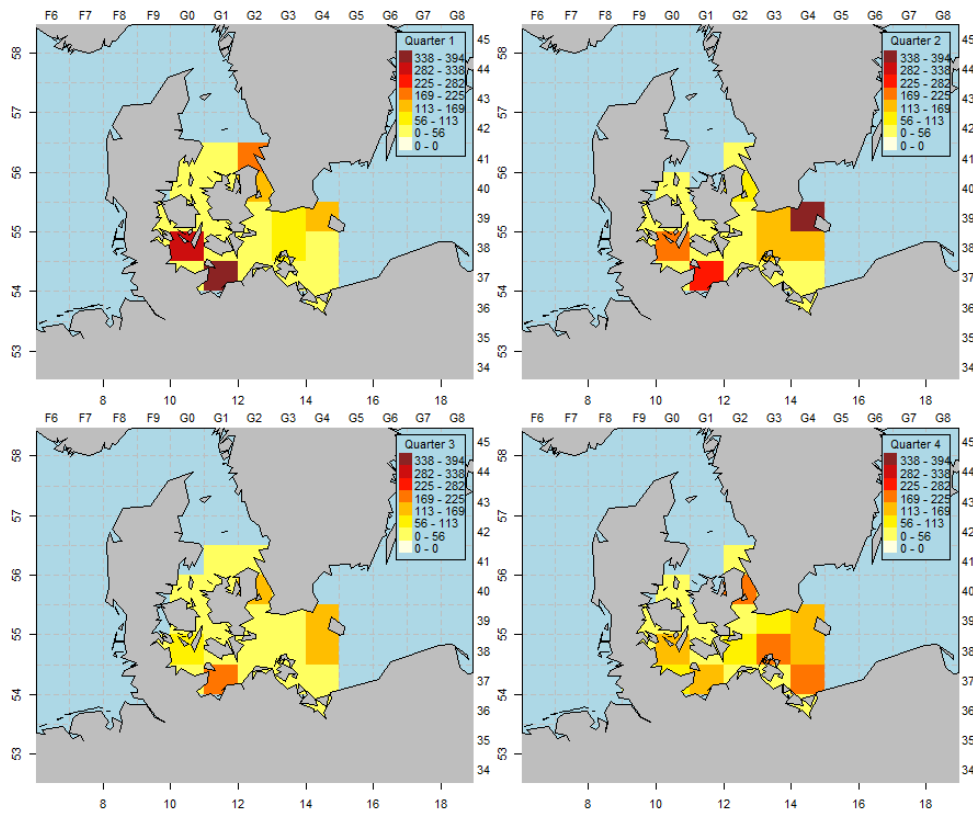


➔ Cod fisheries (demersal)

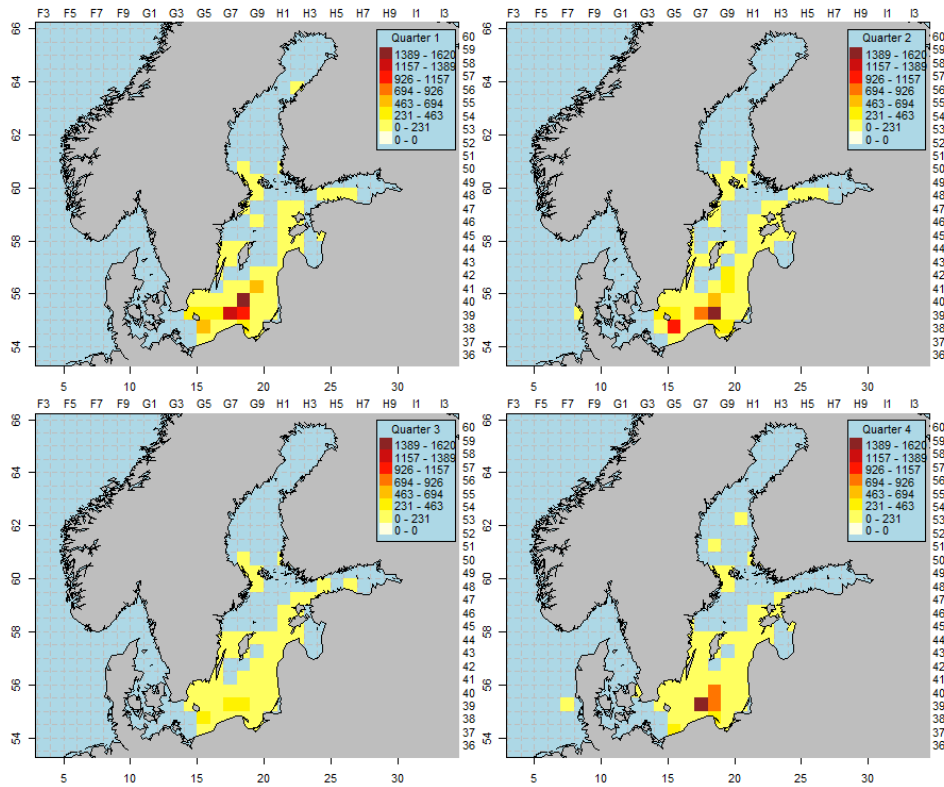
Landings (t) for cod2224 for year 2017



Landings (t) for cod2224 for year 2017

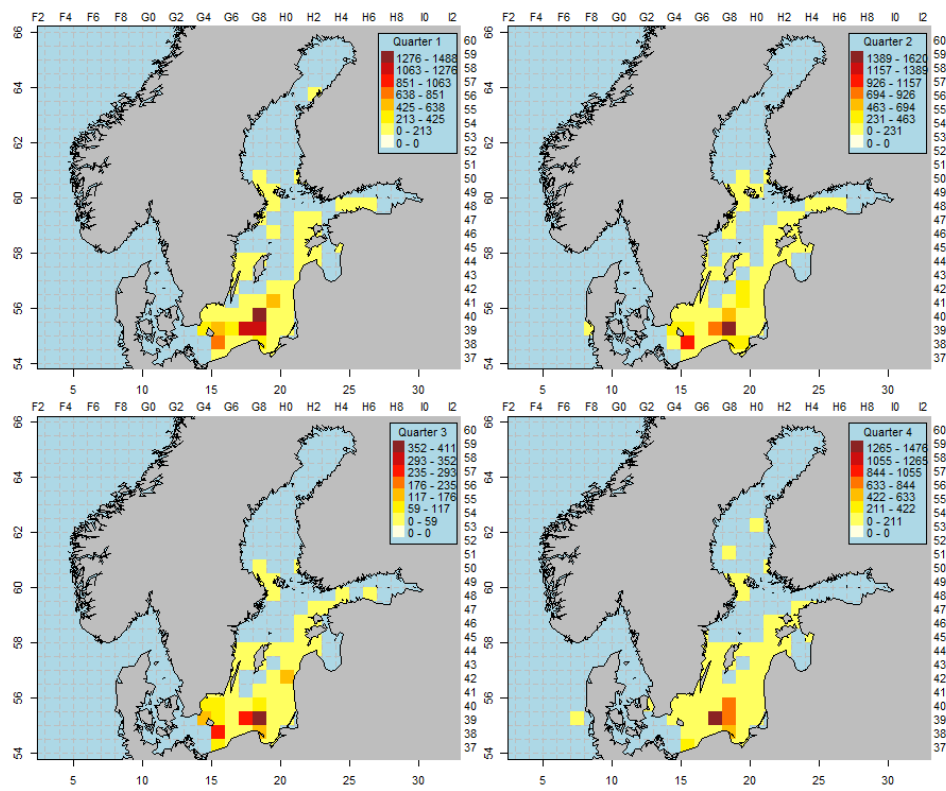


Landings (t) for cod2532 for year 2017

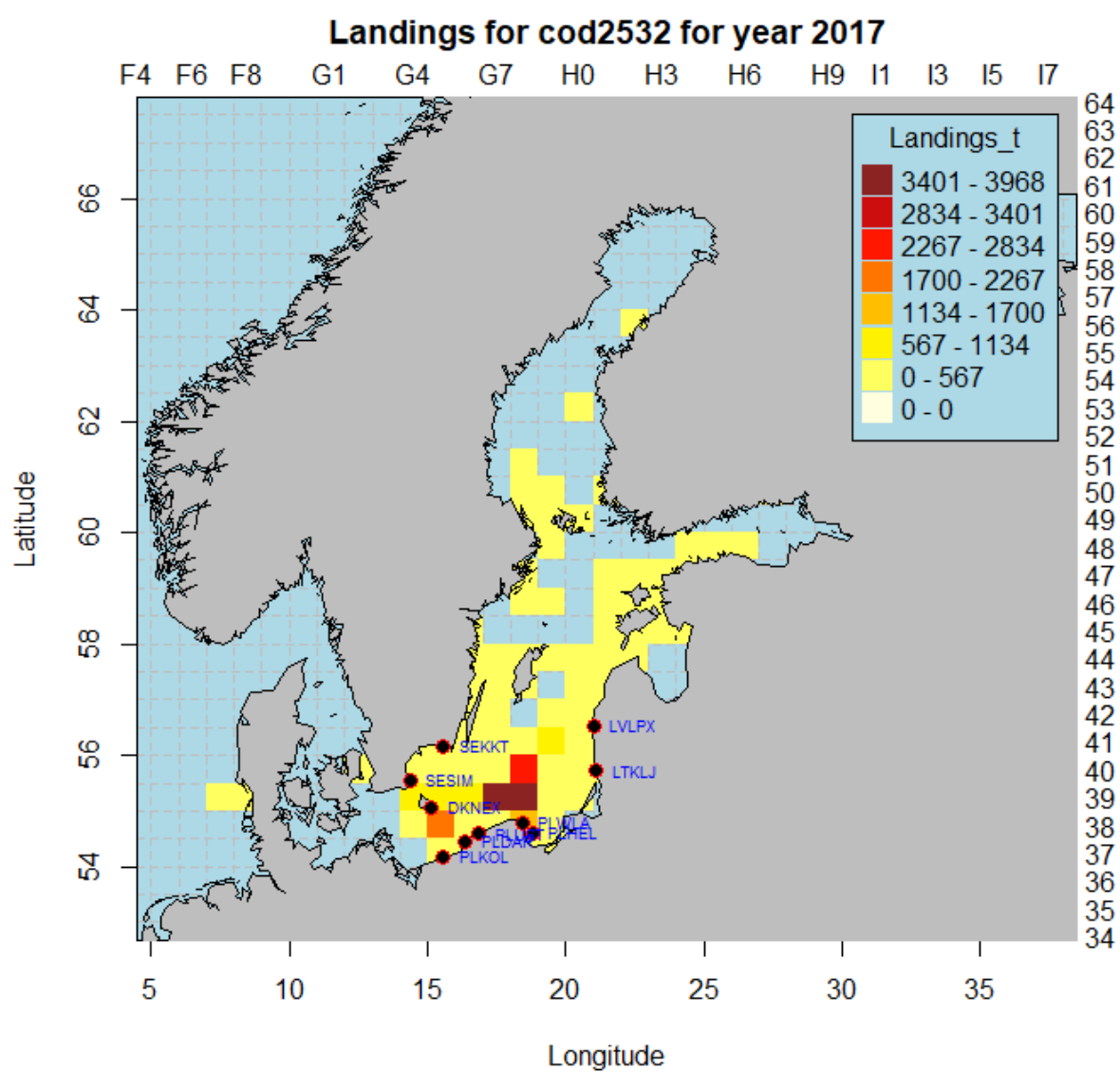


Scale adjusted over the whole year

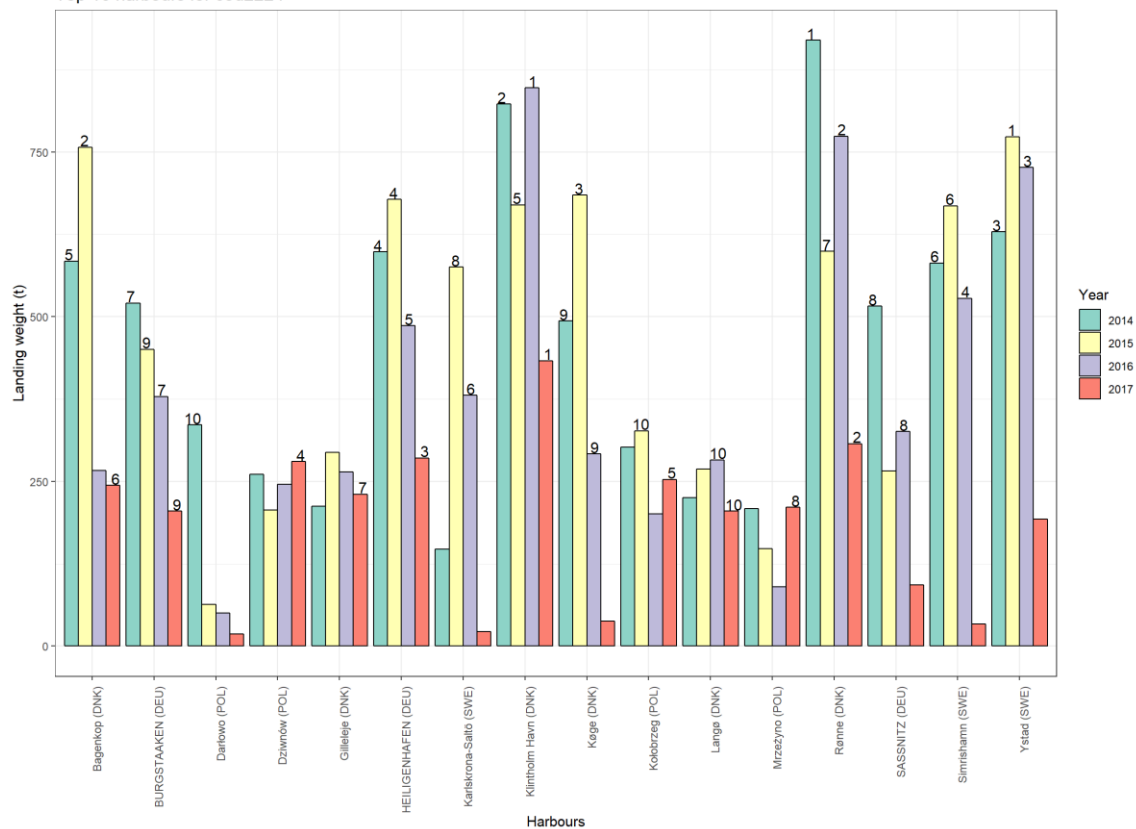
Landings (t) for cod2532 for year 2017



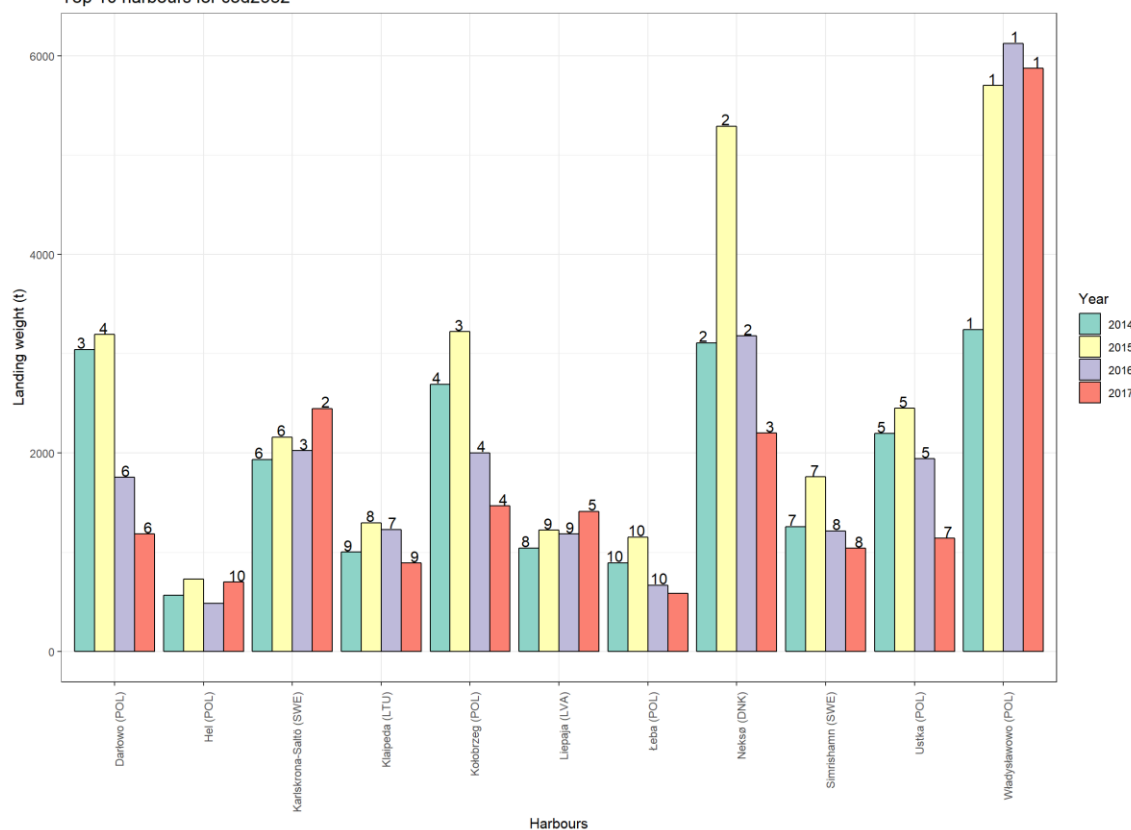
Scale adjusted to the respective quarter



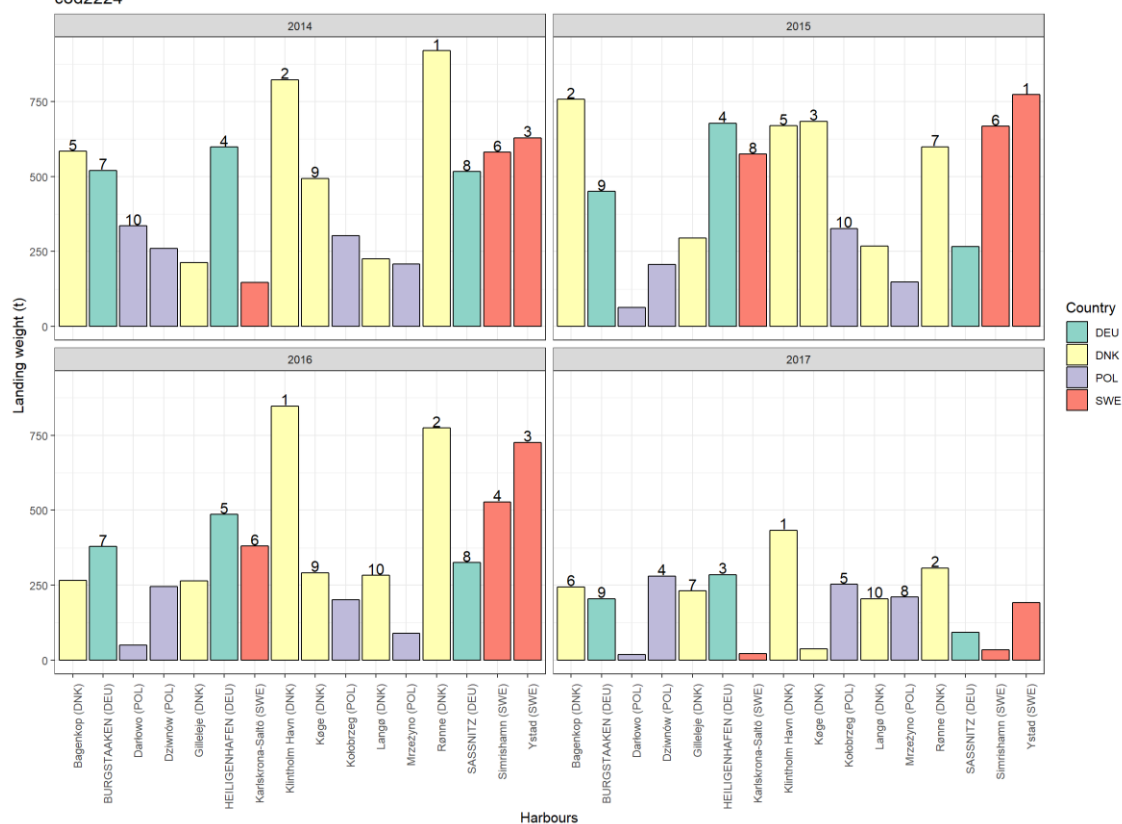
Top 10 harbours for cod2224

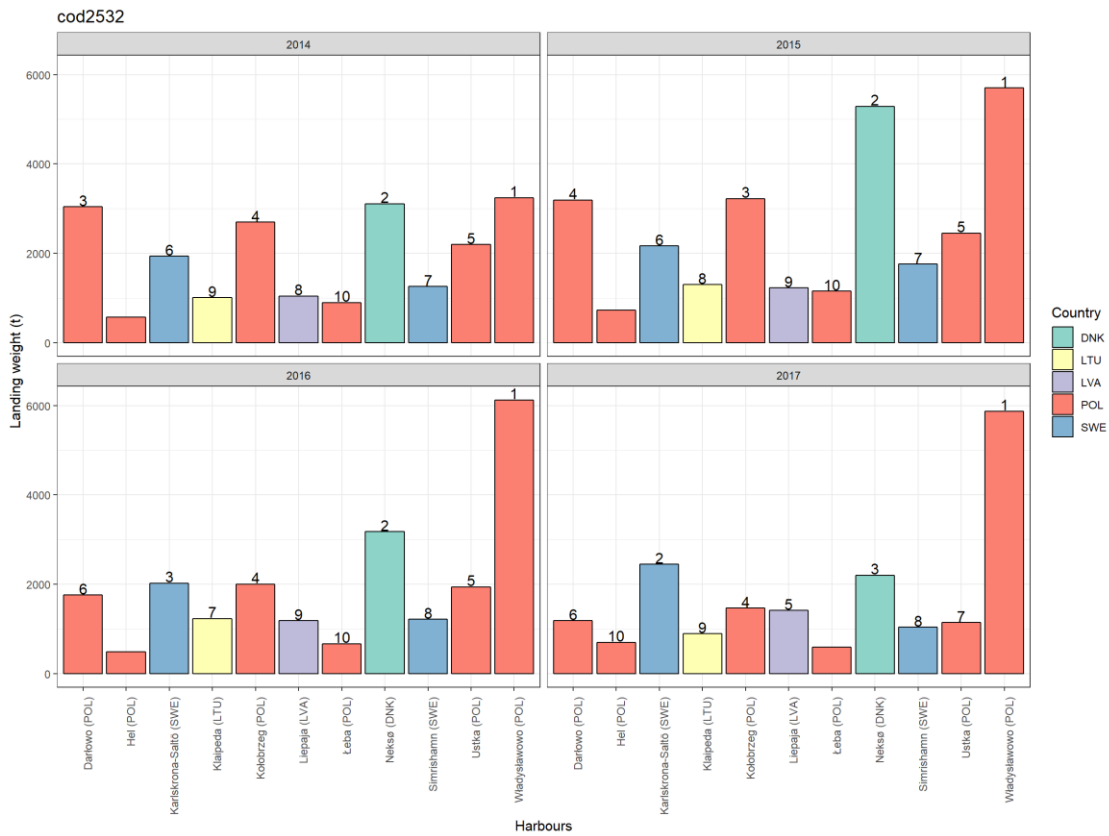


Top 10 harbours for cod2532



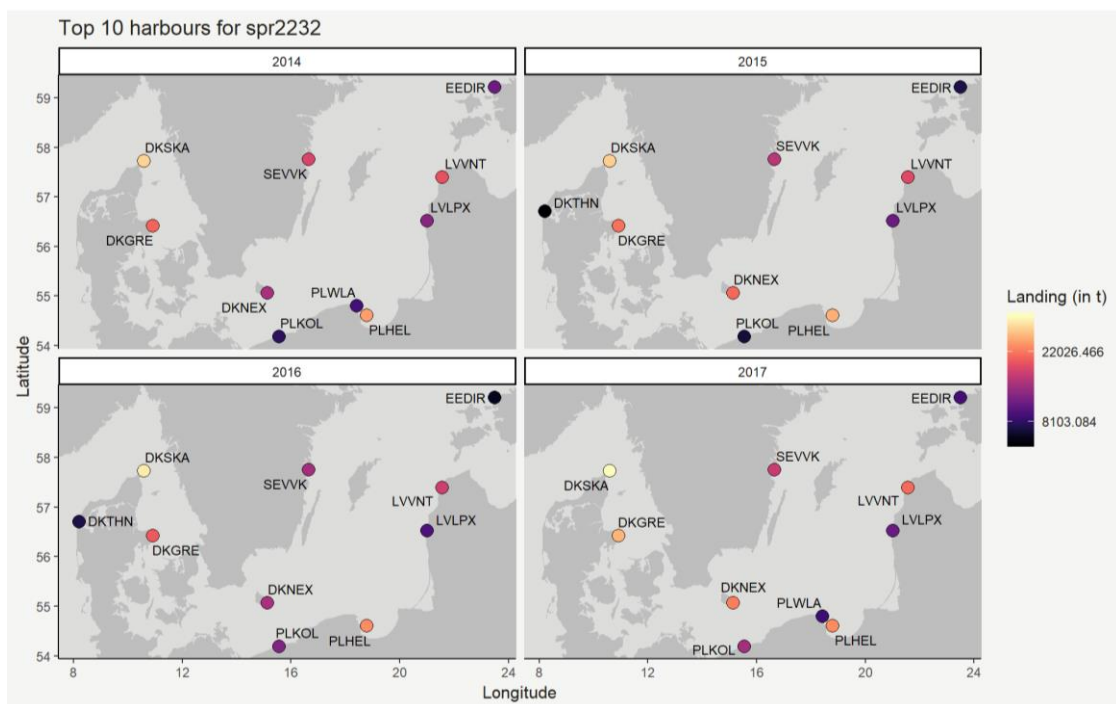
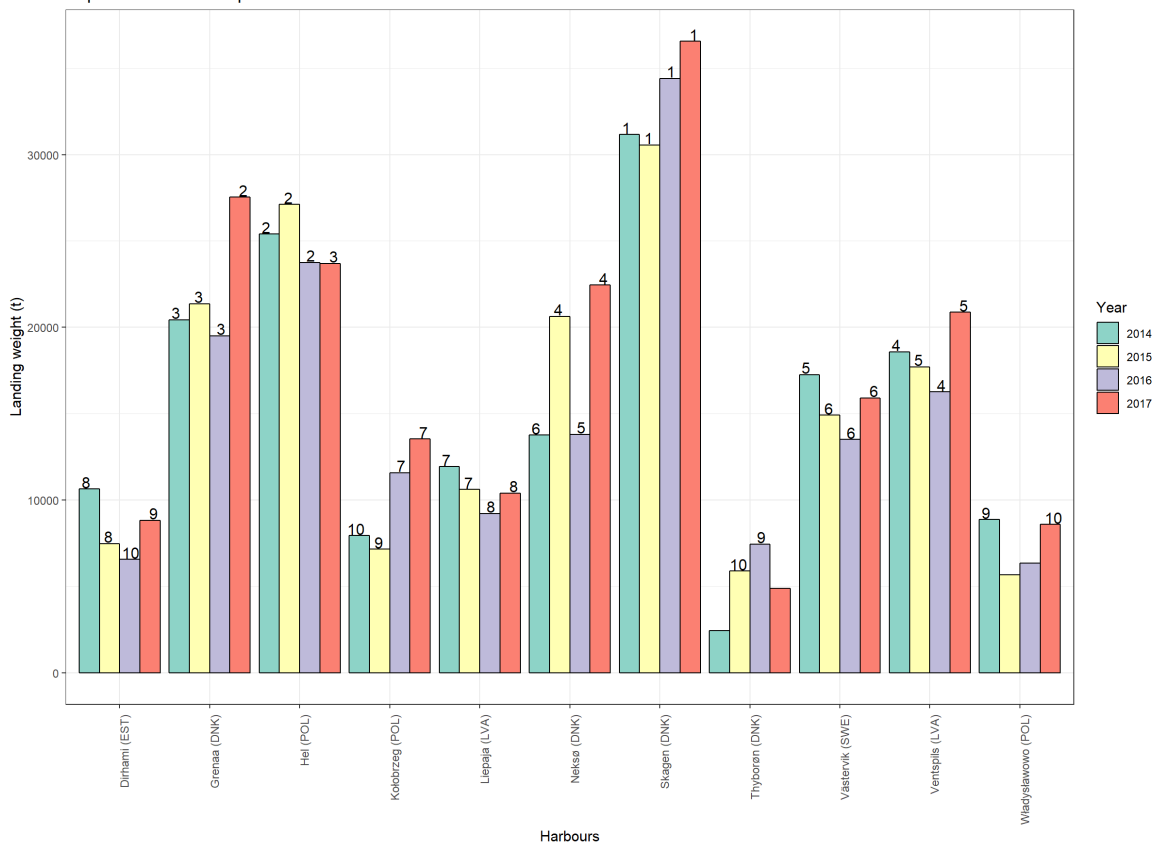
cod2224



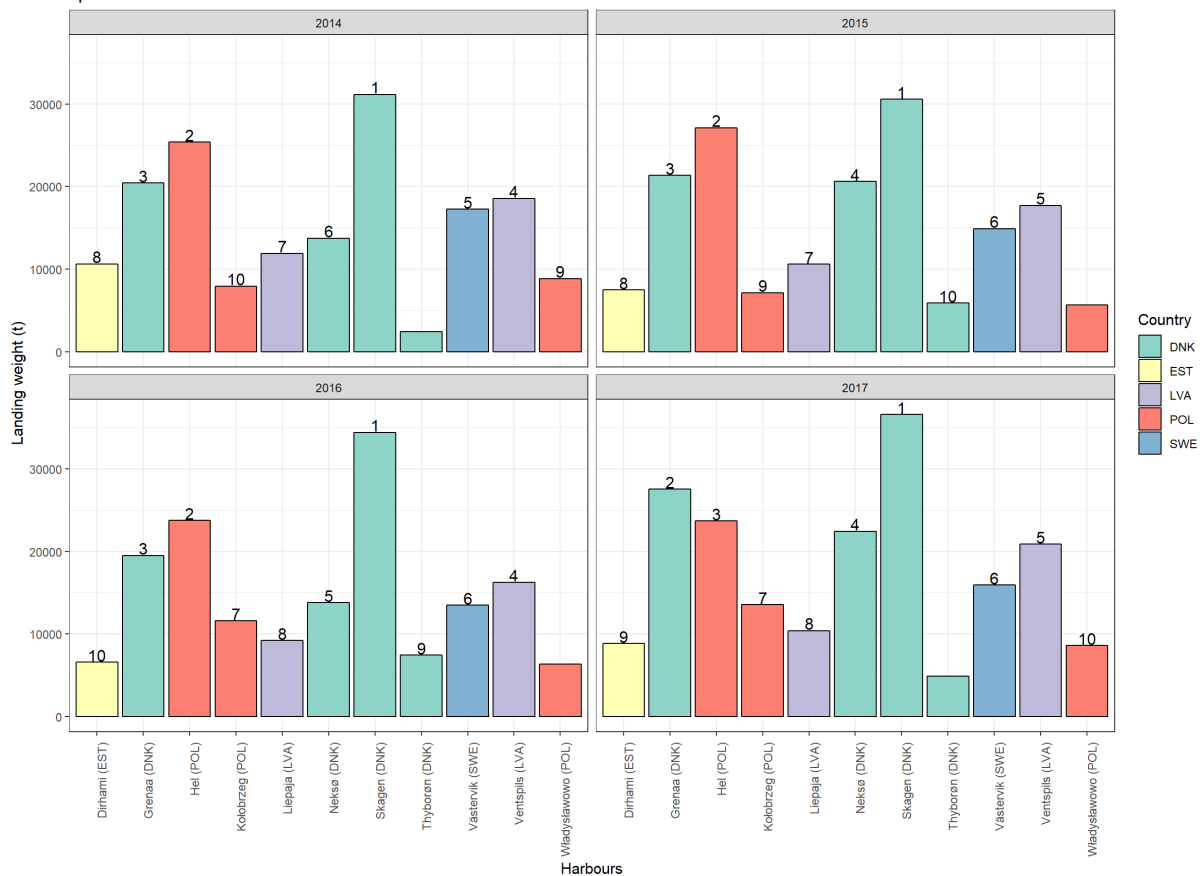


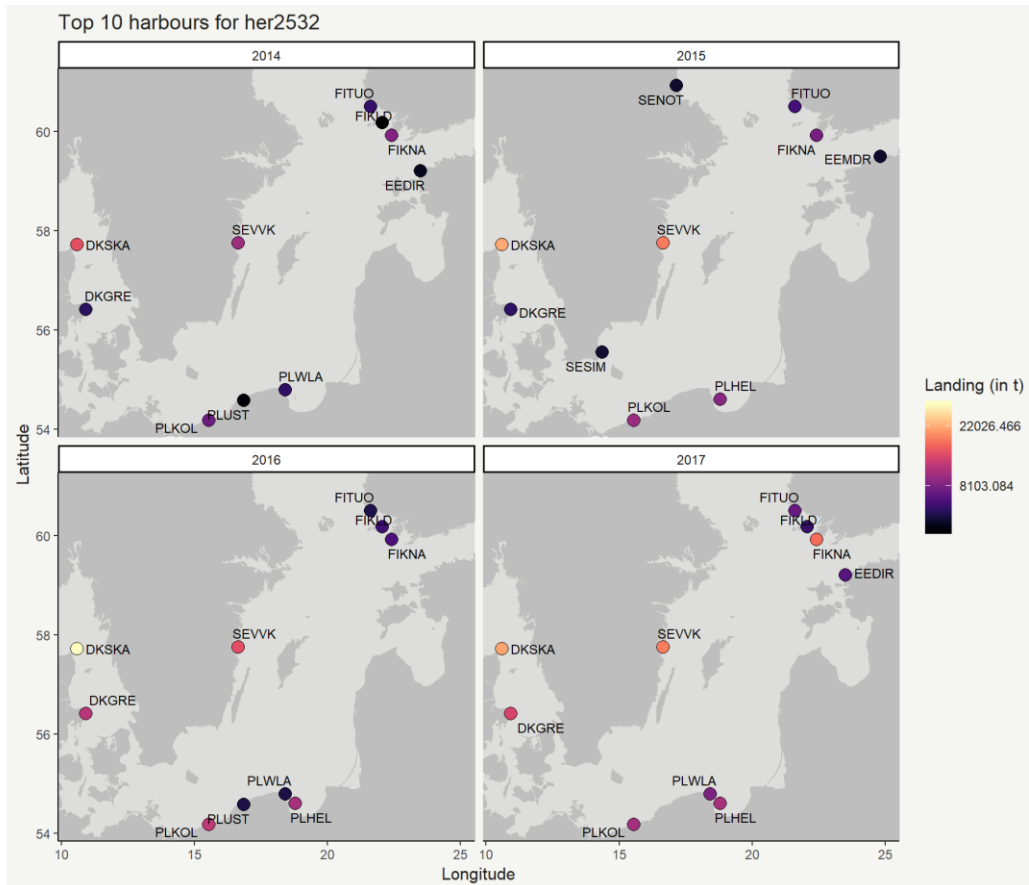
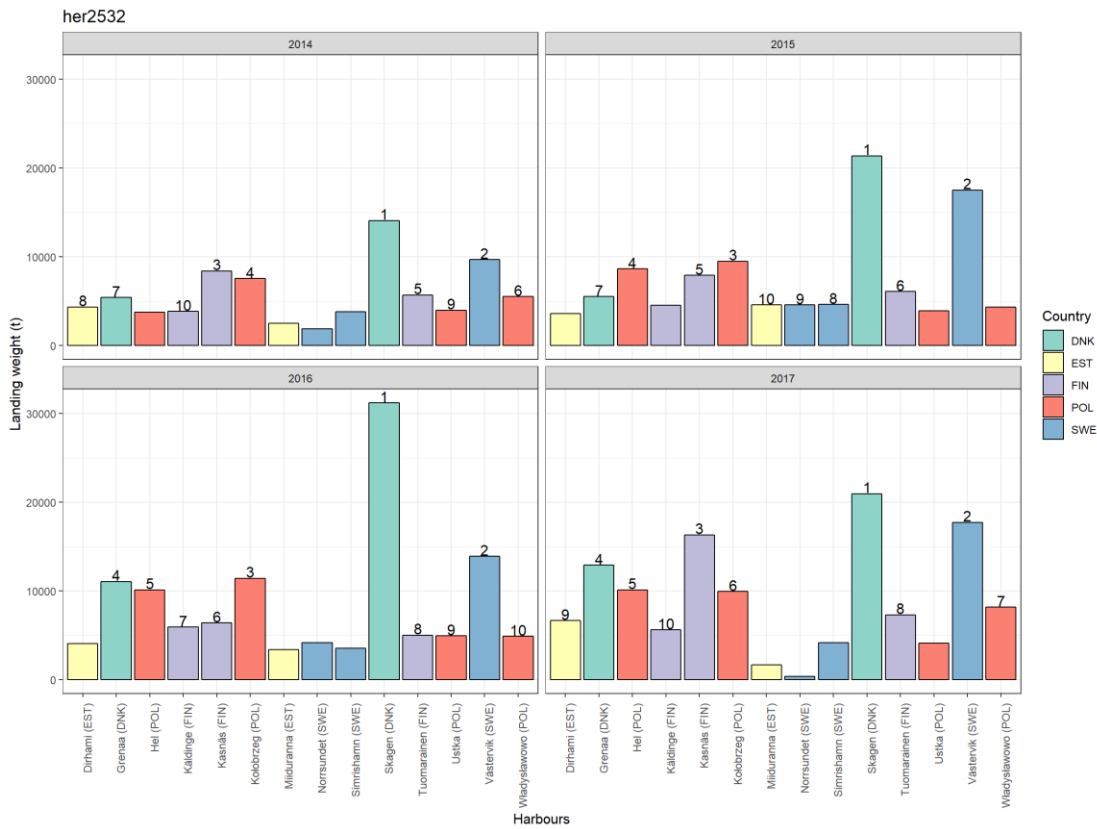
➔ Herring and sprat fisheries (pelagic)

Top 10 harbours for spr2232

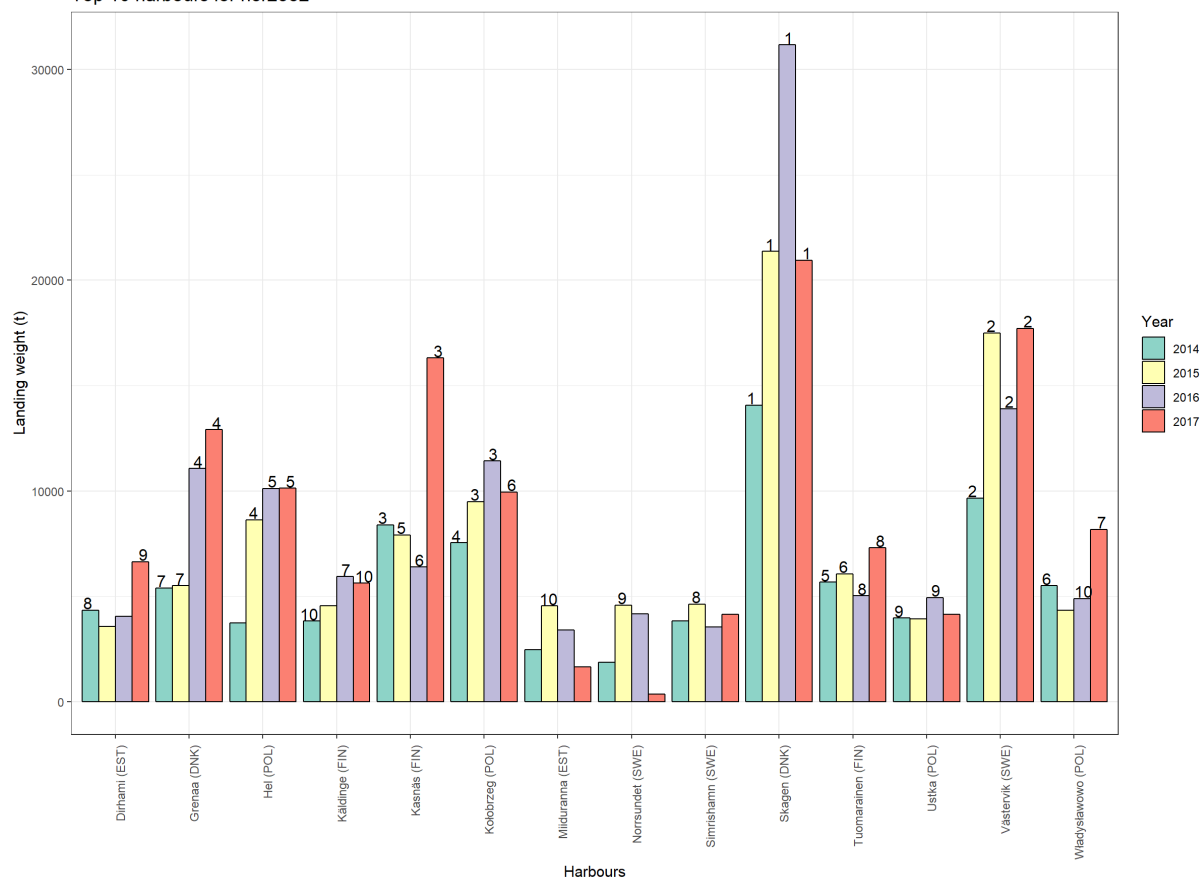


spr2232

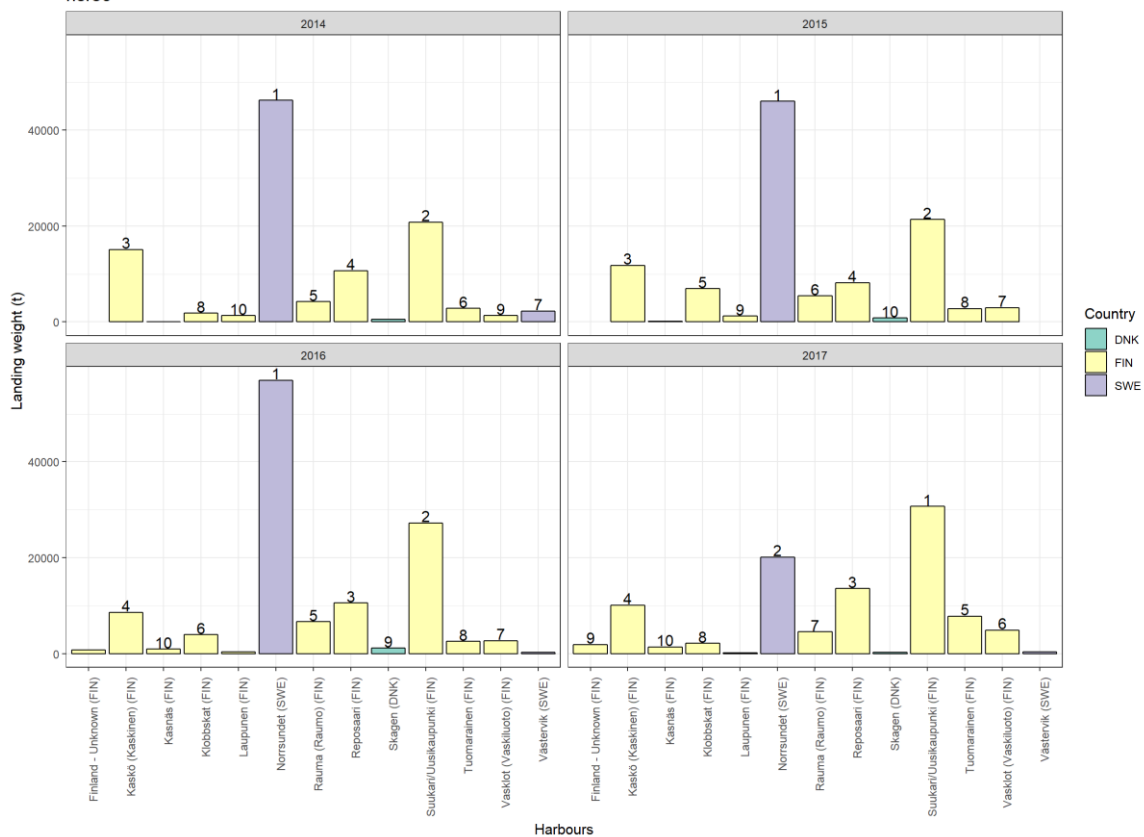


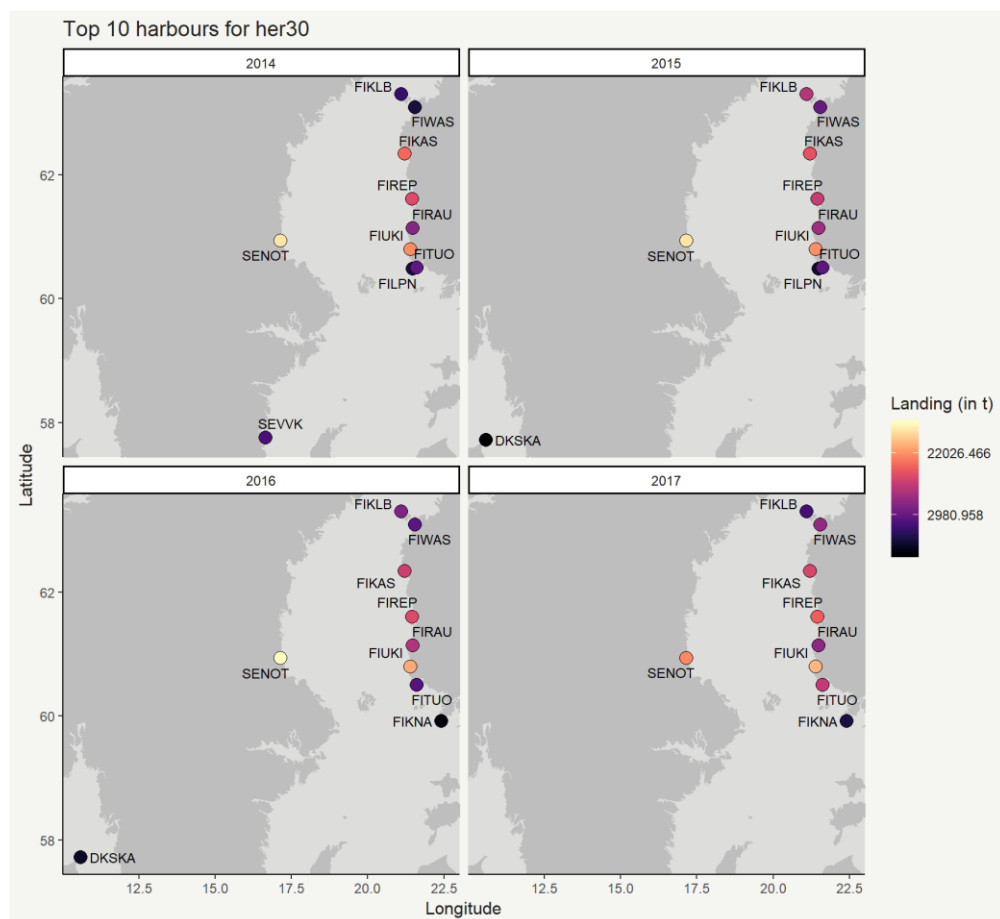


Top 10 harbours for her2532

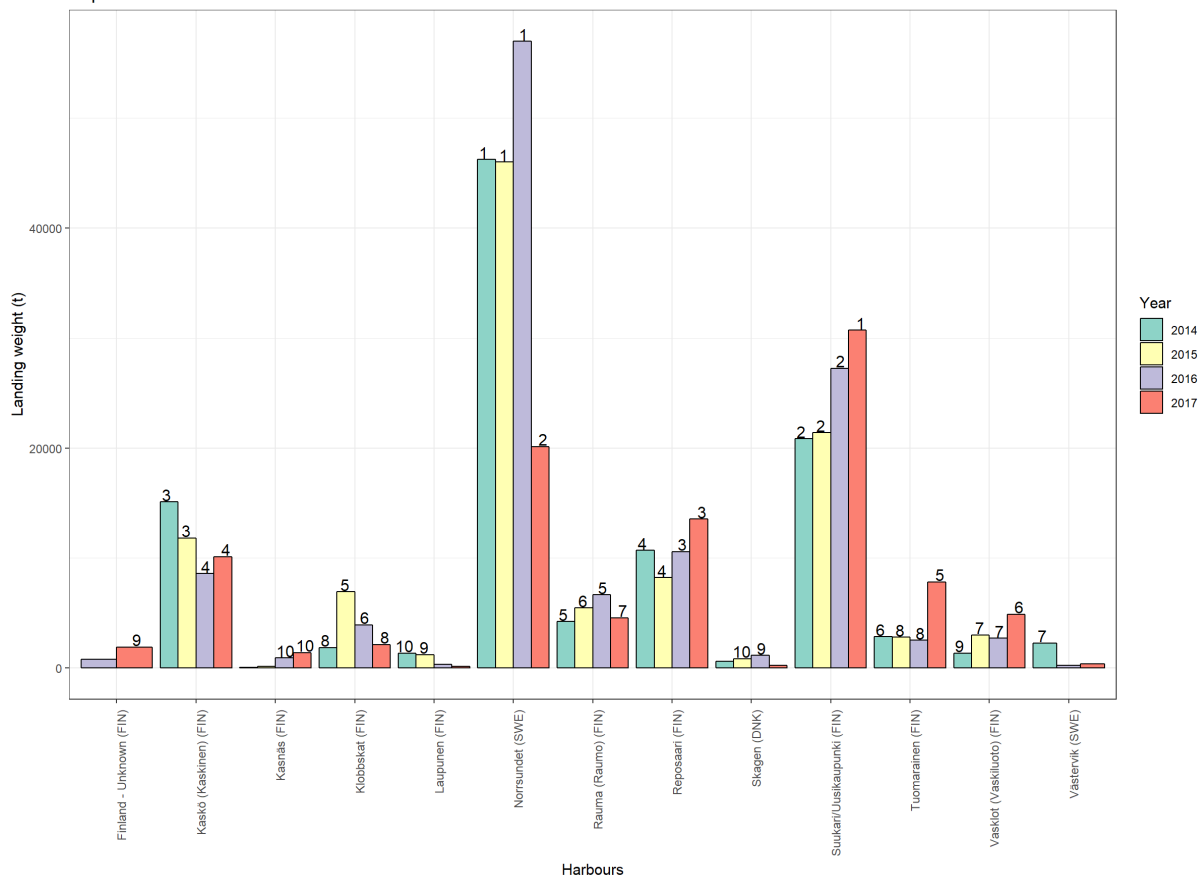


her30

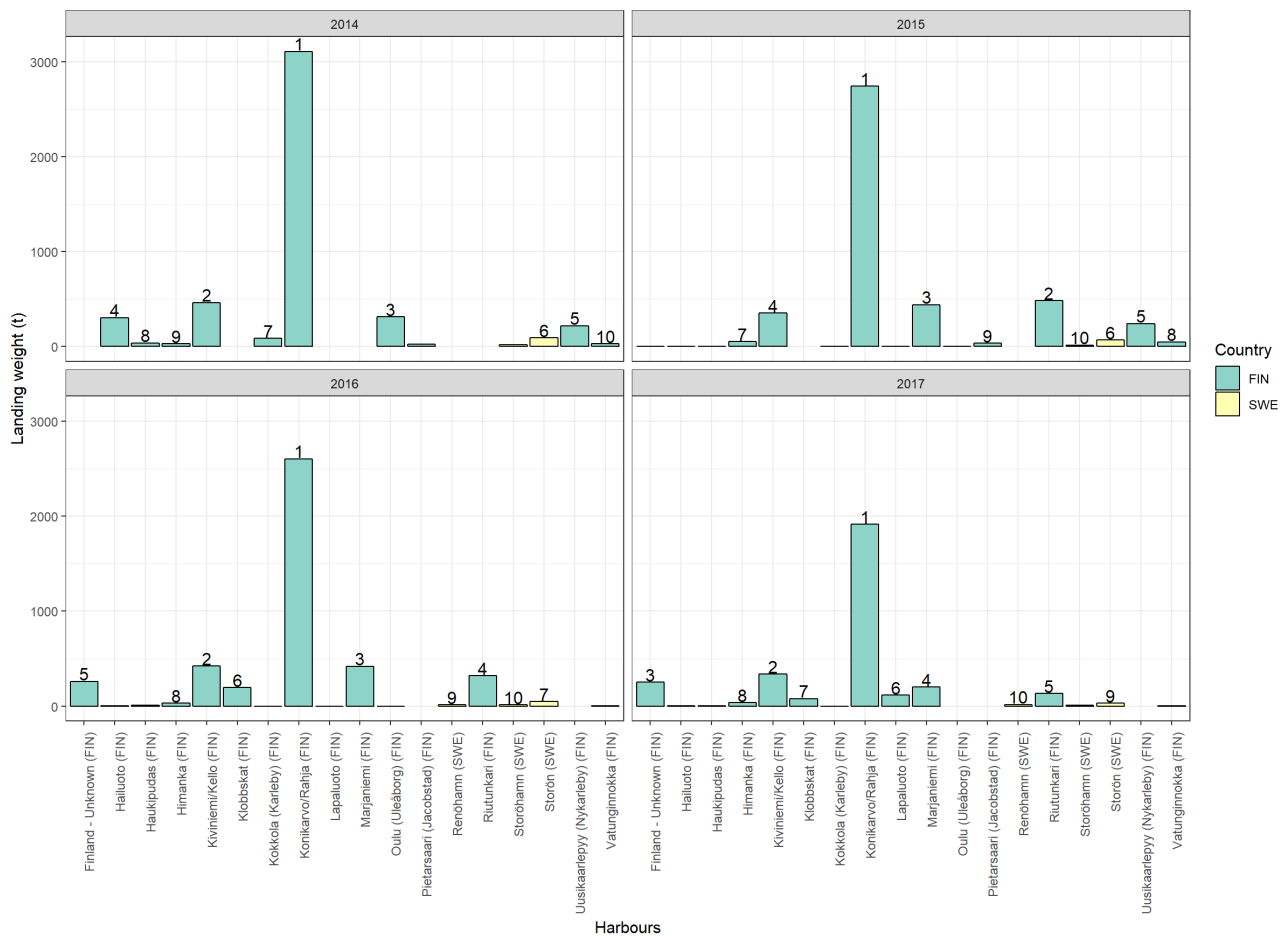




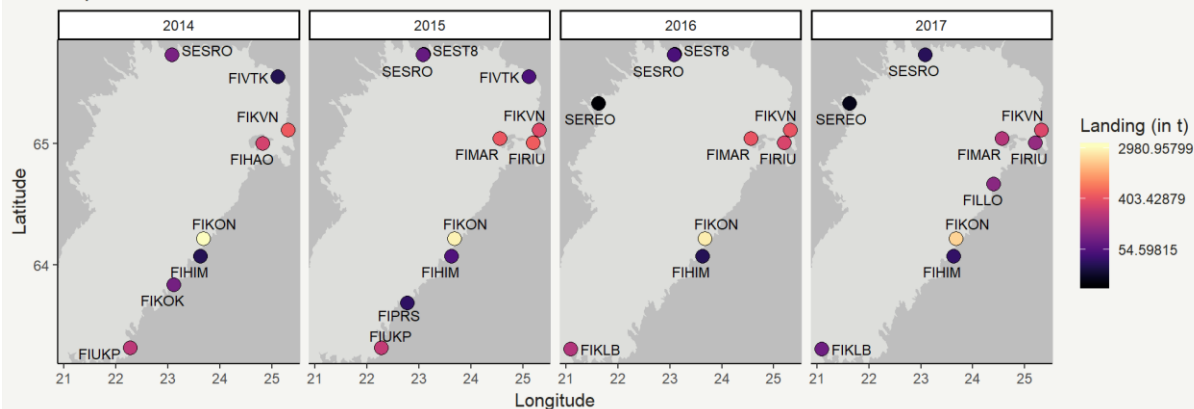
Top 10 harbours for her30



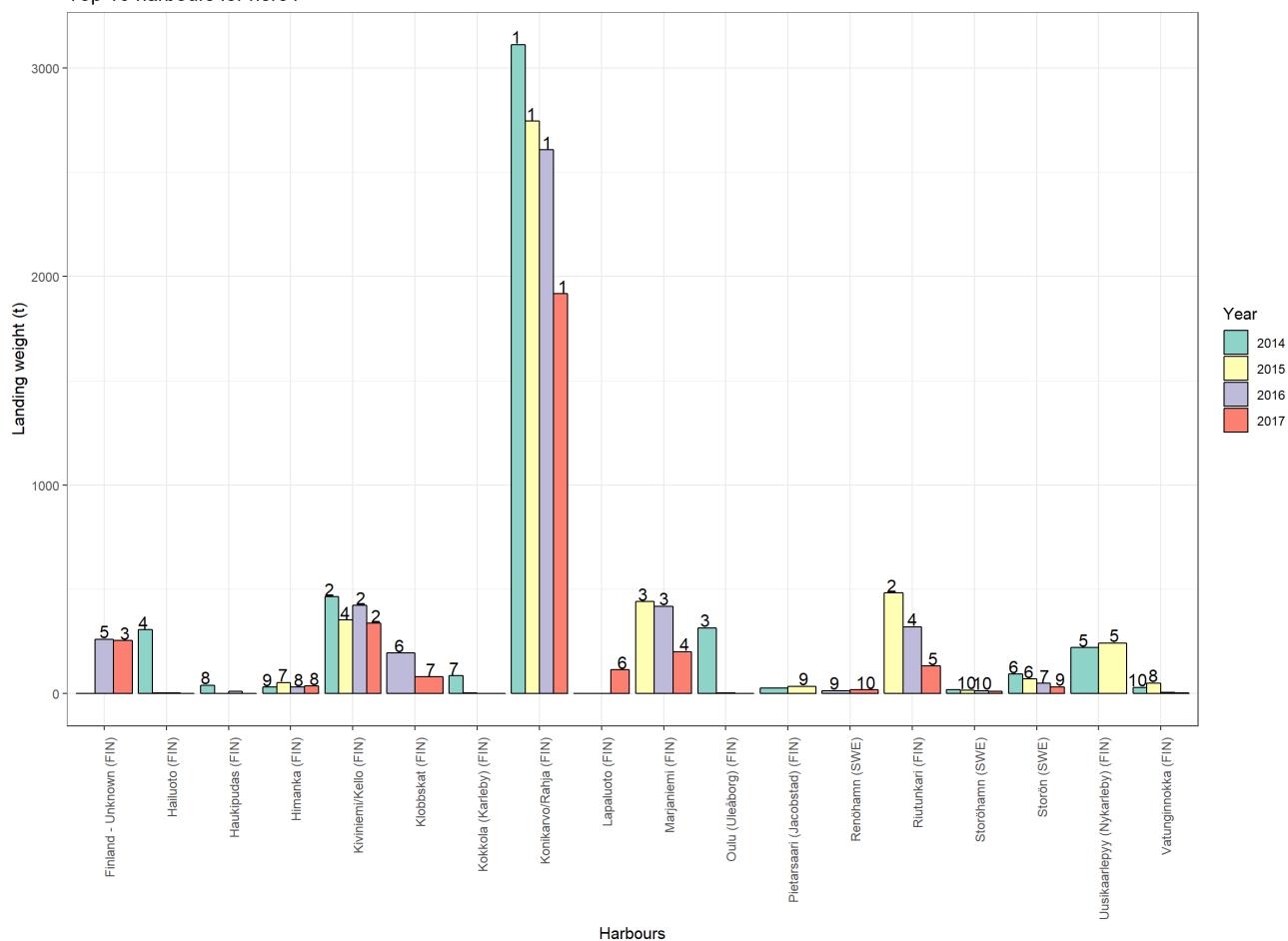
her31



Top 10 harbours for her31

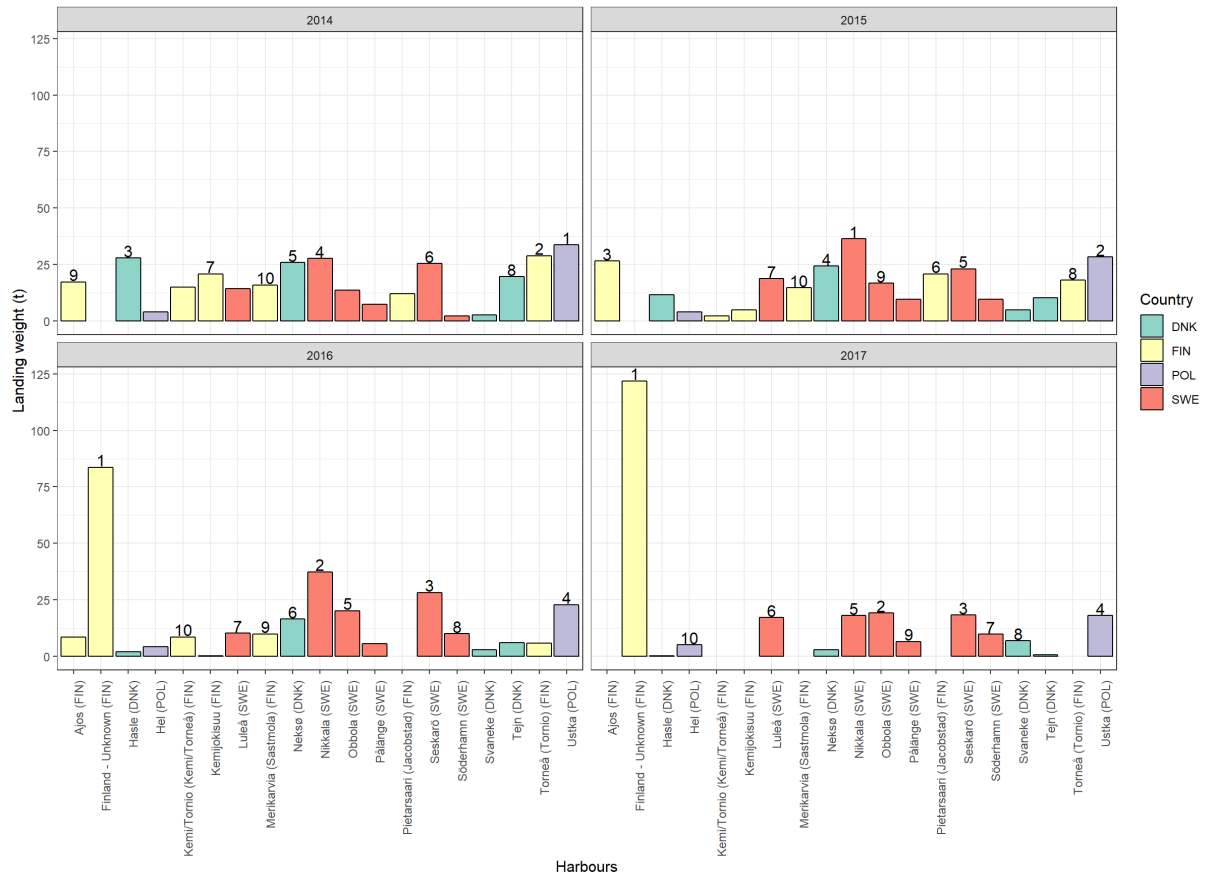


Top 10 harbours for her31

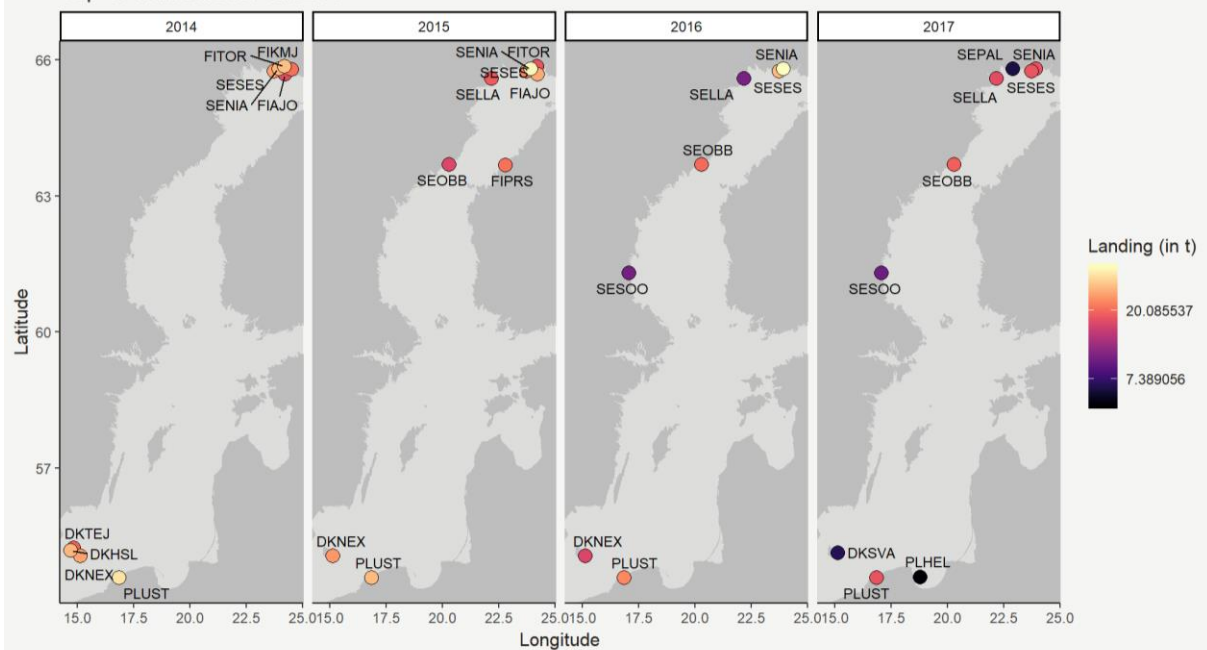


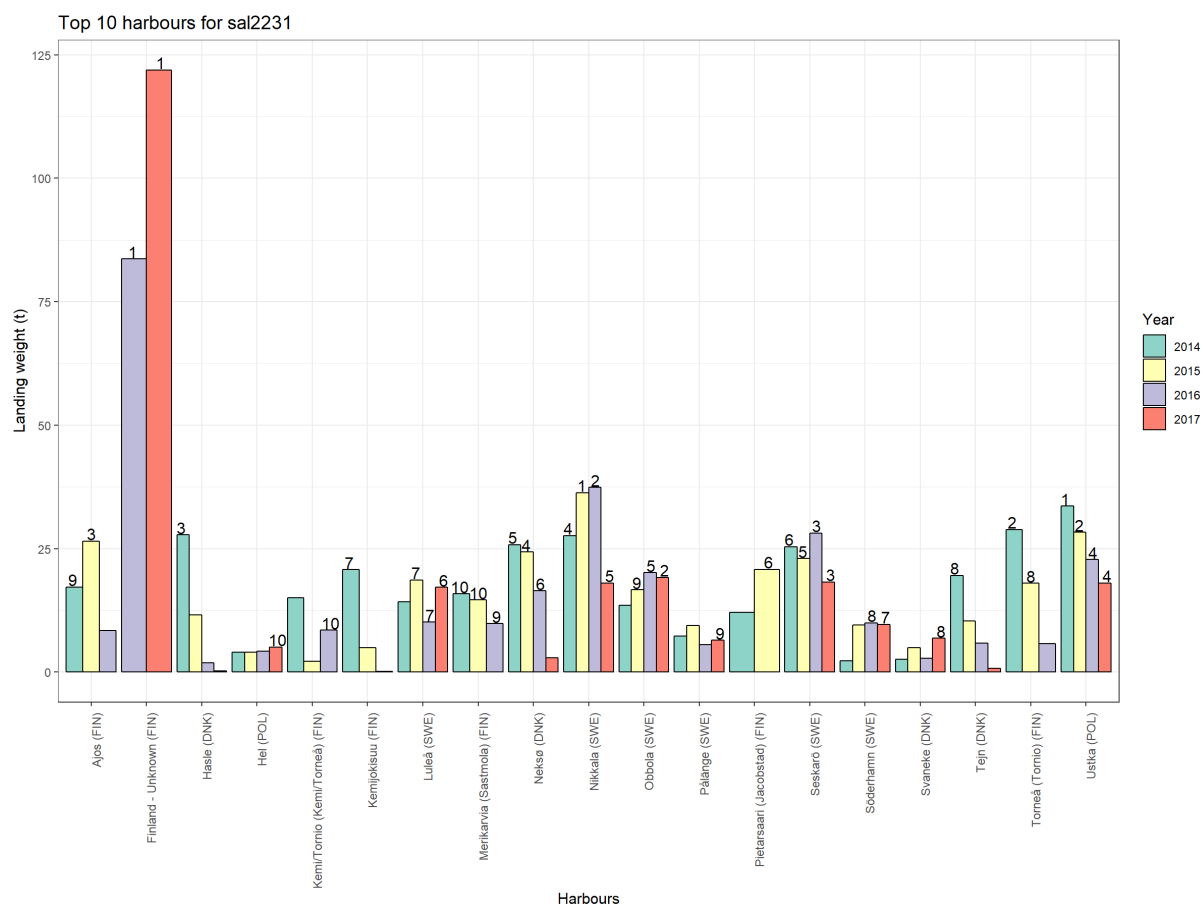
➔ Salmon in the Baltic

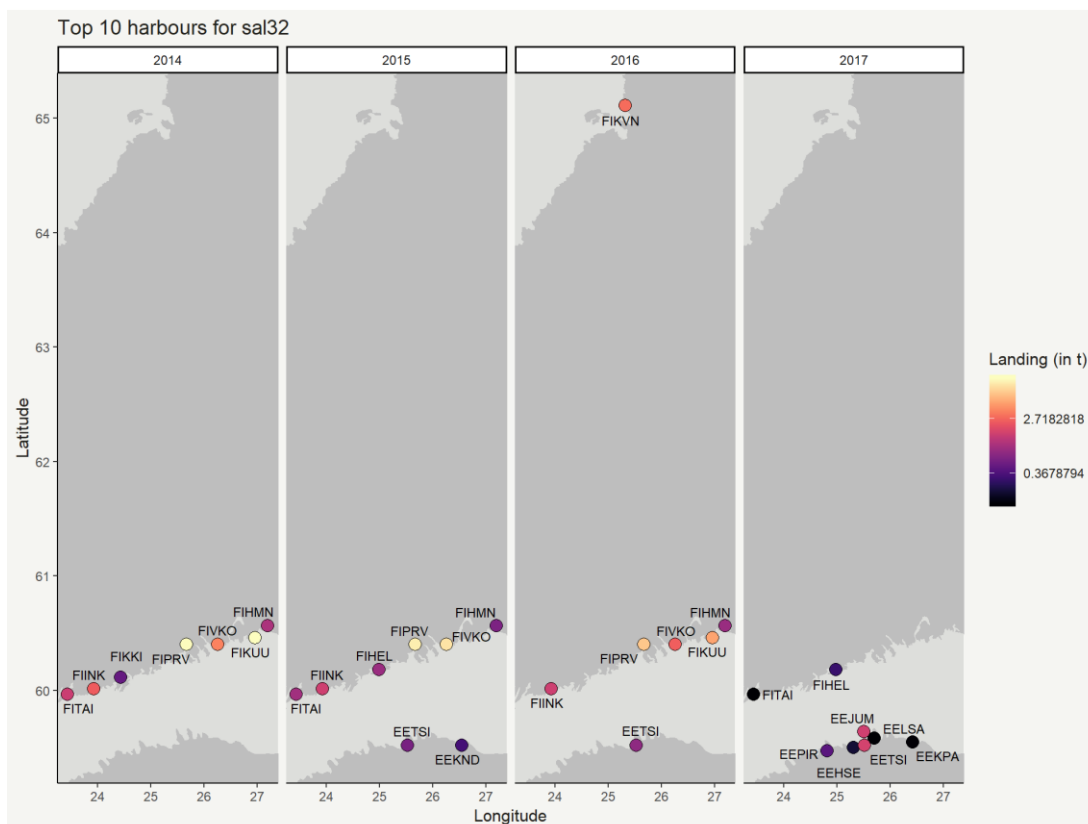
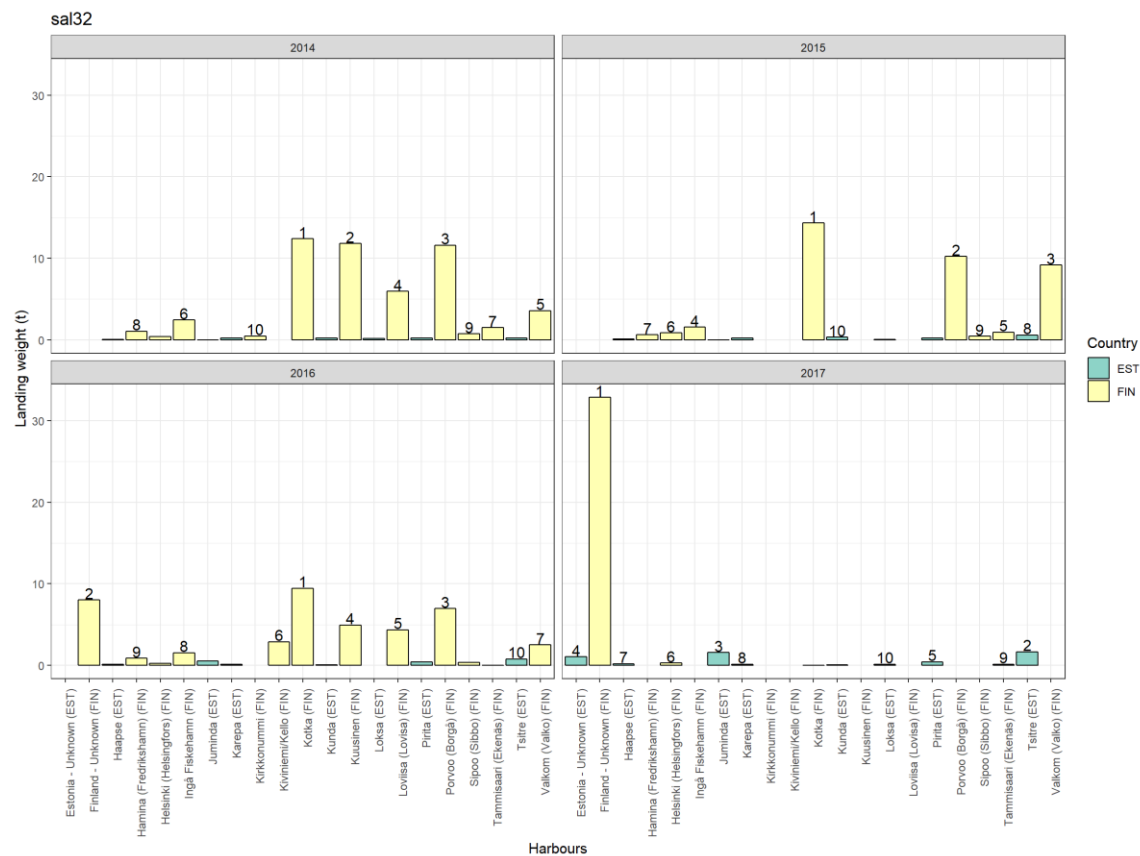
sal2231

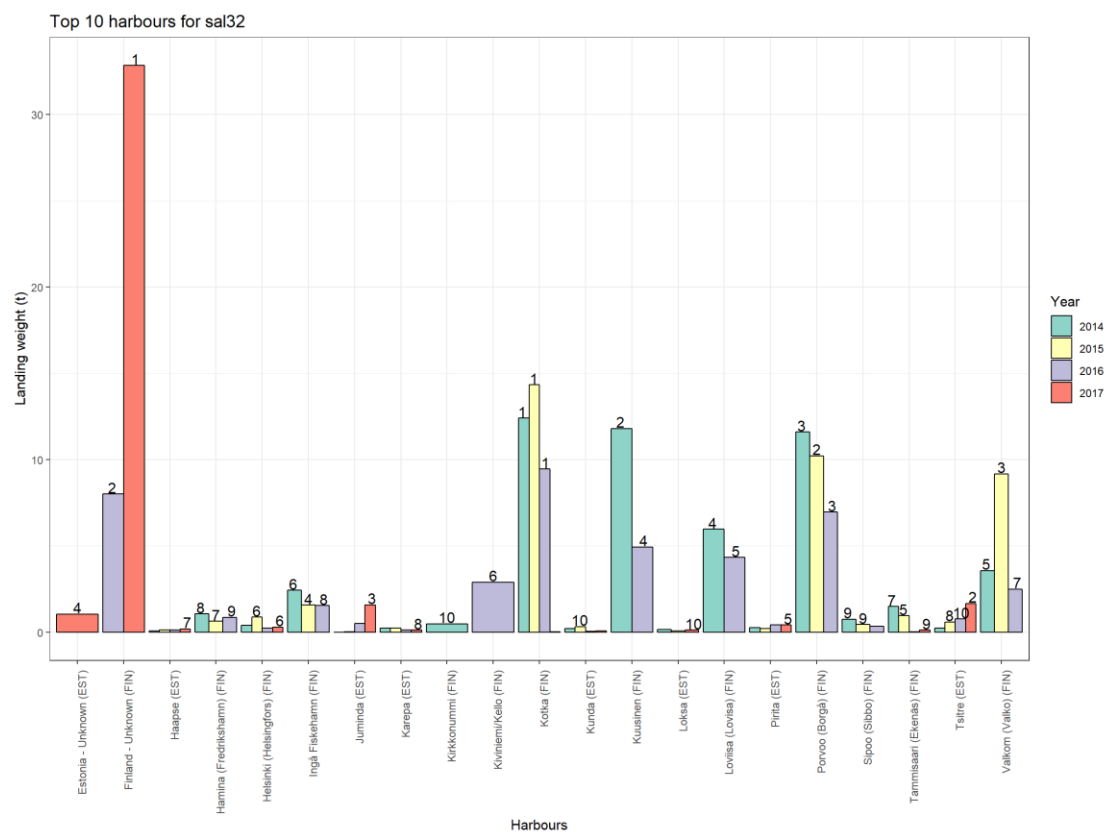


Top 10 harbours for sal2231









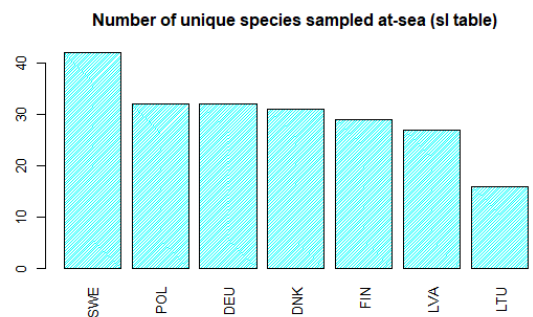
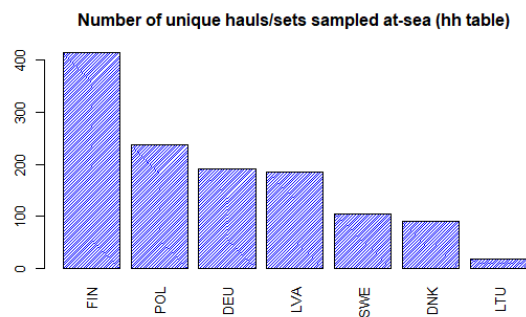
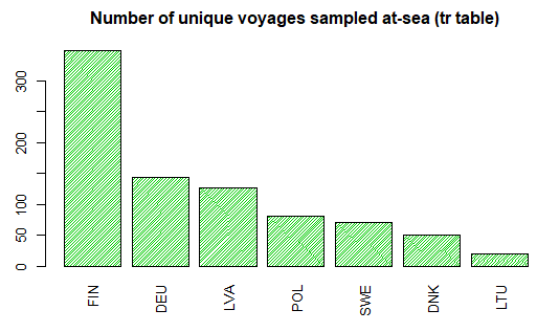
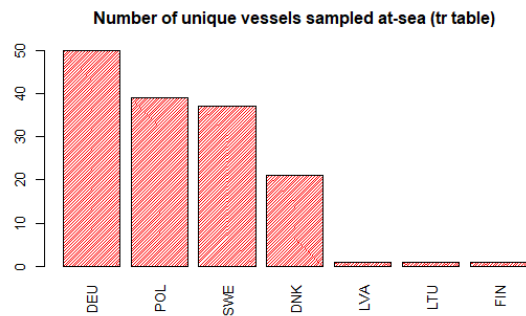
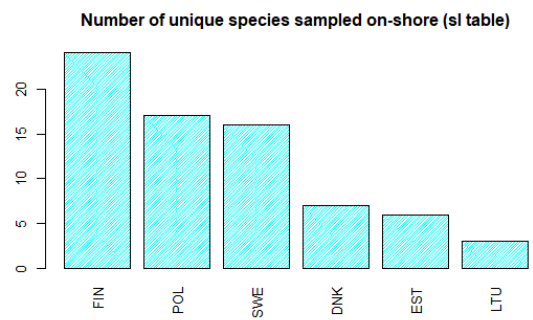
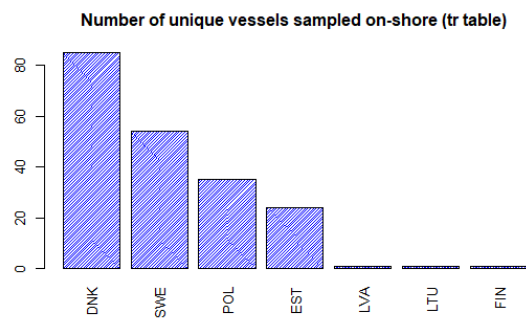
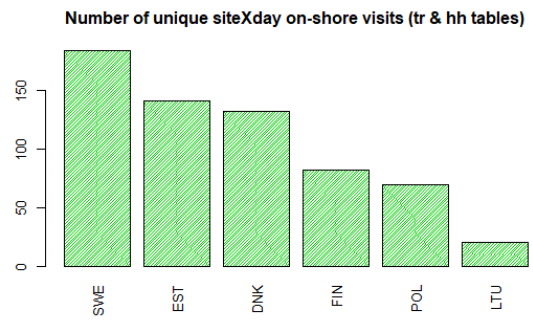
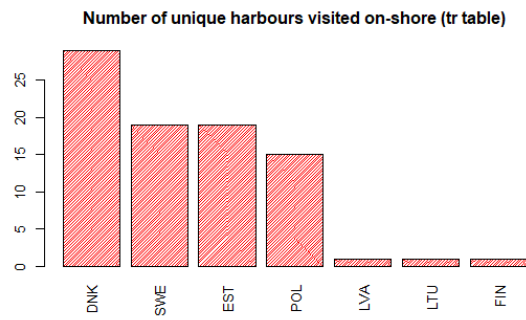
Annex 11. Overview of commercial fisheries sampling data

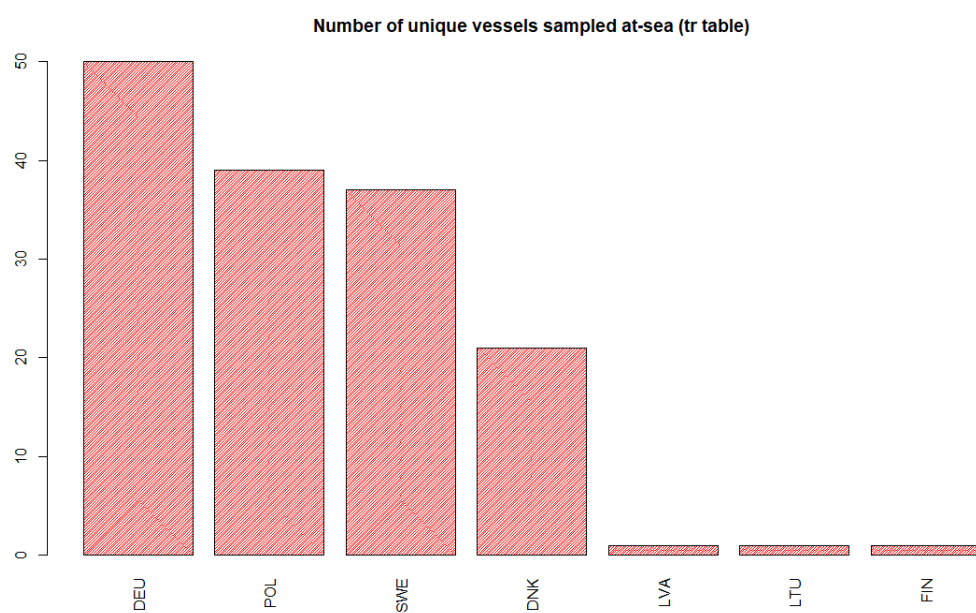
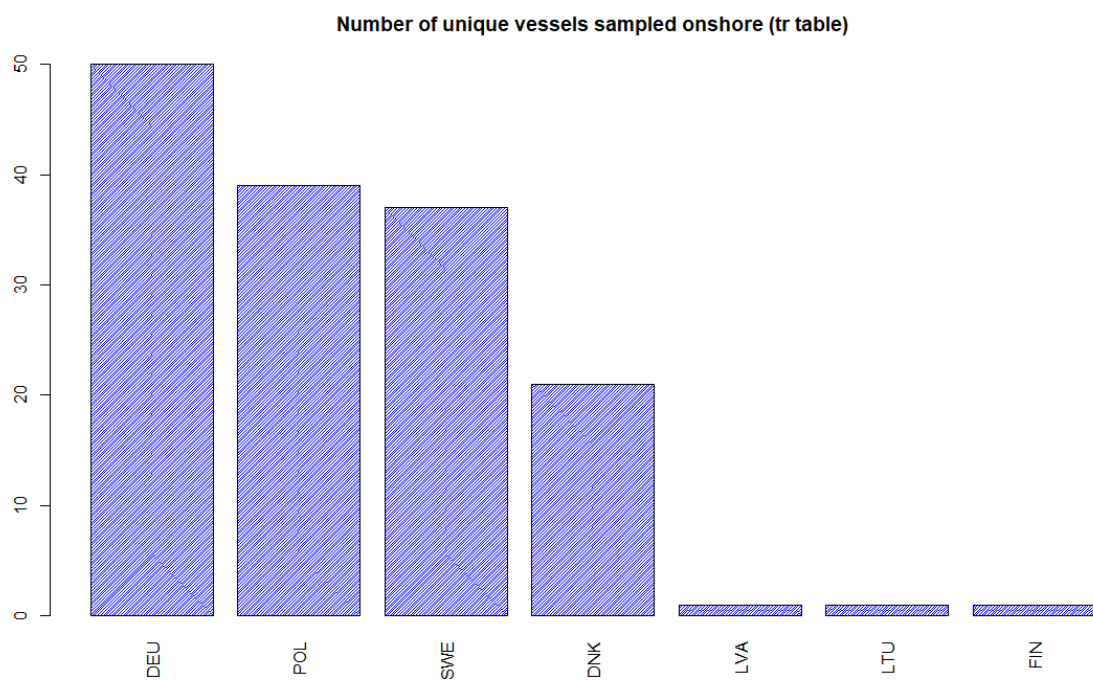
The data are taken from the RDB FishFrame and transferred into the COST-format (<http://wwz.ifremer.fr/cost>). The R scripts are documented on the RCG Baltic sharepoint and should also be available at the sharepoint of the Liaison meeting.

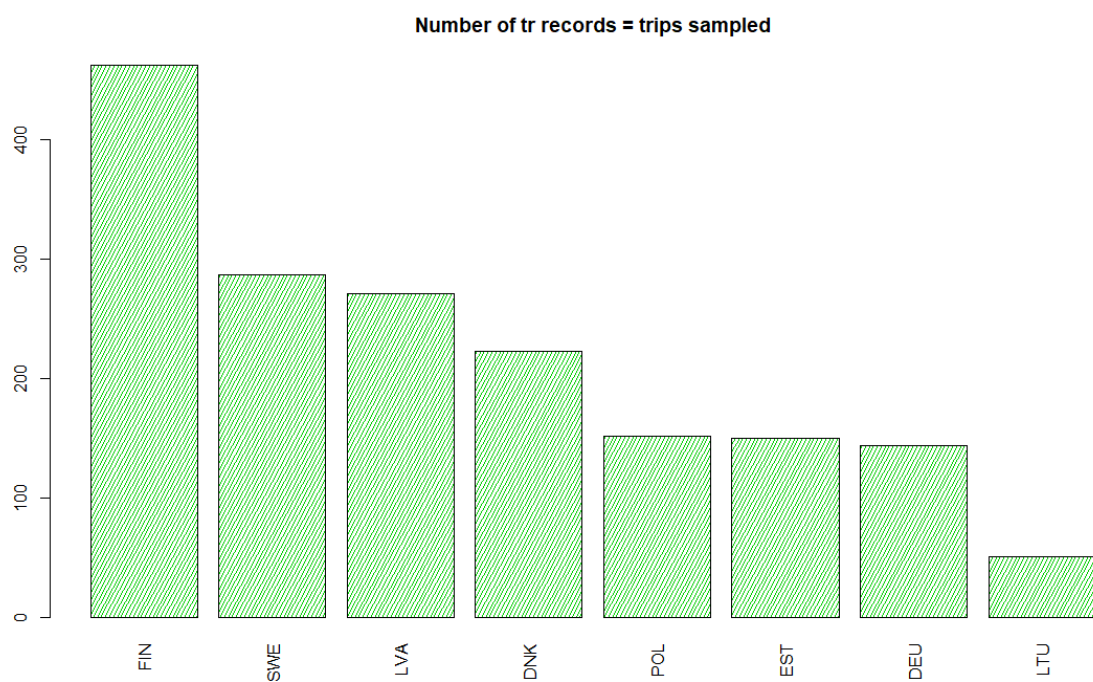
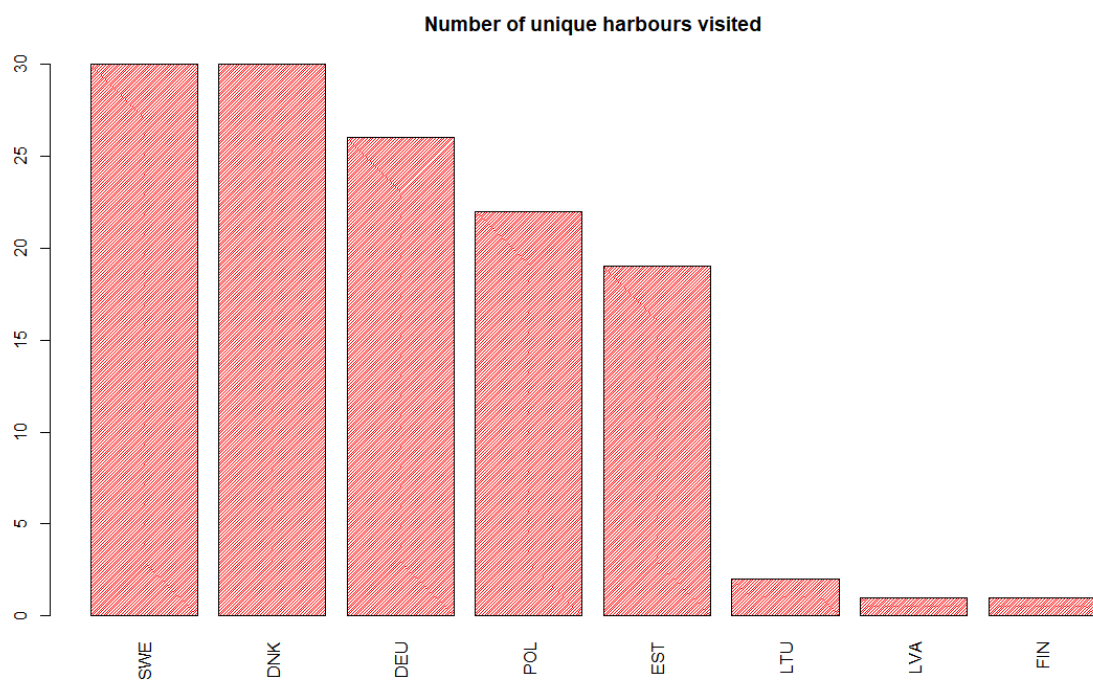
Please note that the graphs reflect the data status presently available in the RDB during the RCG. All MS are kindly requested to critically review the graphs and check whether the data make sense and in case errors are recorded on a national level, the errors should be corrected. Not all MS submitted sampling data on a rectangle-resolution. Those data were excluded from the overview graphs that display data on a rectangle basis.

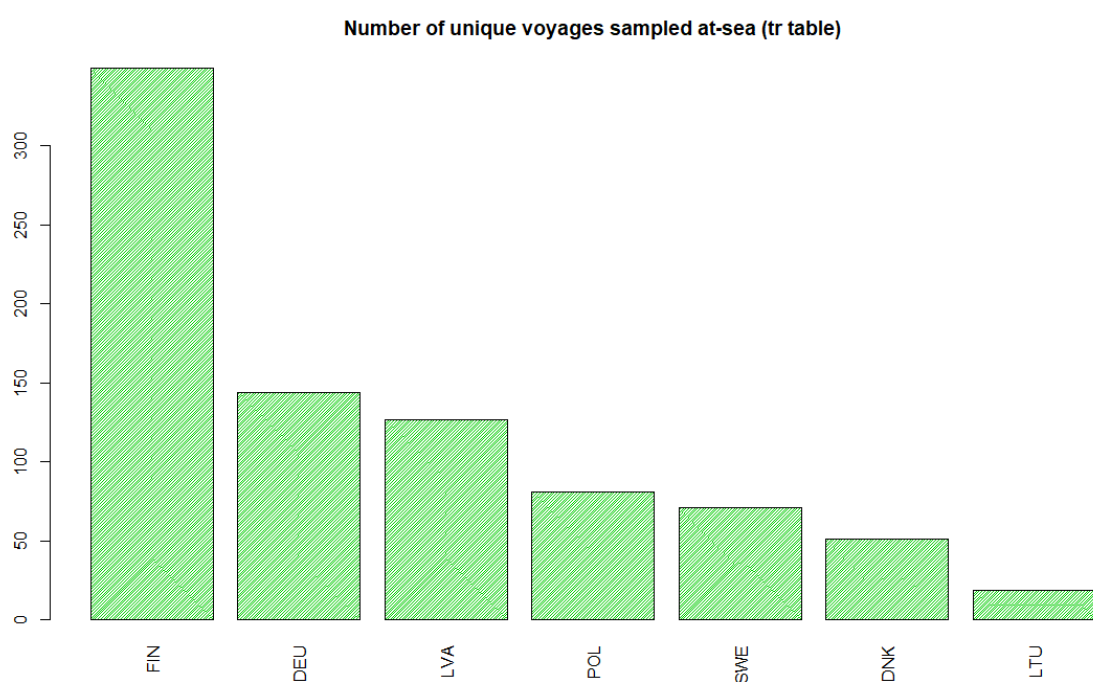
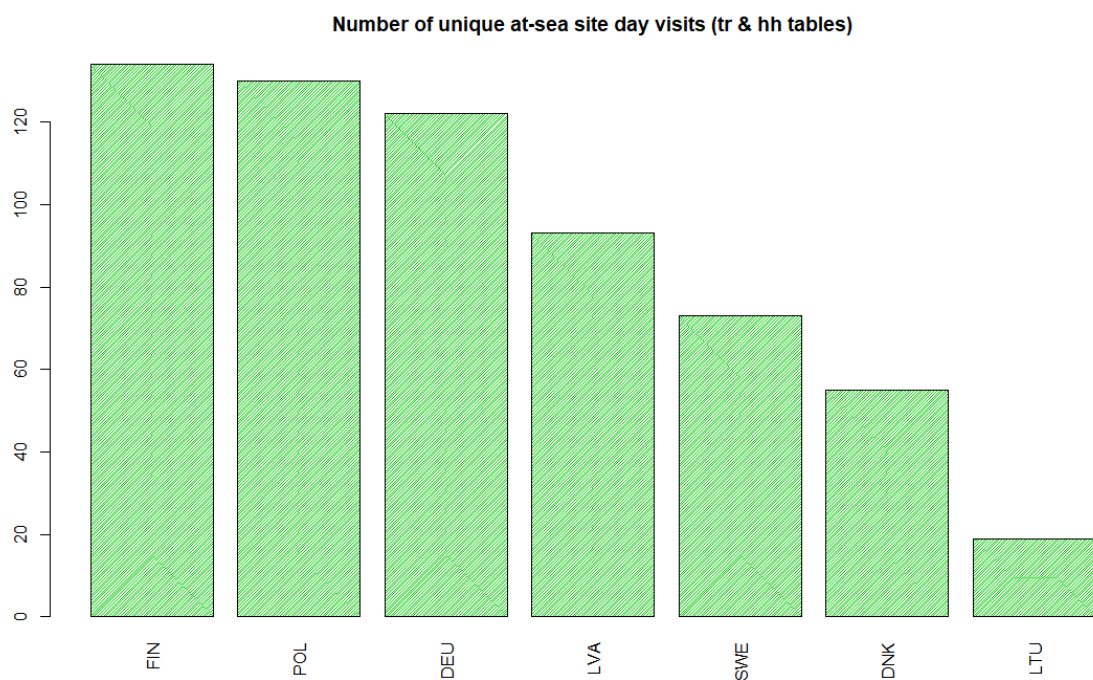
Overview:

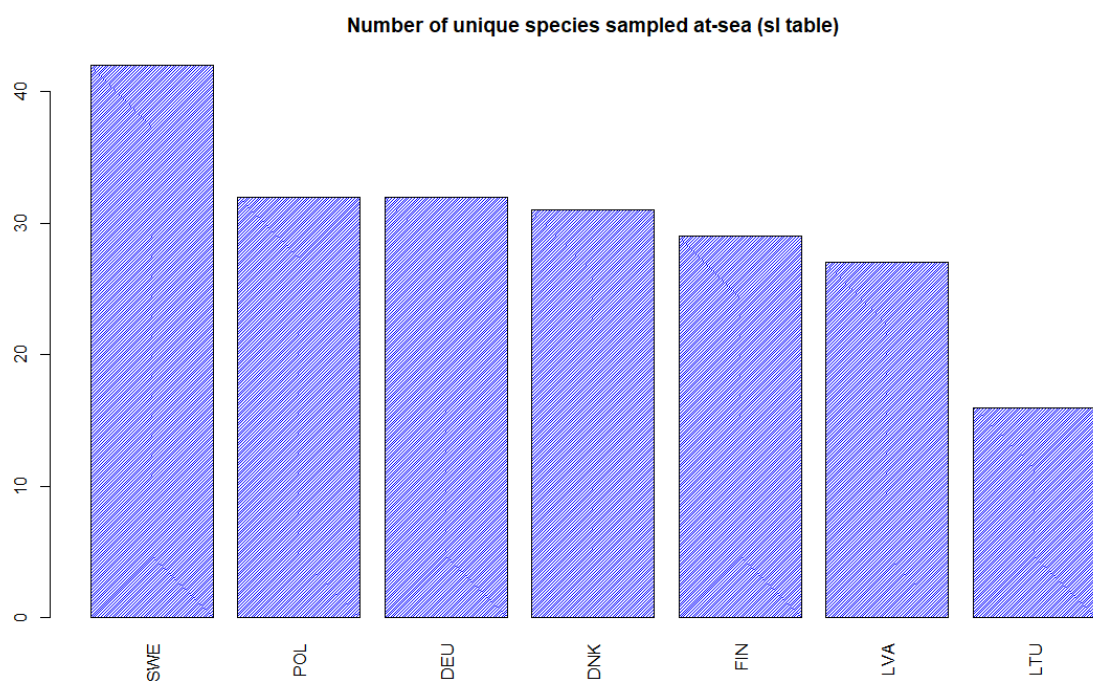
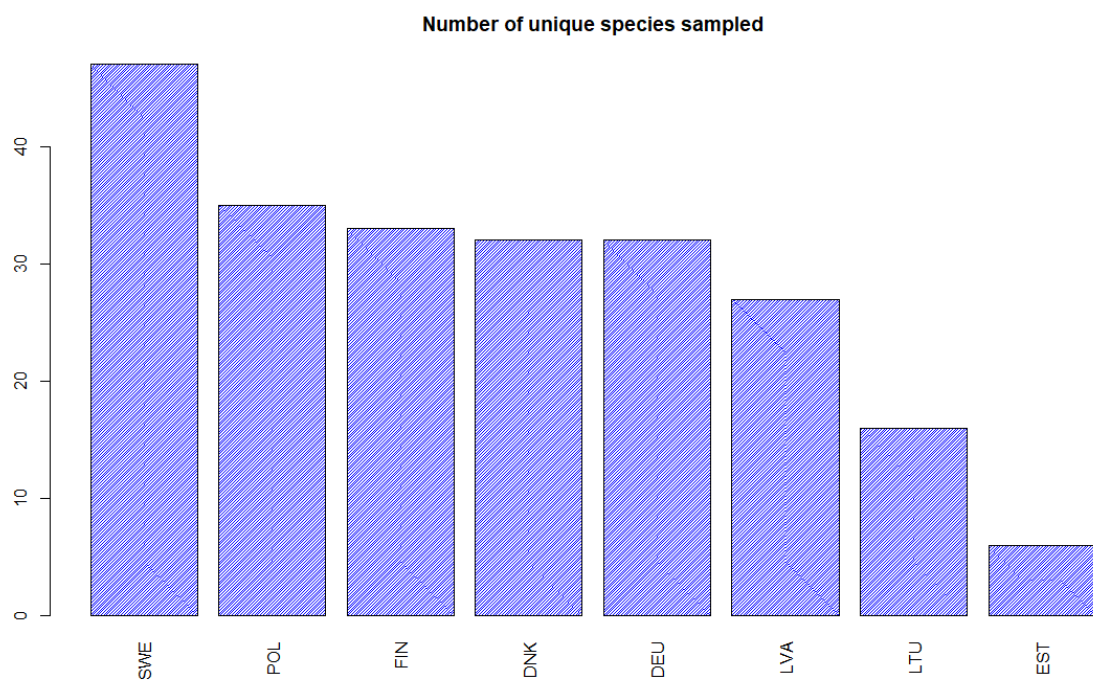
- number of entries in the CLE/CE and CA files
- length distribution 2017 for western and eastern Baltic cod and central Baltic herring
- age-length distribution 2017 for western and eastern Baltic cod and central Baltic herring

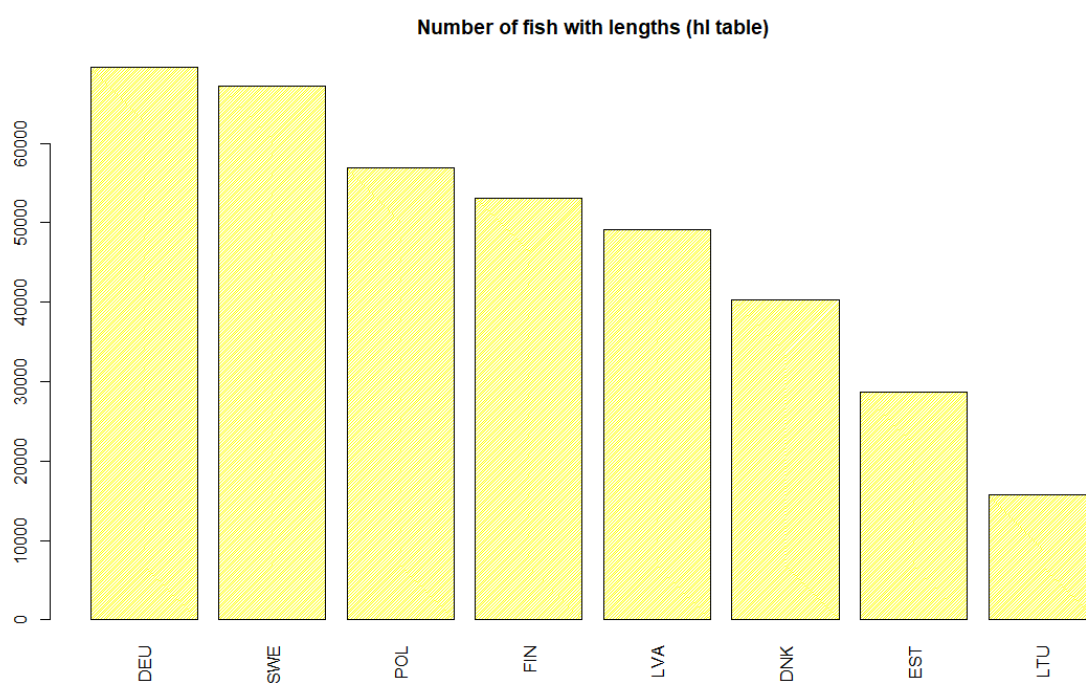
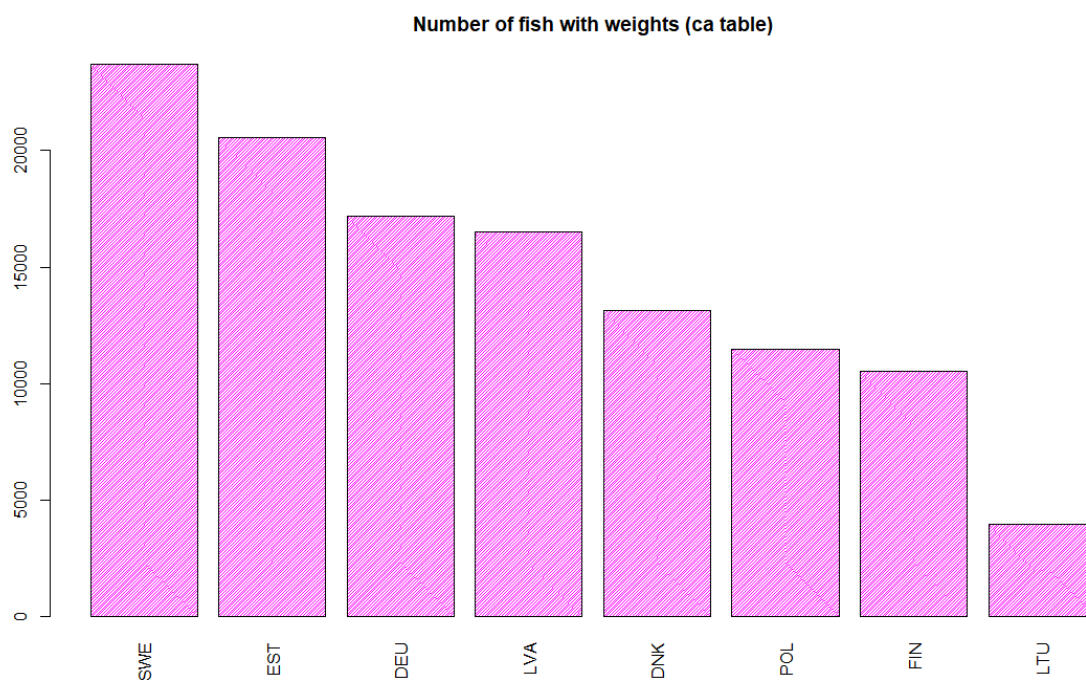


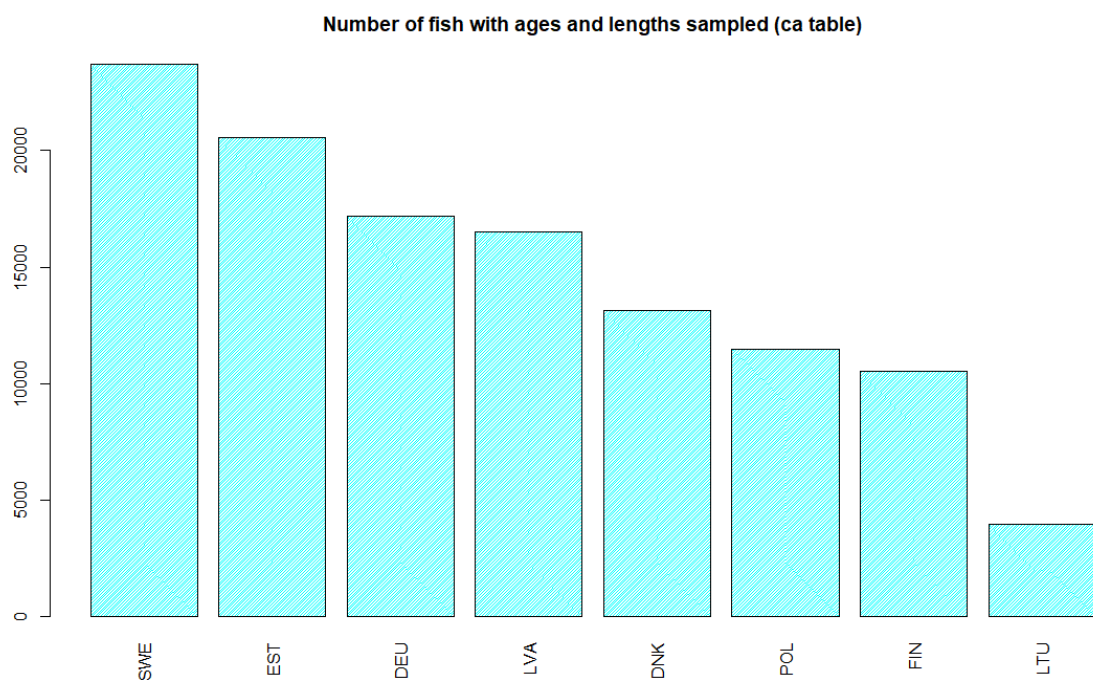






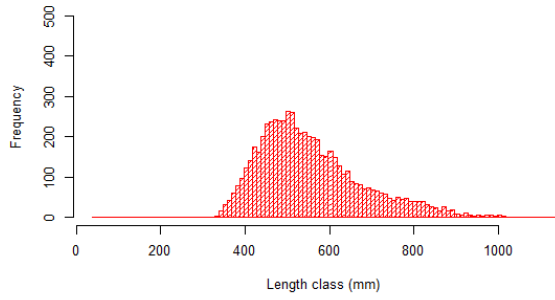




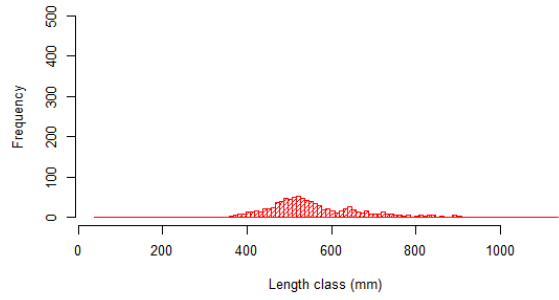


Length distribution for Atlantic cod by area

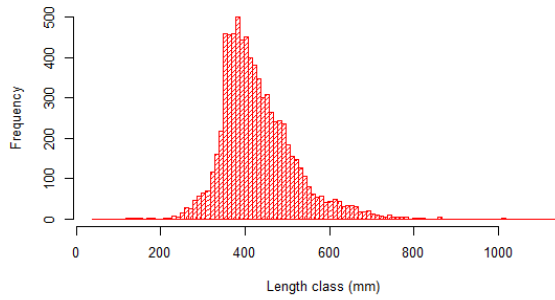
area 27.3.c.22



area 27.3.b.23

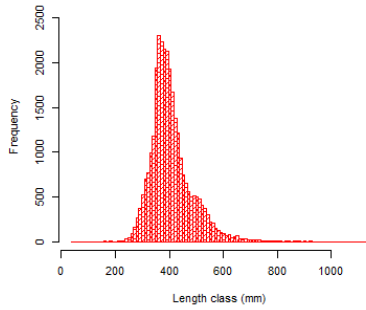


area 27.3.d.24

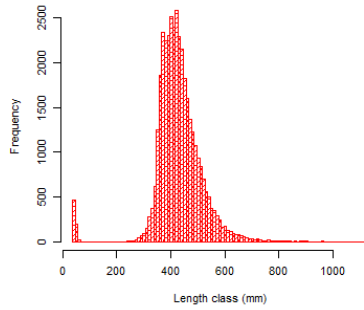


Length distribution for Atlantic cod by area

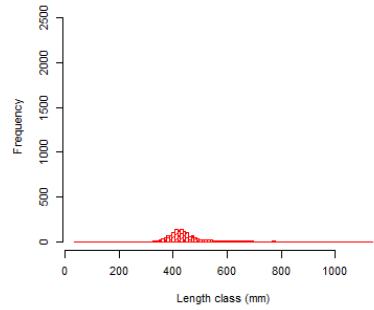
area 27.3.d.25



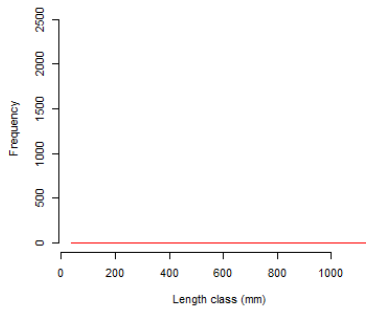
area 27.3.d.26



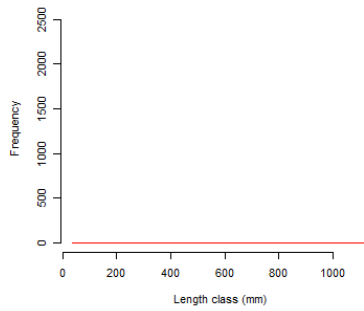
area 27.3.d.28

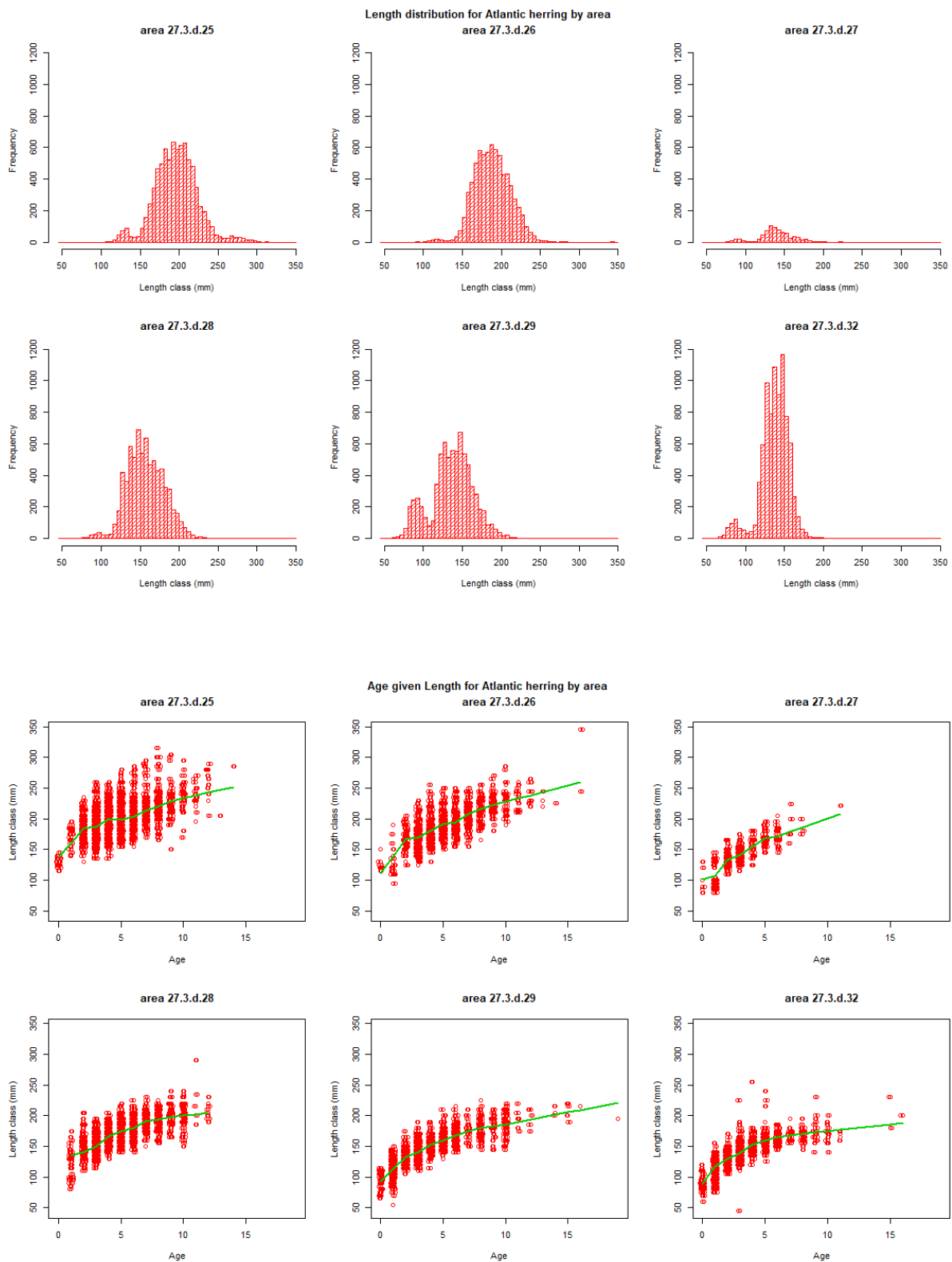


area 27.3.d.29

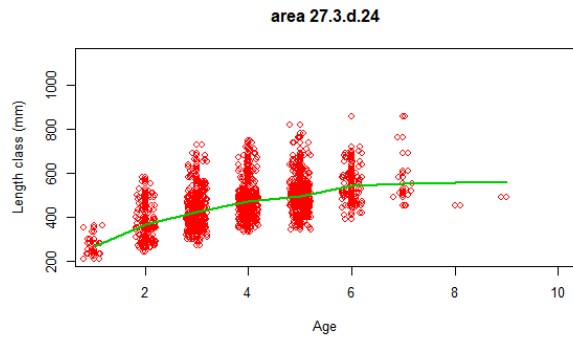
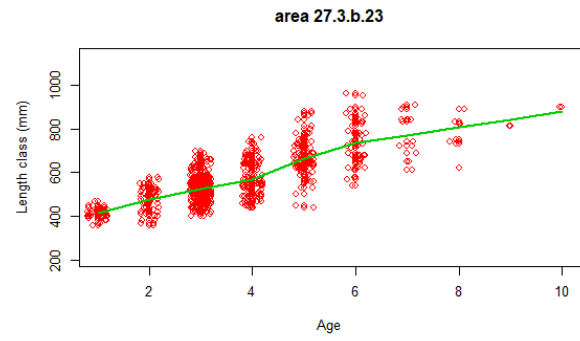
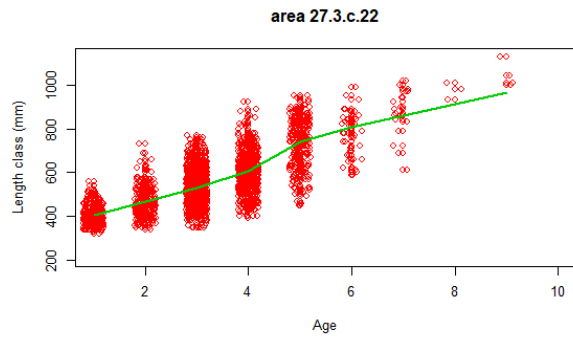


area 27.3.d.30

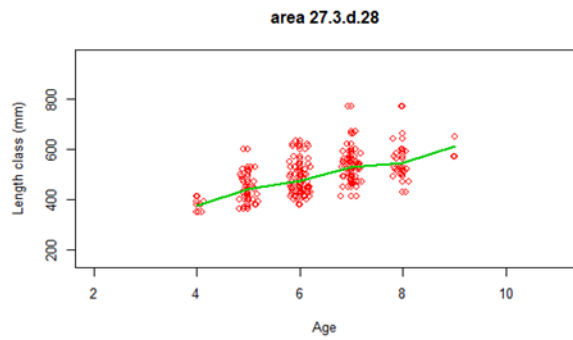
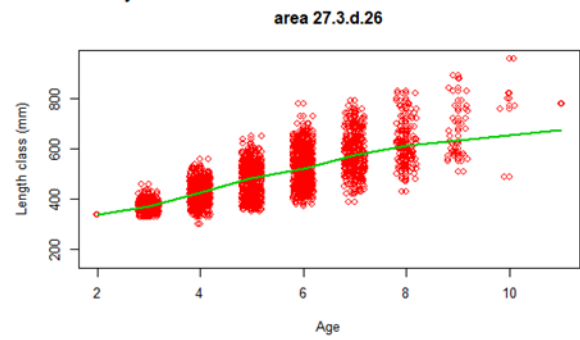
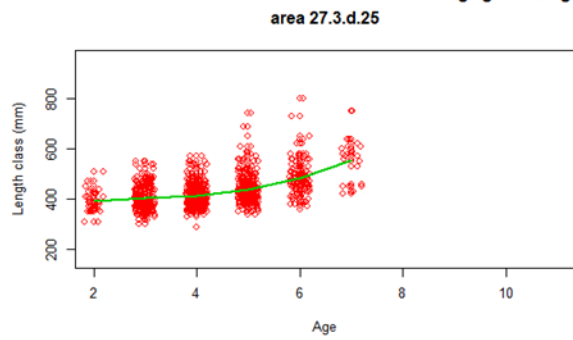




Age given Length for Atlantic cod by area



Age given Length for Atlantic cod by area



Annex 12. Overview of commercial fisheries and sampling data on eel

The status of the eel stock in the Baltic corresponds in general to that in the remaining distribution area: a long-lasting gradual decline in landings since the 1960s, and a slow decline in recruitment. The density of the eel stock in the Baltic decreases from west to east, and from south to north; this pattern is primarily based on reported commercial catches. Fishing targets the yellow and silver eel stage, with silver eel fisheries dominating around the outlet of the Baltic. Restocking of glass eel (derived from southern countries) has been practiced for decades, mainly in inland waters; this has considerably influenced the commercial yield and the biological composition of the stock, and it still does (See also Reports of the ICES working groups WKBALTEEL, WGEEL and WGBAST for more detailed information). The following graphs were provided on request by end-users to provide general overviews on the fishing pattern and spatial distribution of catches.

The data are taken from the RDB FishFrame and transferred into the COST-format (<http://wwwz.ifremer.fr/cost>). The R scripts are documented on the RCG Baltic sharepoint and should also be available at the sharepoint of the Liaison meeting.

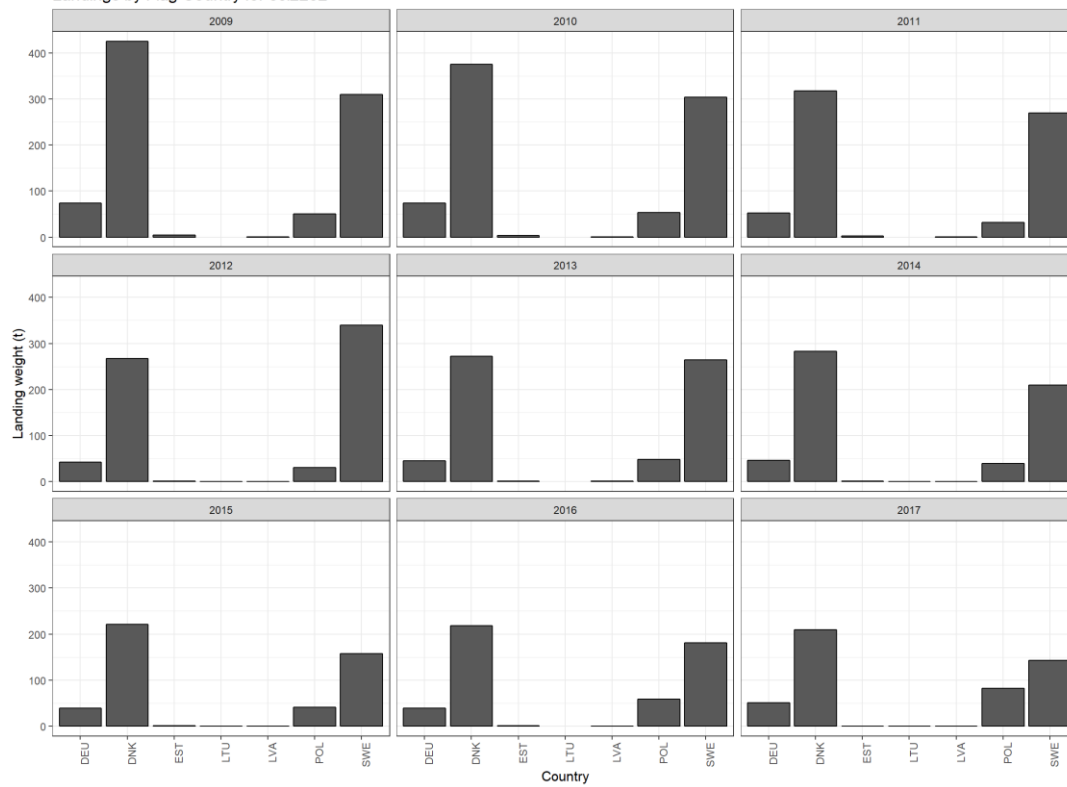
Please note that the graphs reflect the data status presently available in the RDB during the RCG. All MS are kindly requested to critically review the graphs and check whether the data make sense and in case errors are recorded on a national level, the errors should be corrected.

Overview:

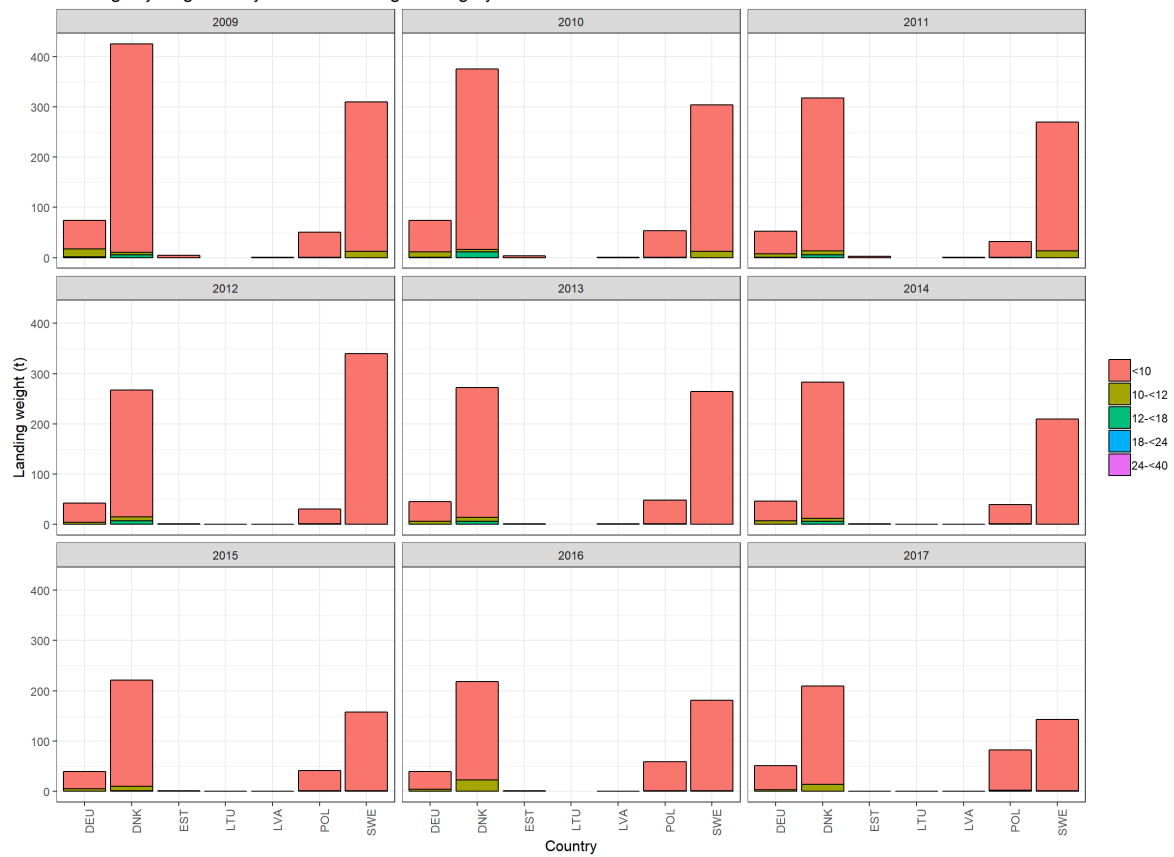
- Landings 2009 – 2017 by flag country
- Landings 2009 – 2017 by flag country and vessel length category
- Landings map 2017, including the main landings harbors*
- Landings map 2017*
- Landings map 2009 – 2017*
- Landings 2017 per quarter*
- Landings in foreign harbors tons and %
- Top 10 landings harbors 2014 - 2017
- Location of the top 10 landings harbors 2017
- Number and spatial distribution of length measured eels from the landings*
- Number spatial distribution of length measured eel from the discards

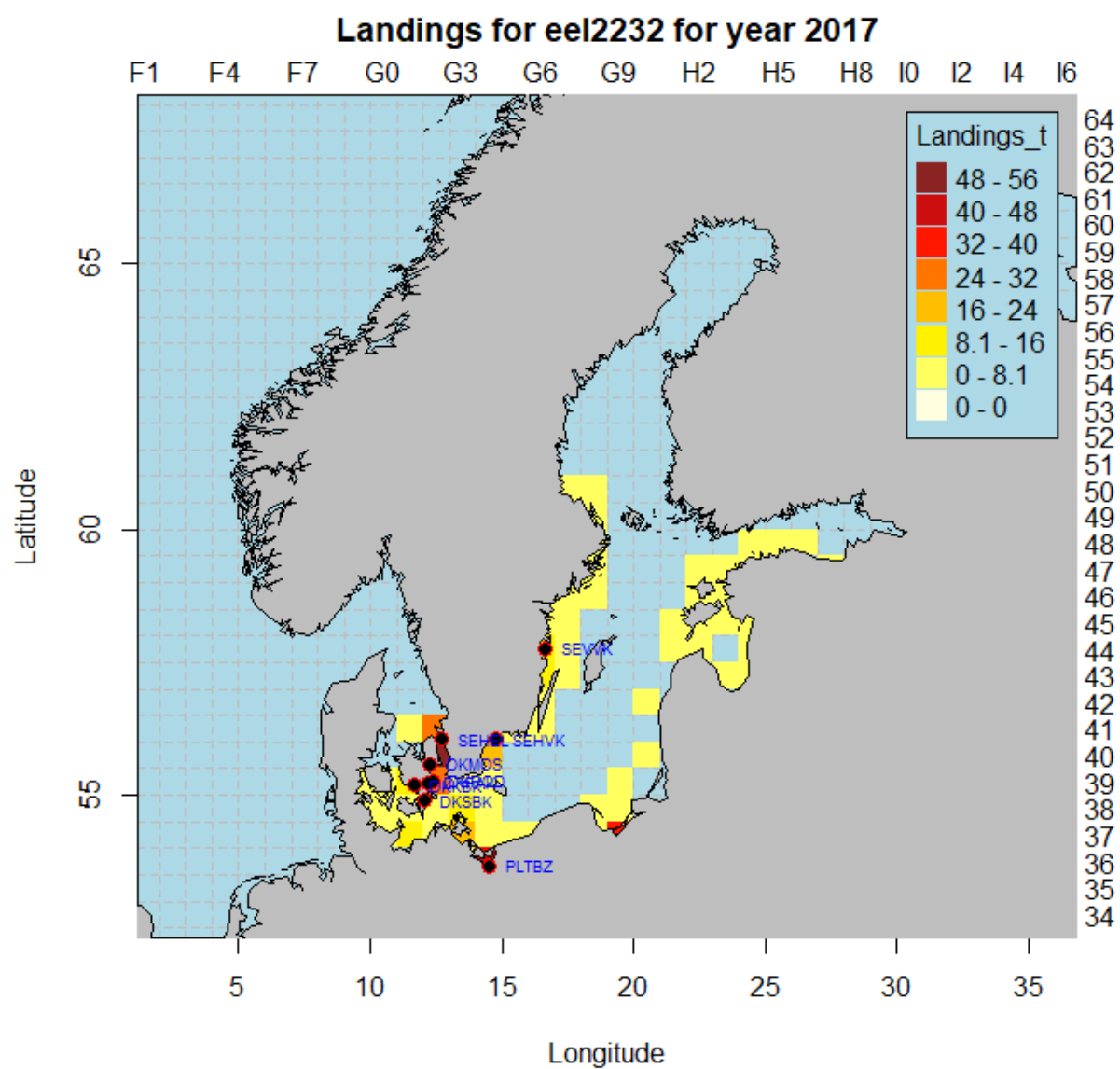
**Not all MS submitted commercial fisheries data on a rectangle-resolution. Those data were excluded from the overview graphs that display data on a rectangle basis and might give a wrong or shifted perception of the actual fishing pattern.*

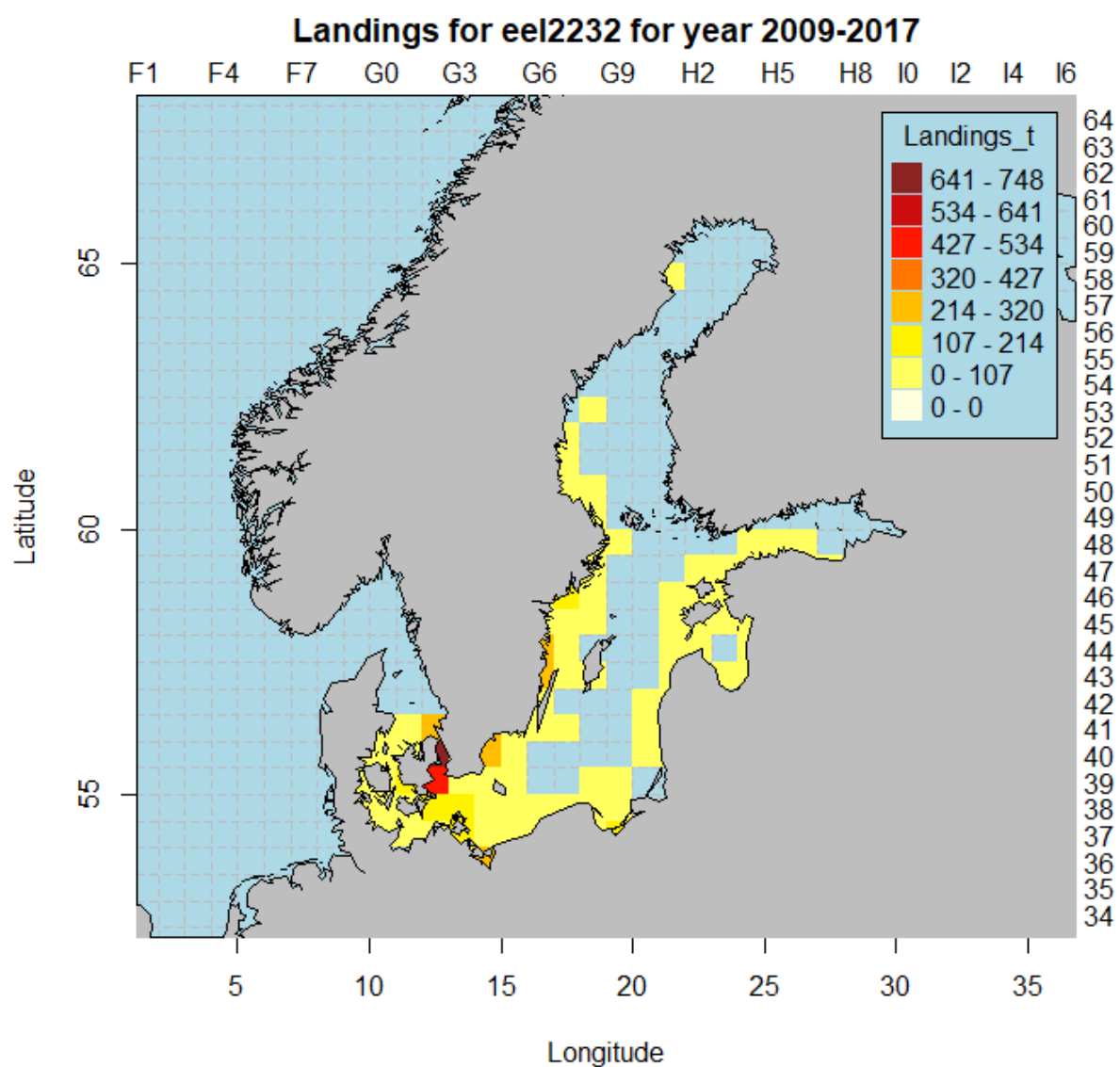
Landings by Flag Country for eel2232

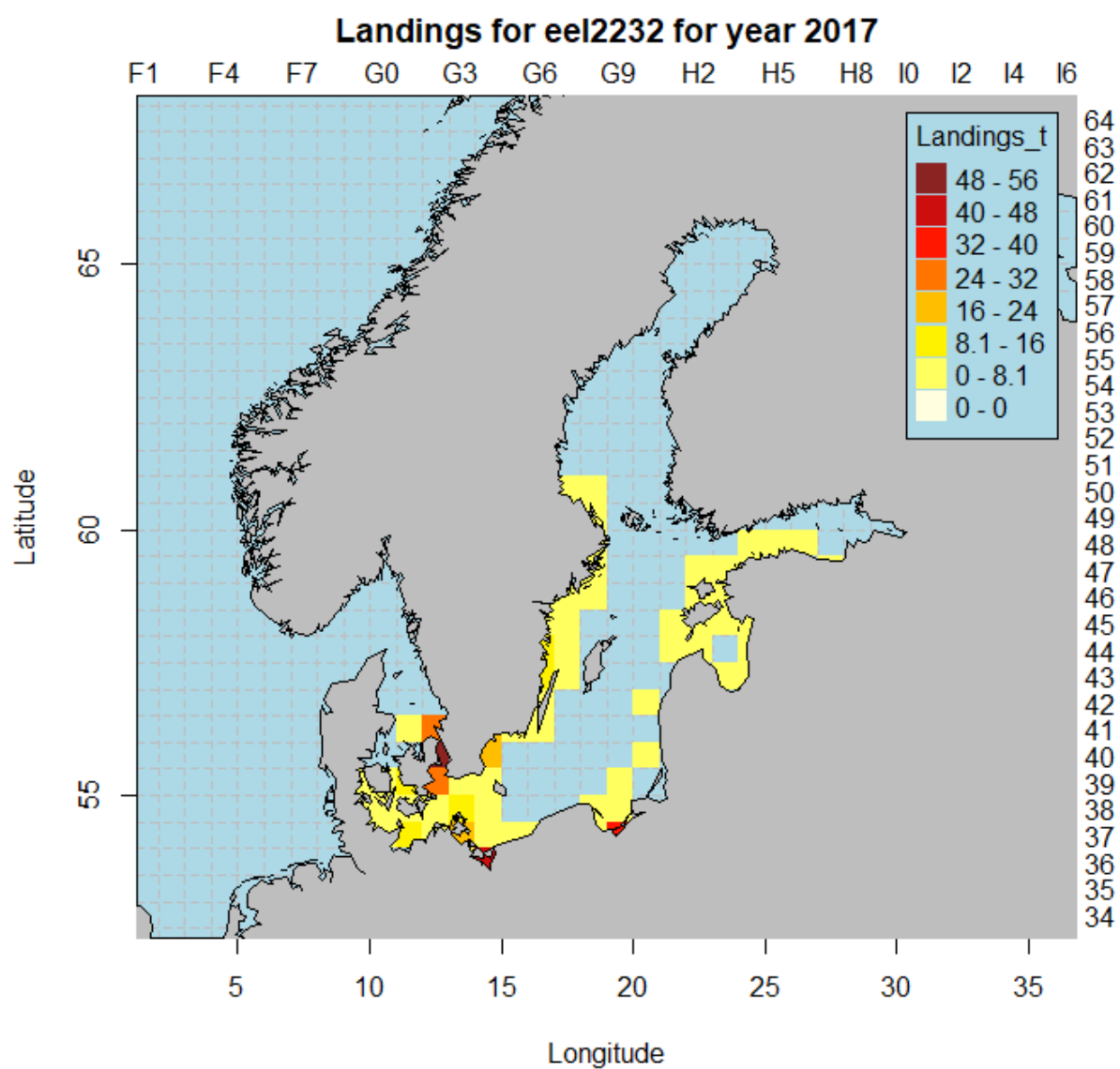


Landings by Flag Country and Vessel Length Category for eel2232

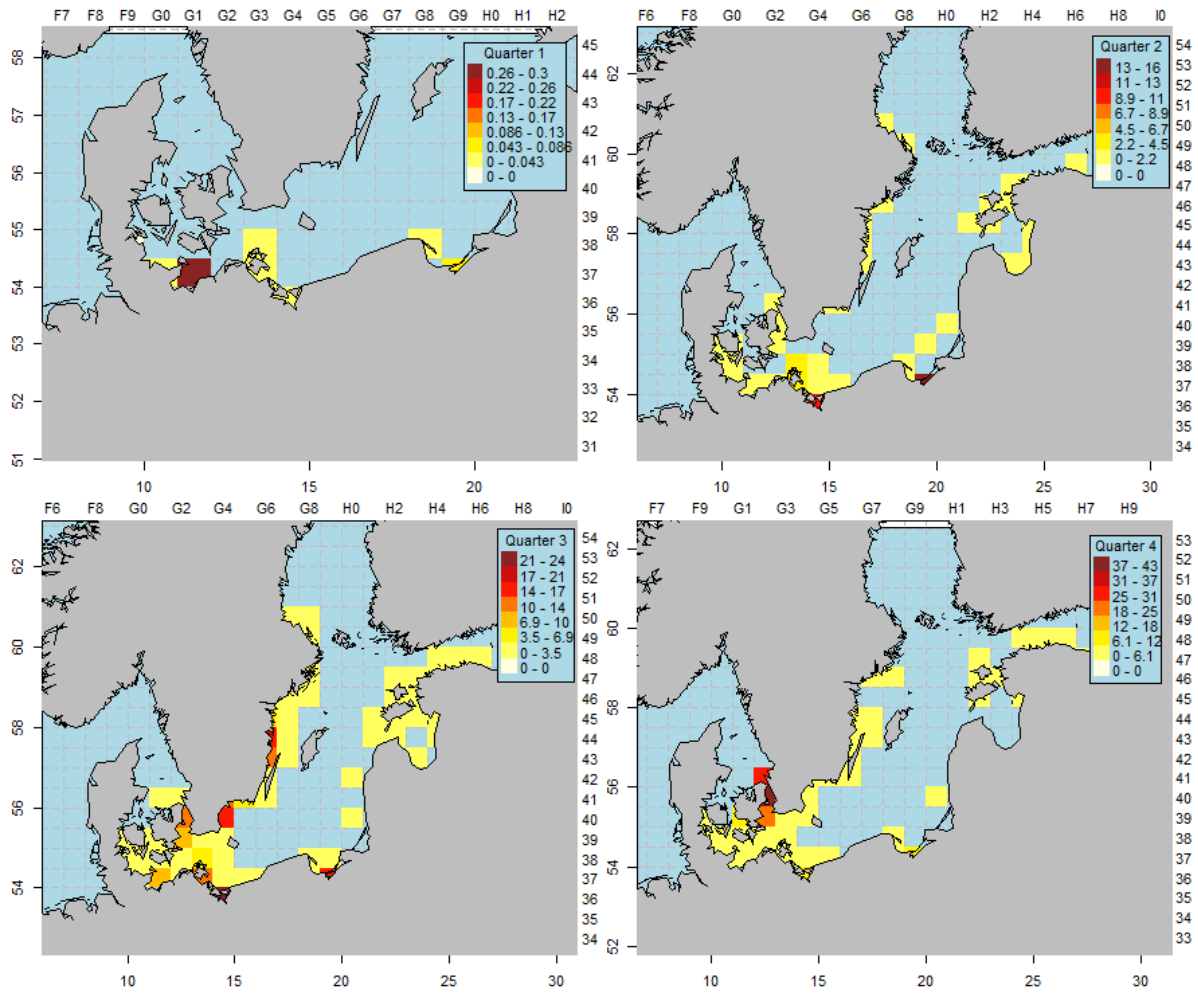


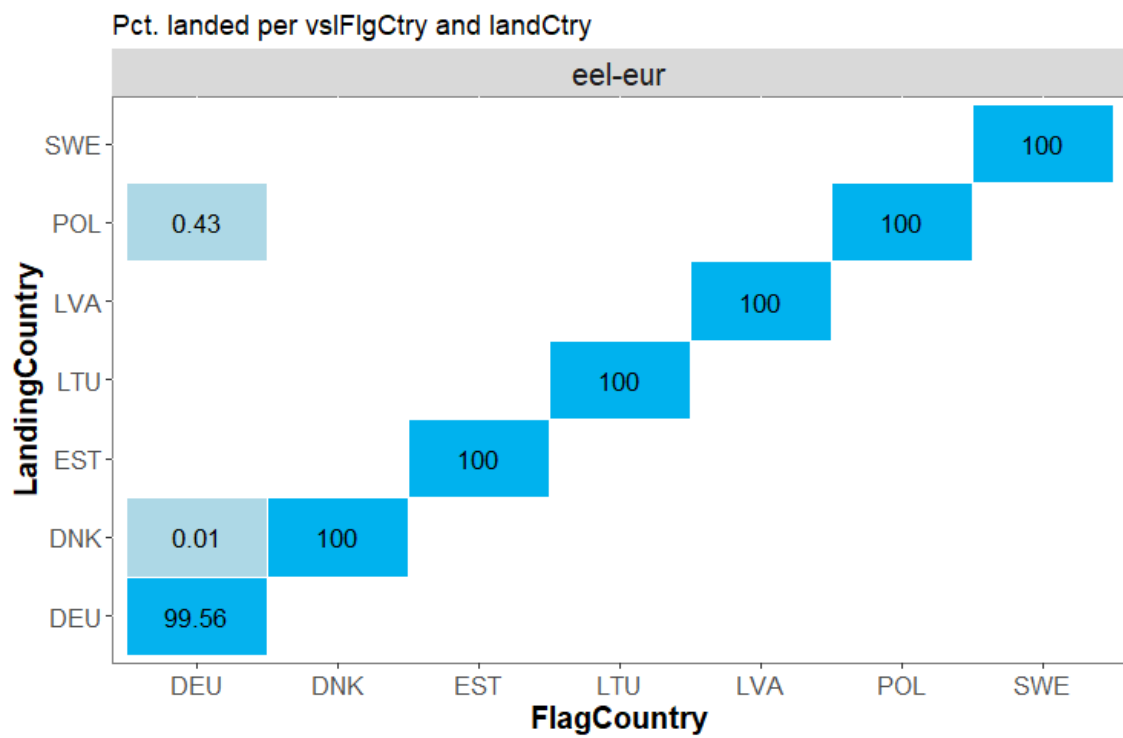
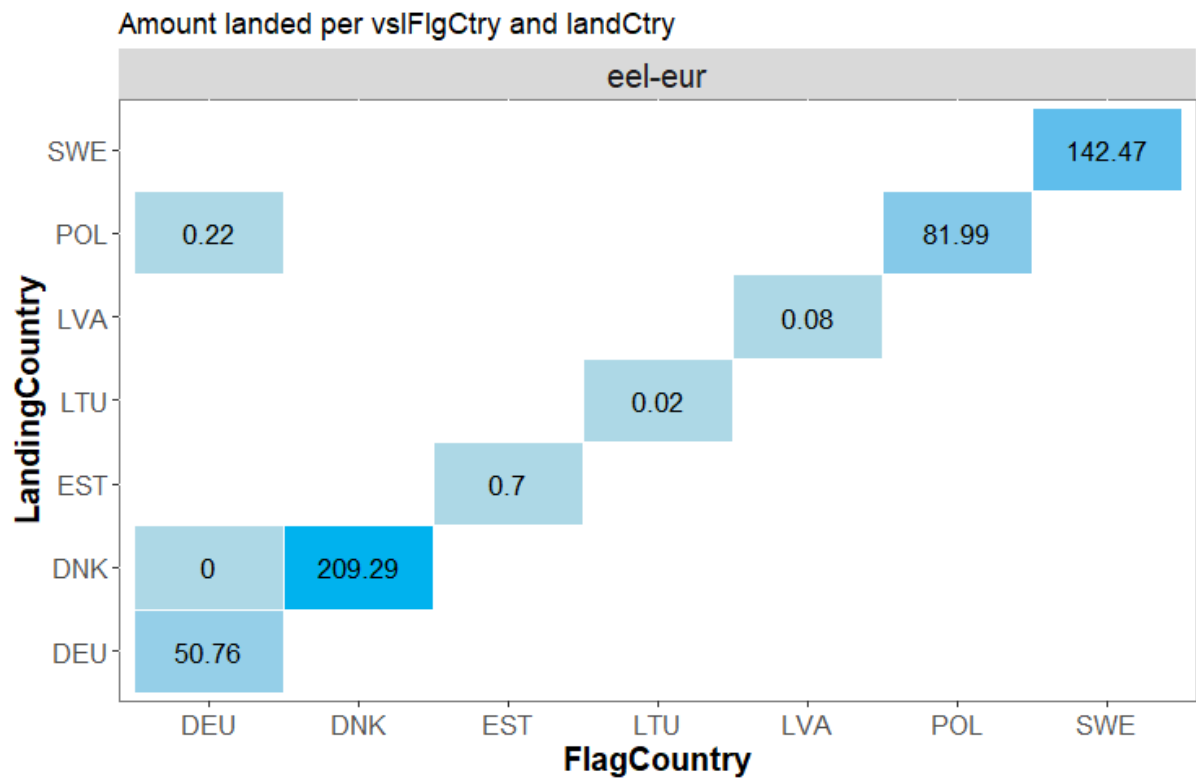


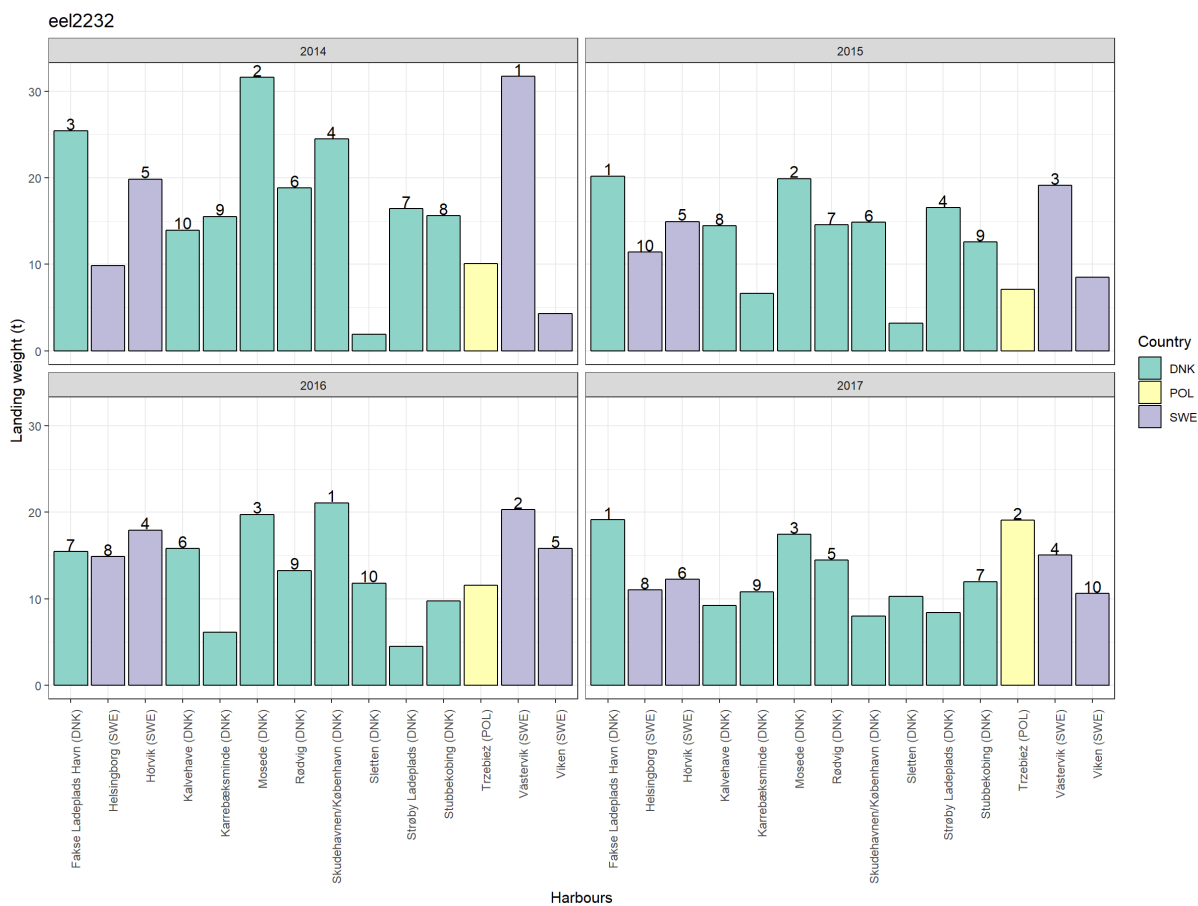
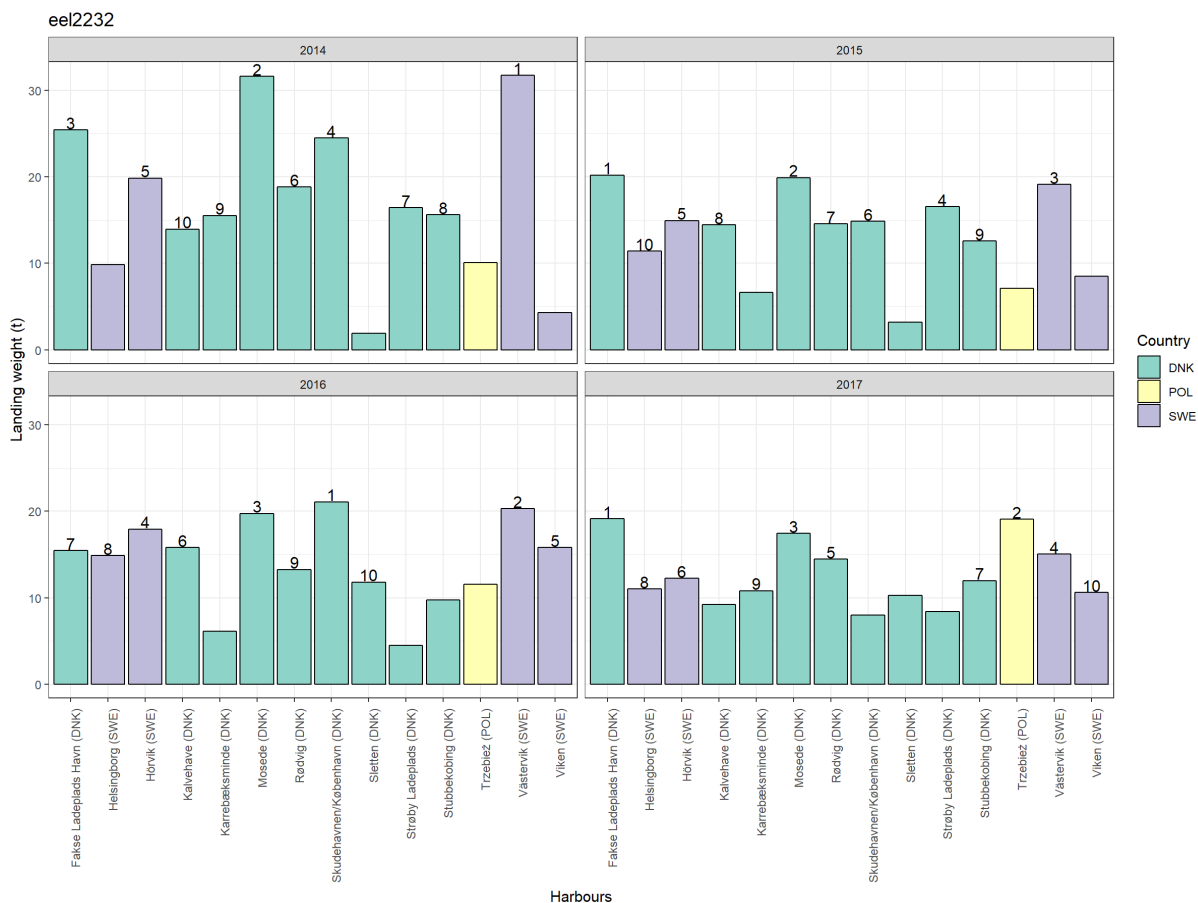




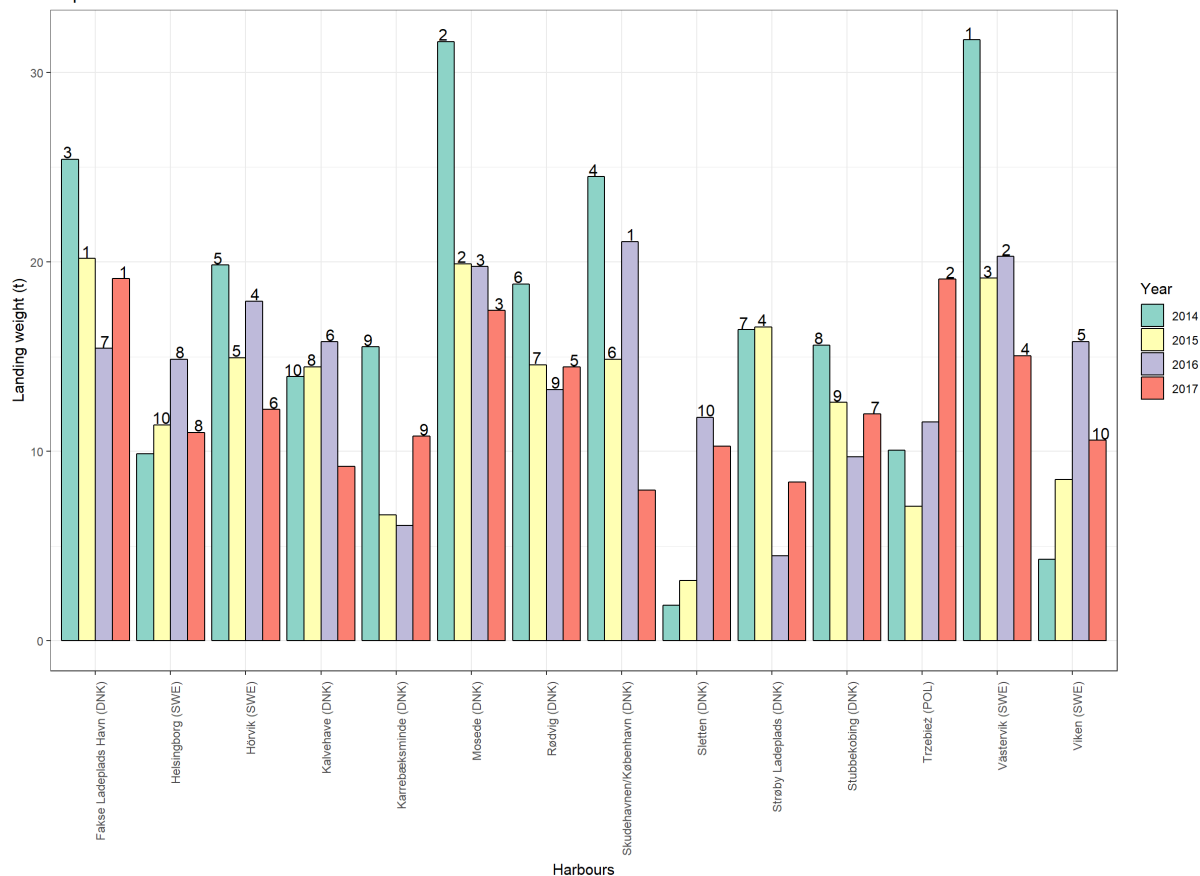
Landings (t) for eel2232 for year 2017



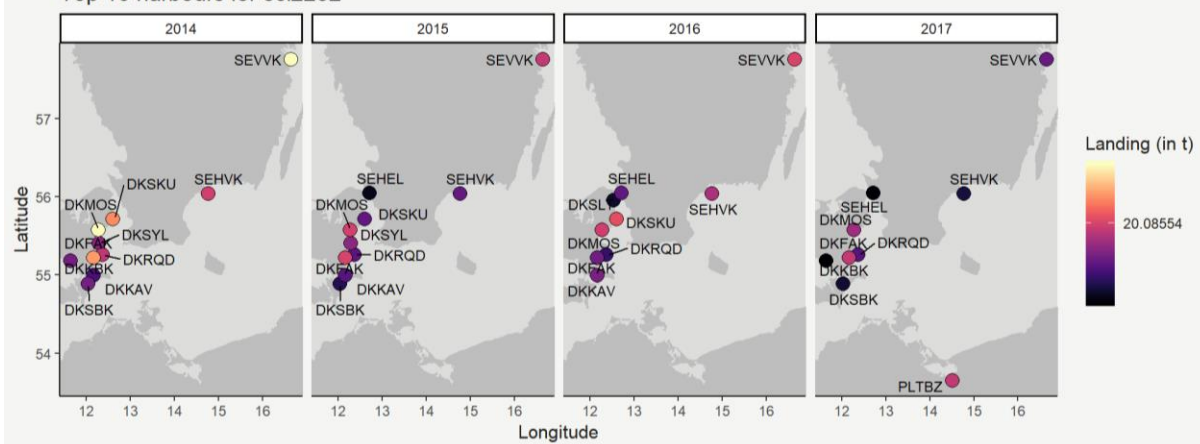




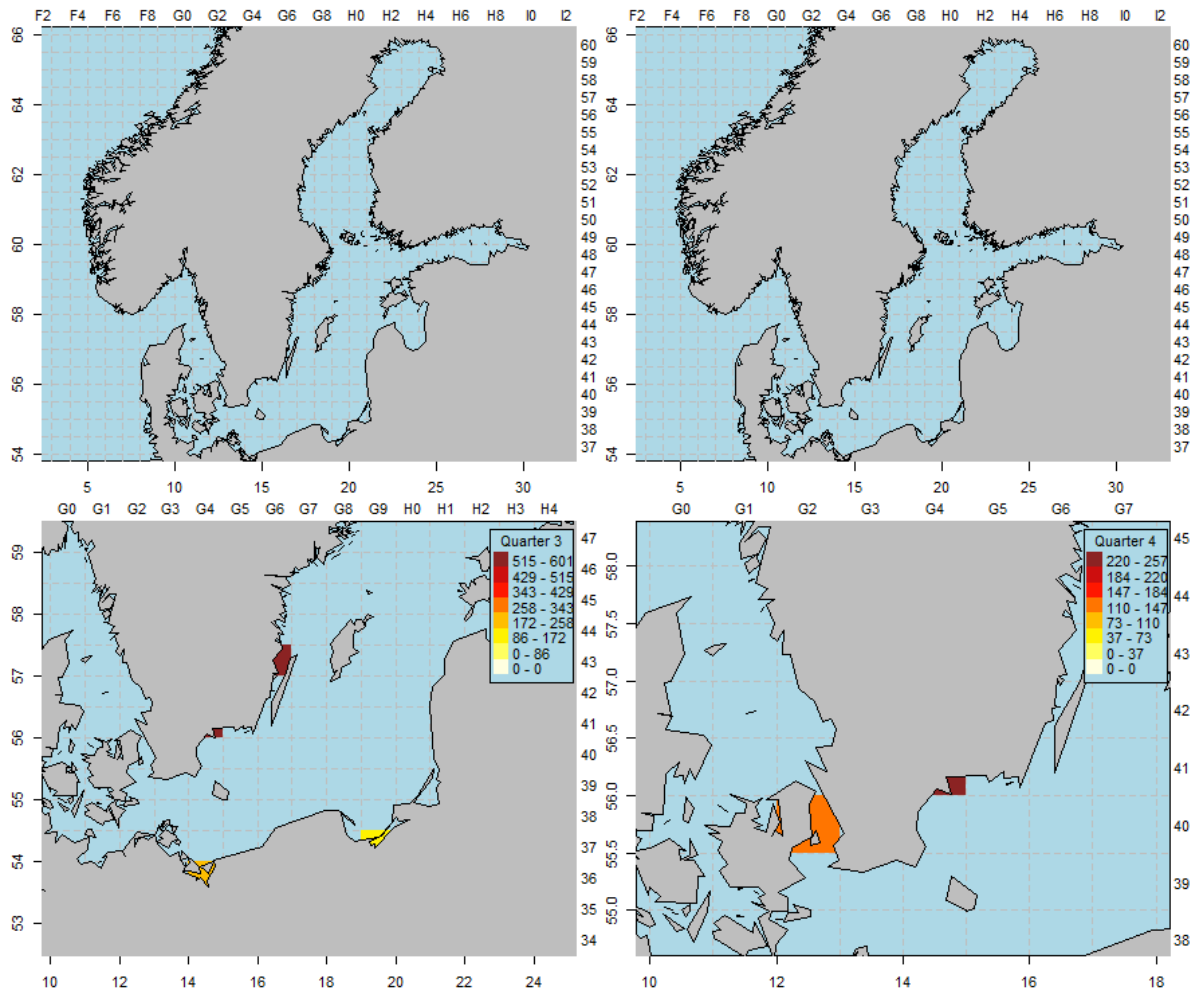
Top 10 harbours for eel2232



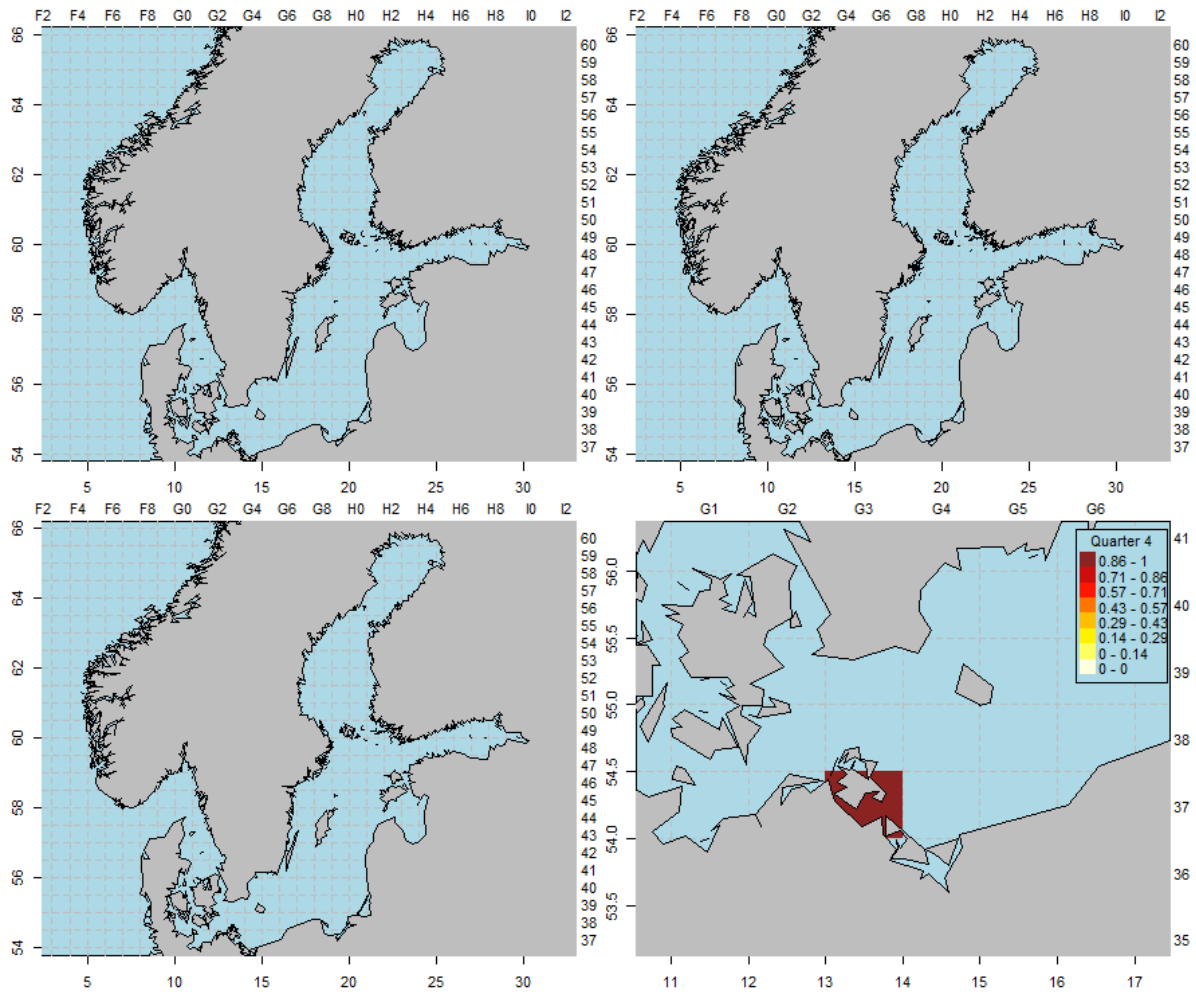
Top 10 harbours for eel2232



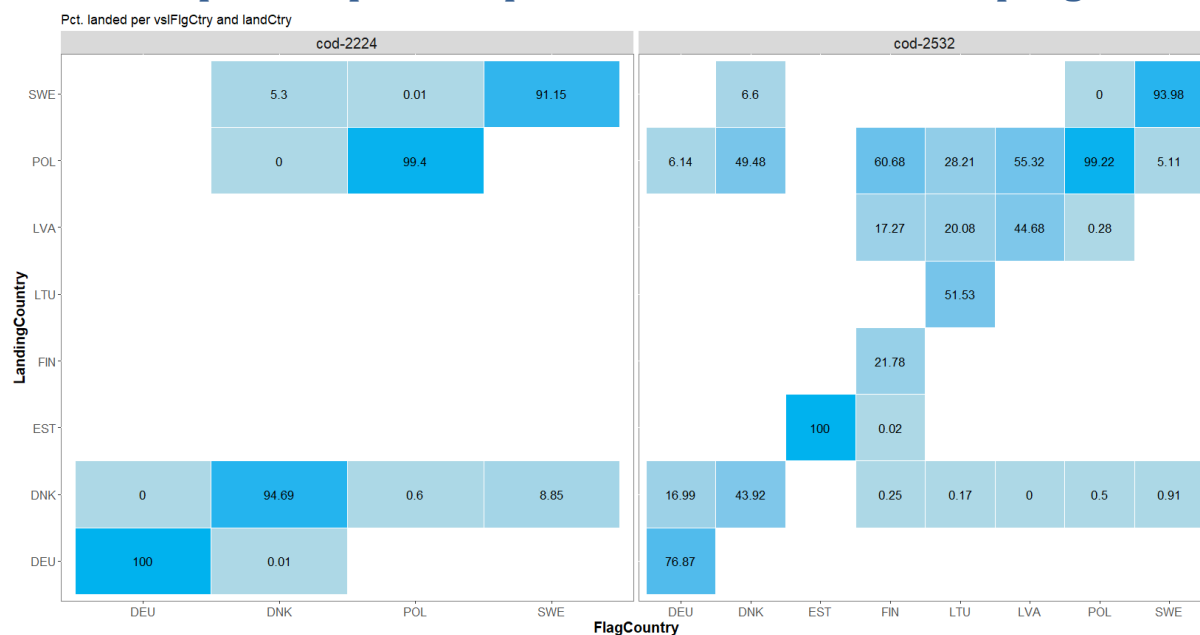
Number of length measurements for eel2232 for year 2017 for LAN



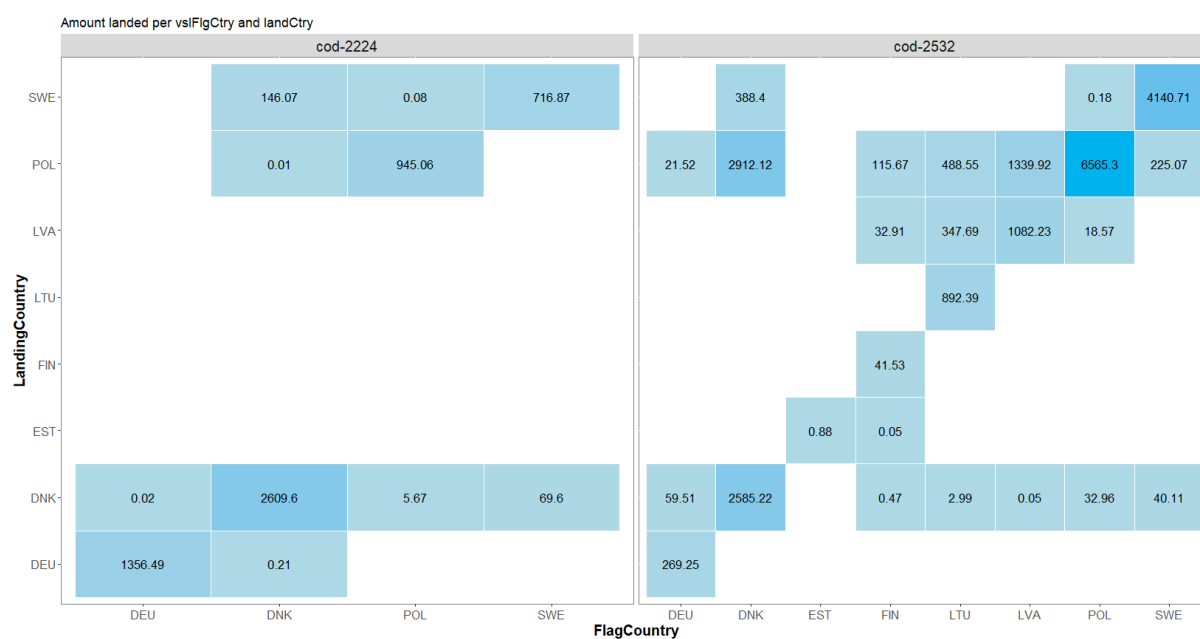
Number of length measurements for eel2232 for year 2017 for DIS



Annex 13. Case study Baltic cod. Overviews on landing distributions and the respective spatiotemporal distribution of the sampling

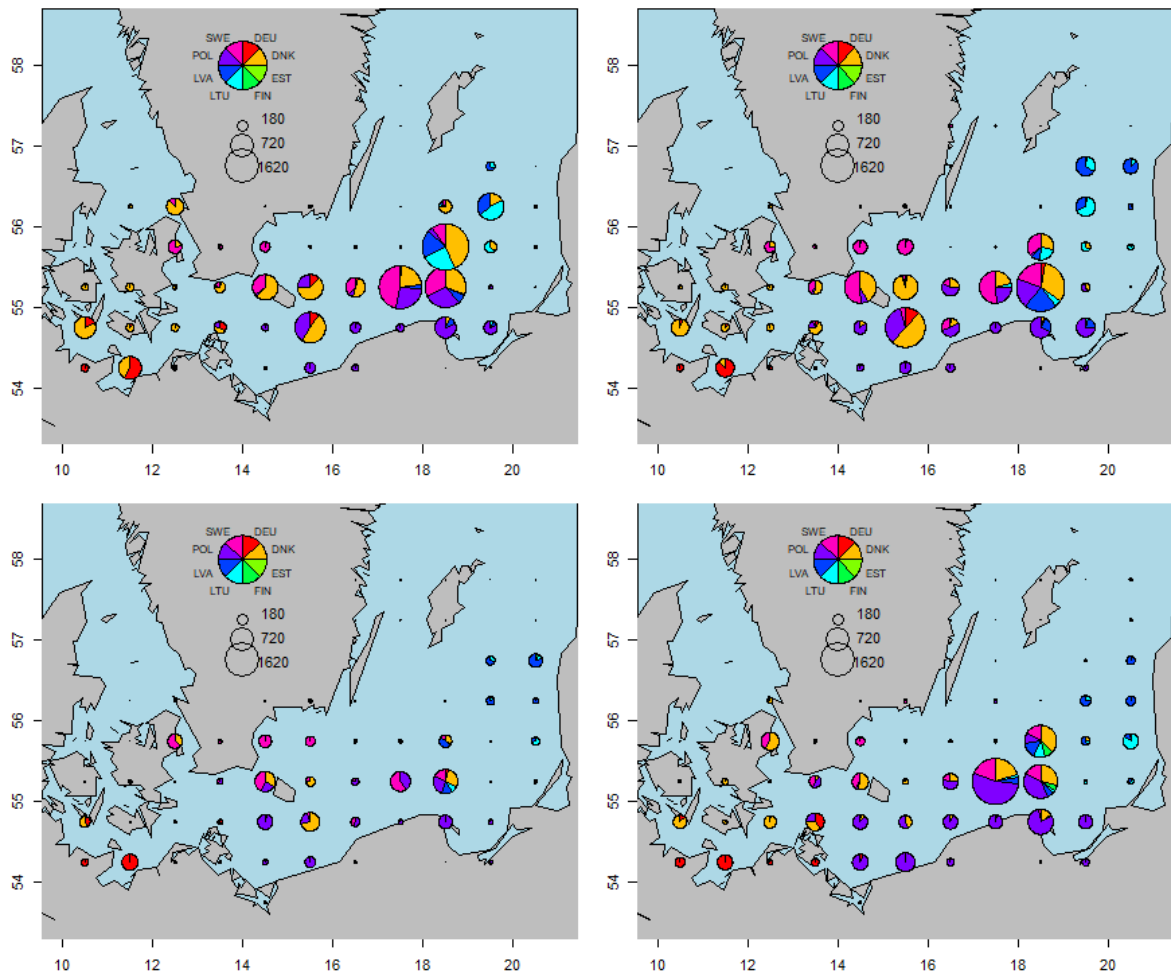


Landings of cod in foreign harbors (as % relative to Flag country)



Landings of cod in foreign harbors (total landings weight in tons)

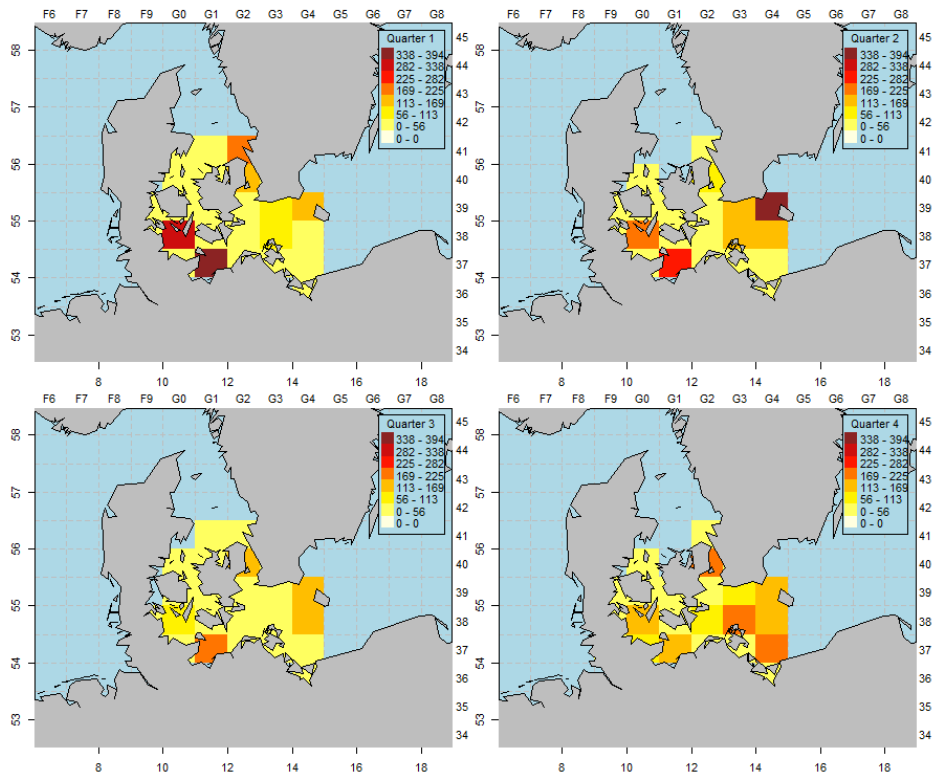
Landings (t) for cod in 2017 by flag country



Landings of cod 2017 per MS and rectangle. The size of the circle represents the amount landed

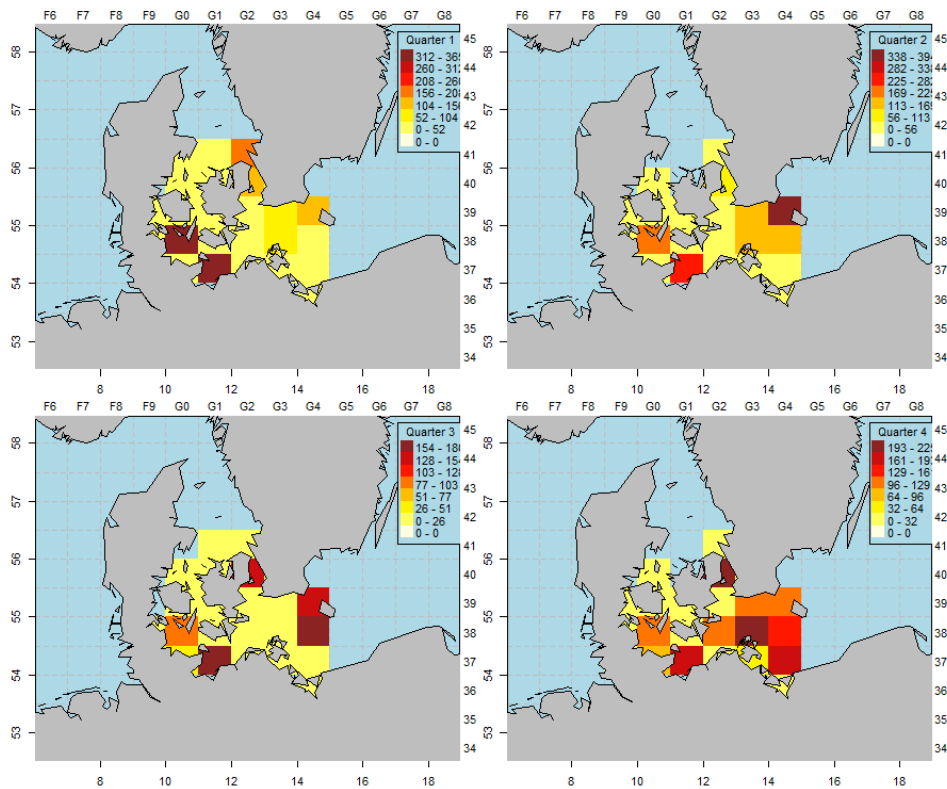
Scale adjusted over the whole year

Landings (t) for cod2224 for year 2017

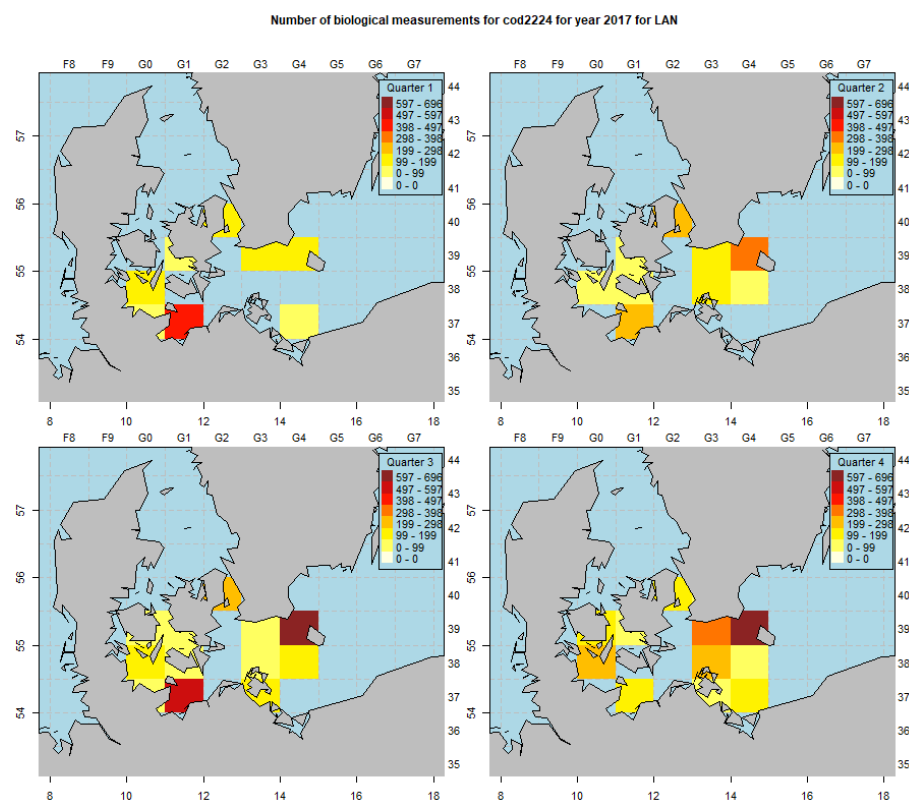


Cod.27.3.22-24: total landings 2017 per quarter. *Scale adjusted over the whole year*

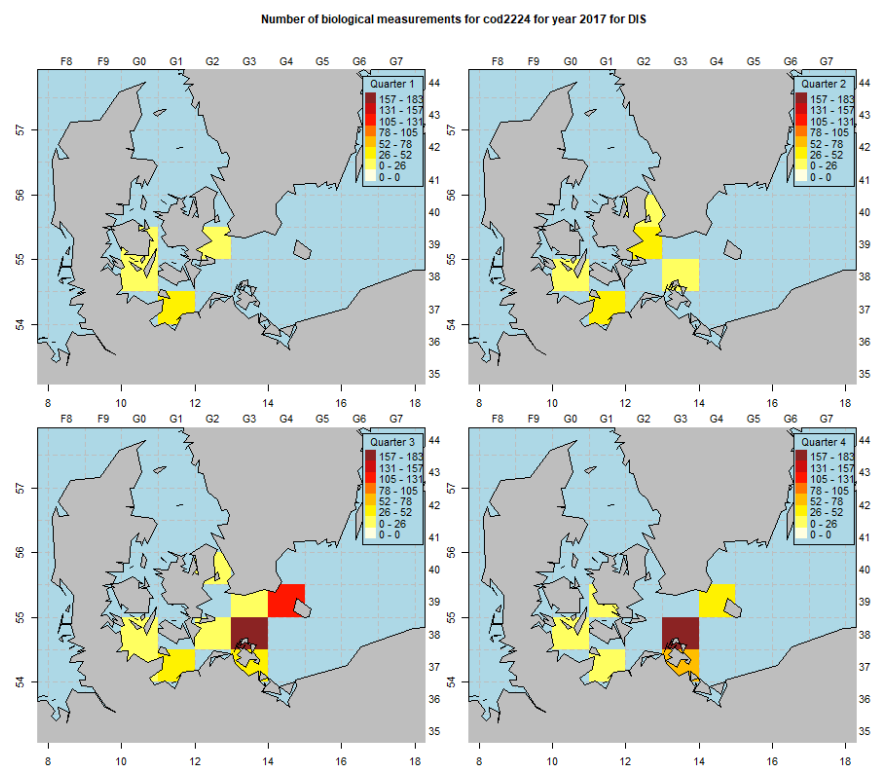
Landings (t) for cod2224 for year 2017



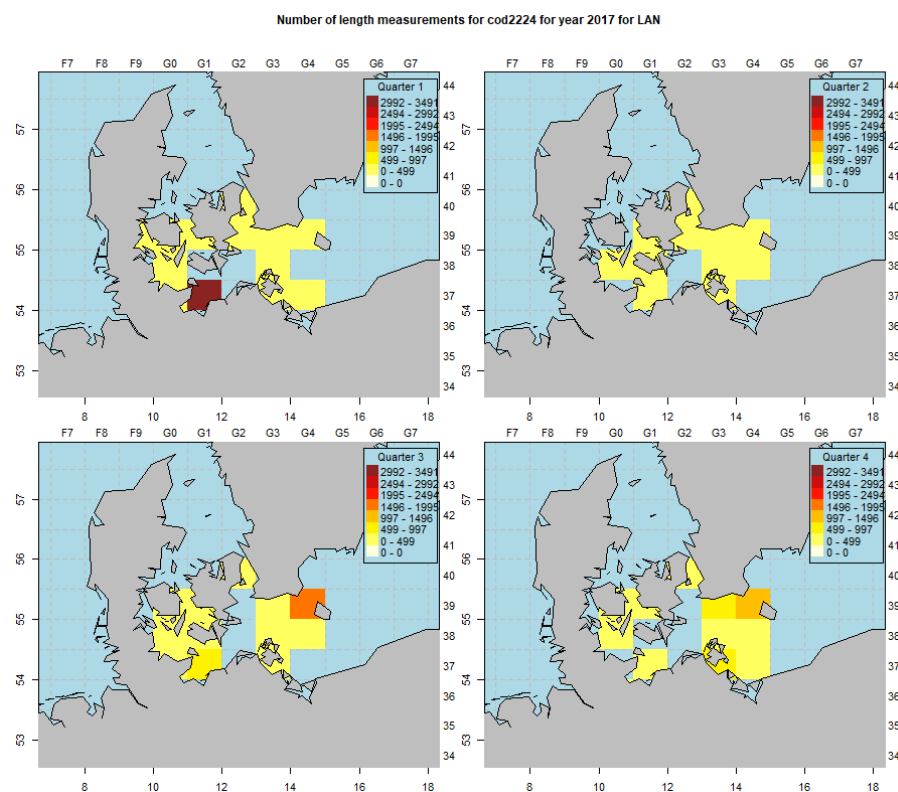
Cod.27.3.22-24: total landings 2017 per quarter. *Scale adjusted to the respective quarter*



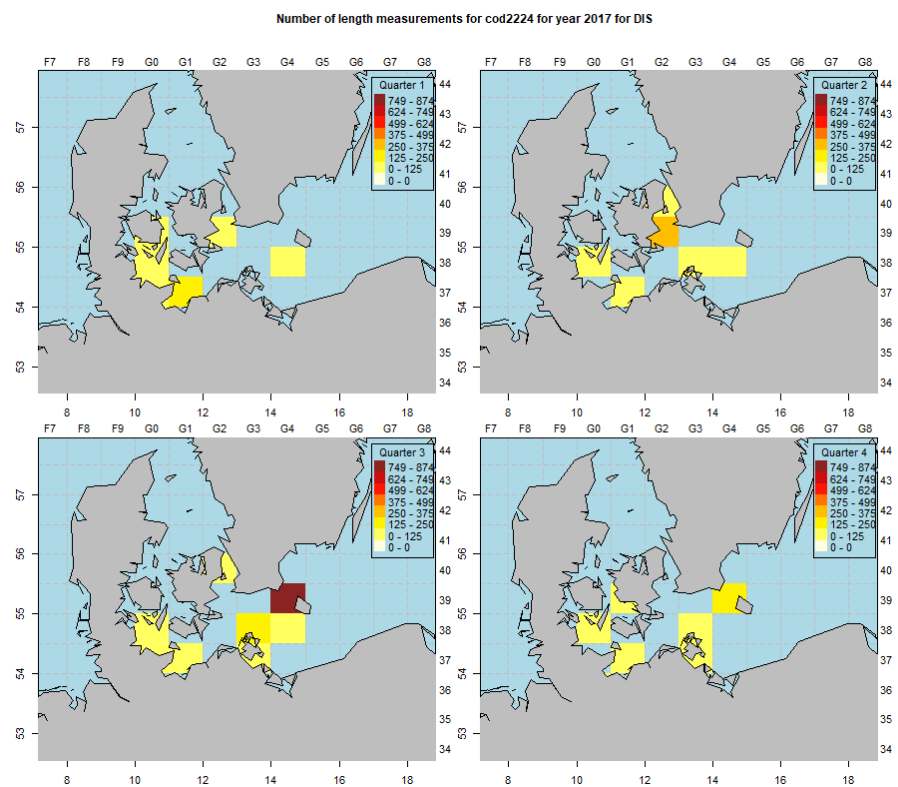
Cod.27.3.22-24: number of biological samples (CA) from the landings fraction 2017 per quarter*
Scale adjusted over the whole year



Cod.27.3.22-24: number of biological samples (CA) from the discard fraction 2017 per quarter* *Scale adjusted over the whole year*

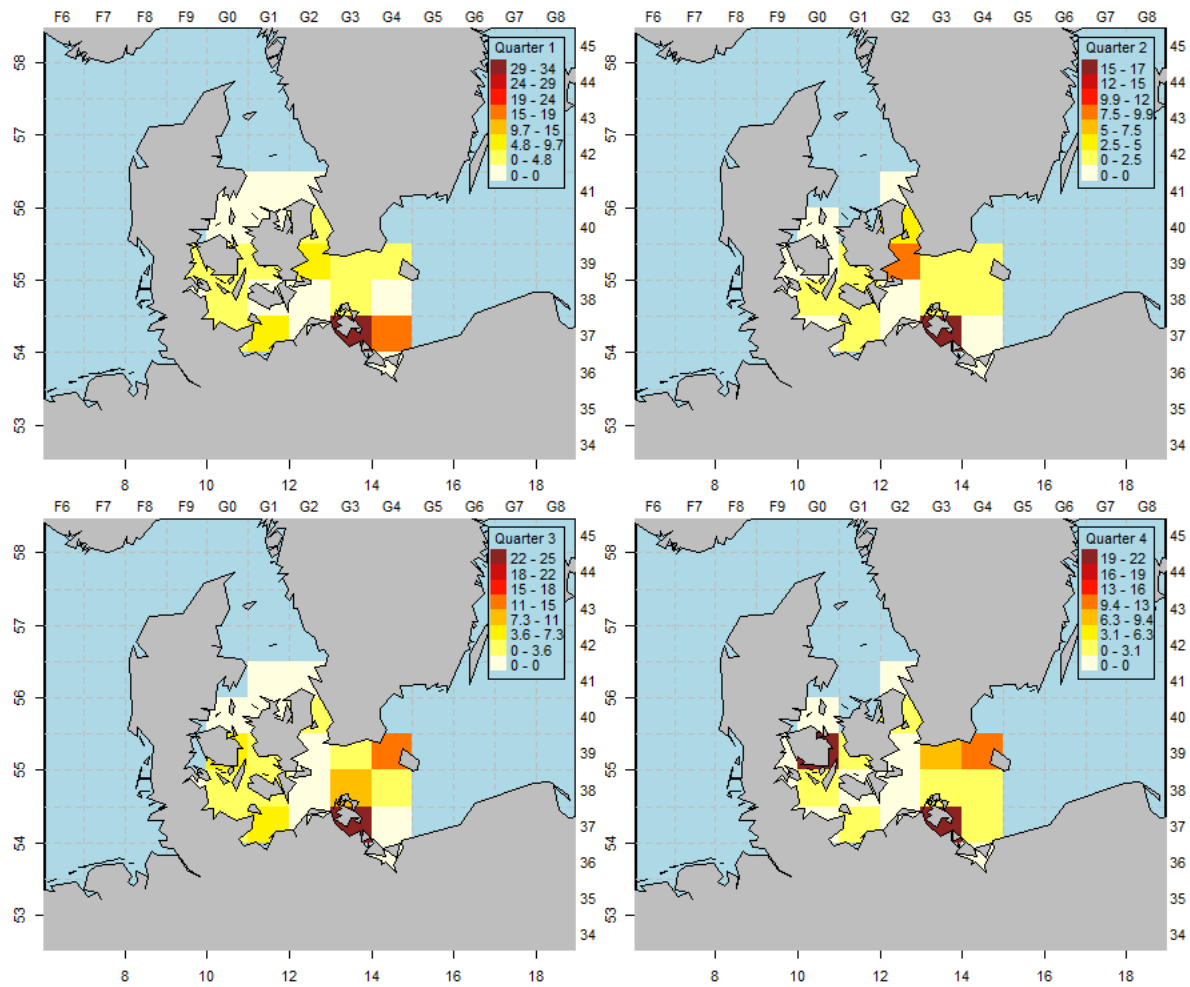


Cod.27.3.22-24: number of length measurements (HL) from the landings fraction 2017 per quarter*
Scale adjusted over the whole year



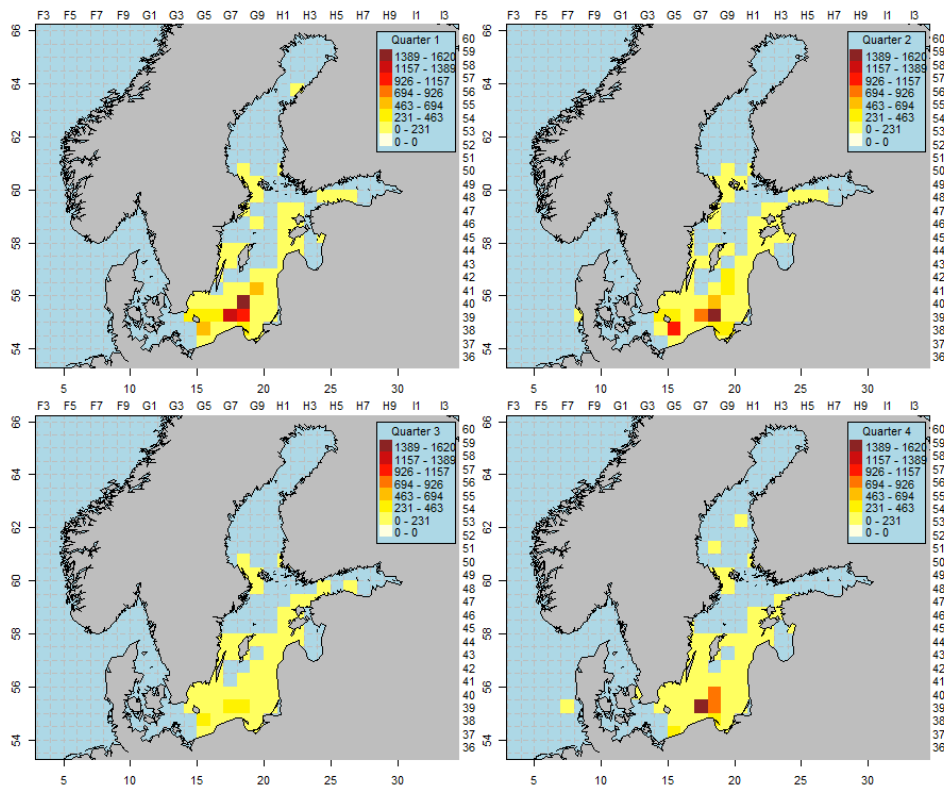
Cod.27.3.22-24: number of length measurements (HL) from the discard fraction 2017 per quarter*
Scale adjusted over the whole year

Number of length measurements / Landings (t) for cod2224 for year 2017



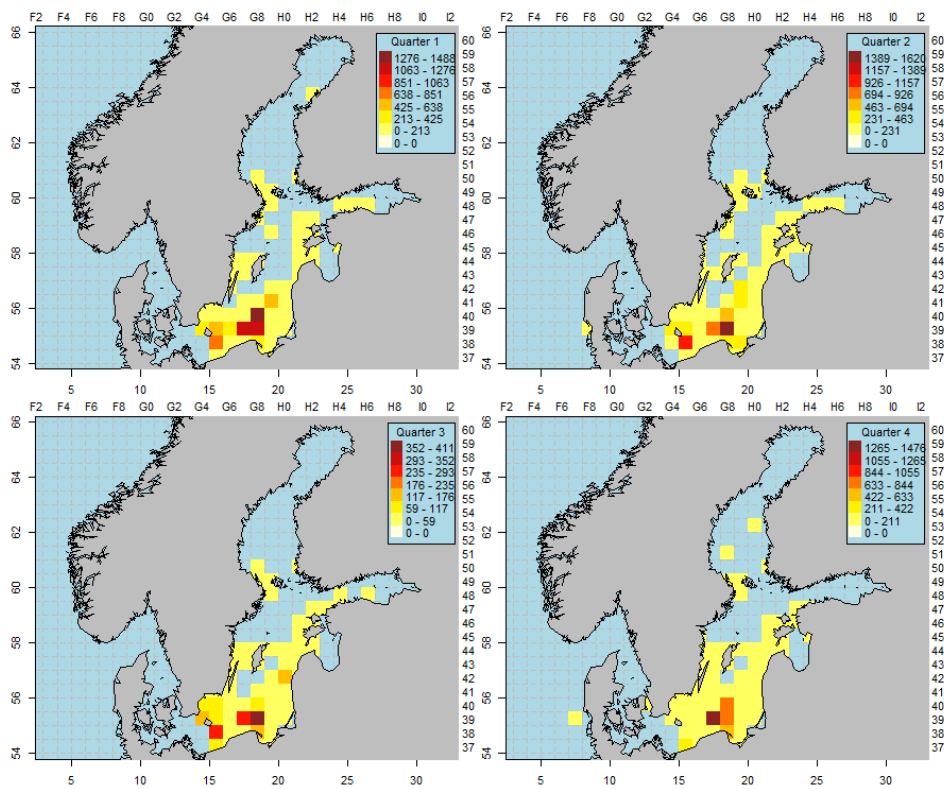
Cod.27.3.22-24: sampling intensity (number of length measurements per ton of landings) in 2017 per quarter

Landings (t) for cod2532 for year 2017



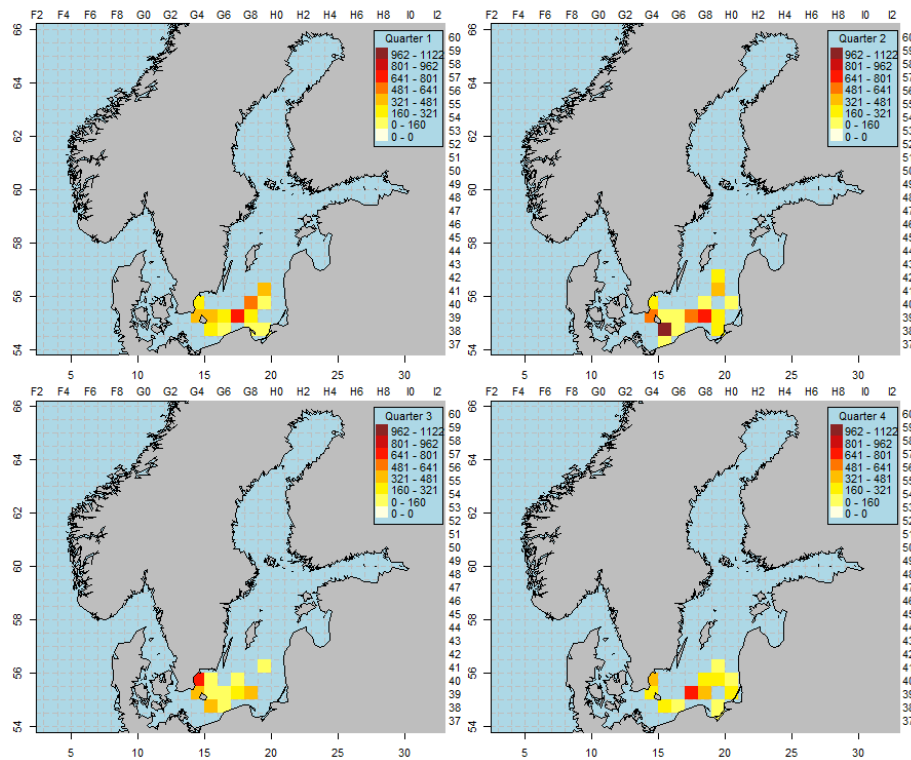
Cod.27.3.25-32: total landings 2017 per quarter *Scale adjusted over the whole year*

Landings (t) for cod2532 for year 2017



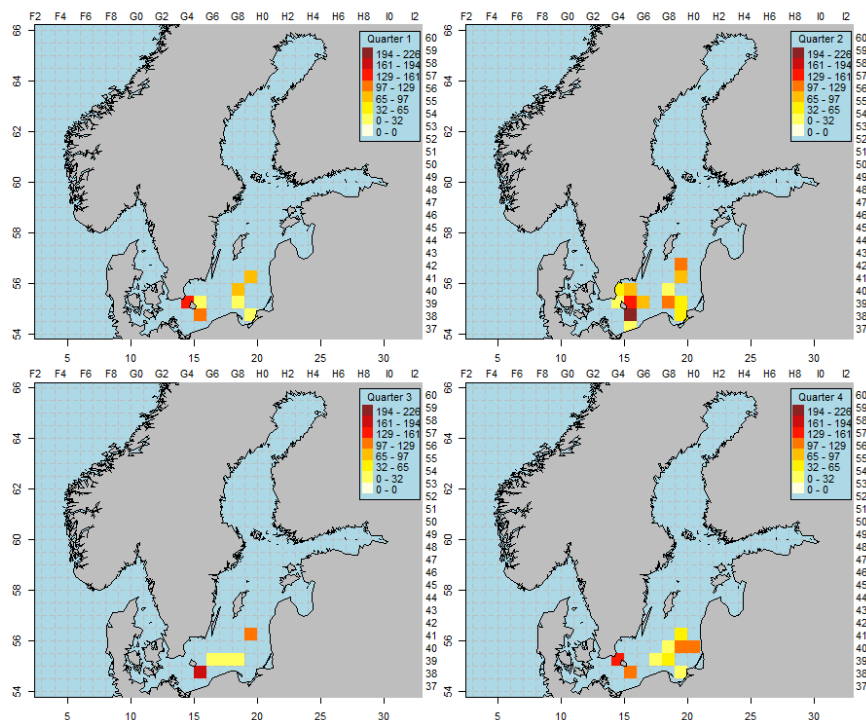
Cod.27.3.25-32: total landings 2017 per quarter. *Scale adjusted to the respective quarter*

Number of biological measurements for cod2532 for year 2017 for LAN



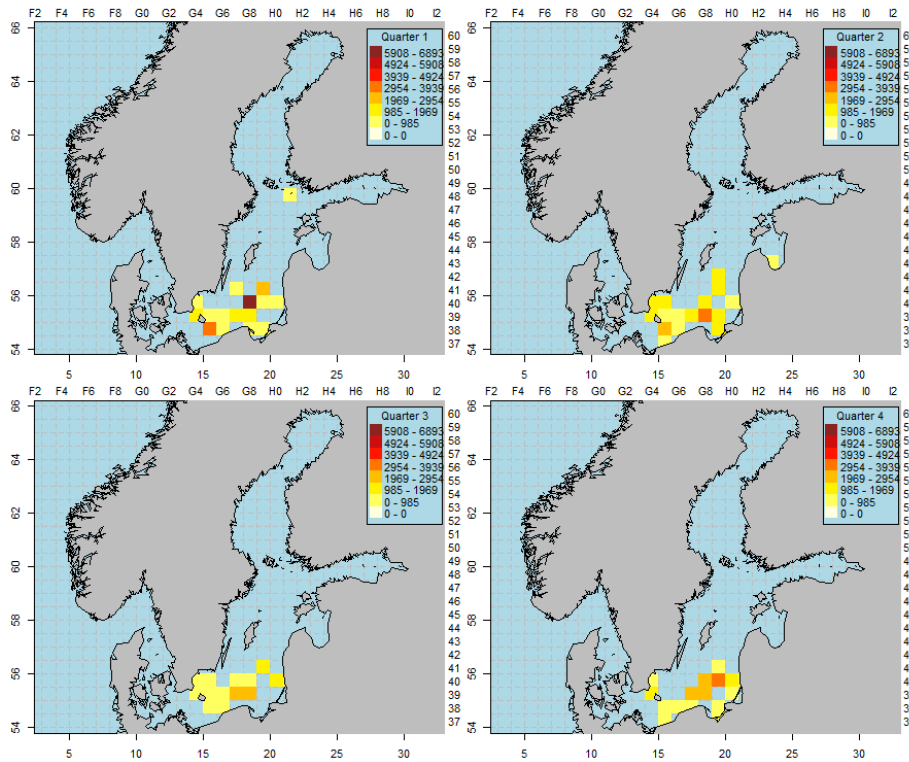
Cod.27.3.25-32: number of biological samples (CA) from the landings fraction 2017 per quarter. *Scale adjusted over the whole year*

Number of biological measurements for cod2532 for year 2017 for DIS



Cod.27.3.22-24: number of biological samples (CA) from the discard fraction 2017 per quarter. *Scale adjusted over the whole year*

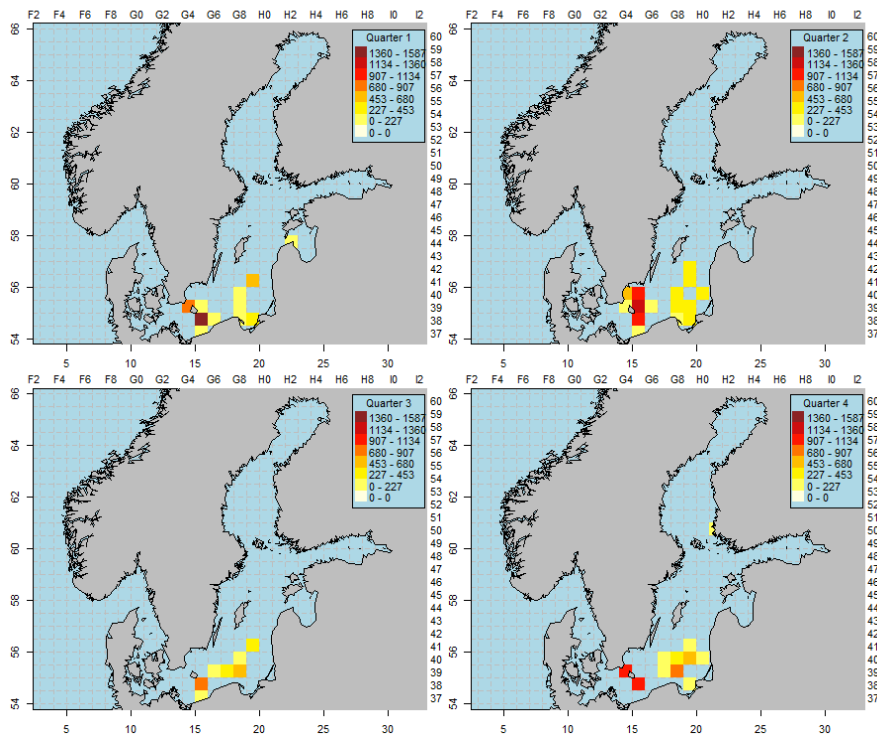
Number of length measurements for cod2532 for year 2017 for LAN



Cod.27.3.25-32: number of length measurements (HL) from the landings fraction 2017 per quarter*

Scale adjusted over the whole year

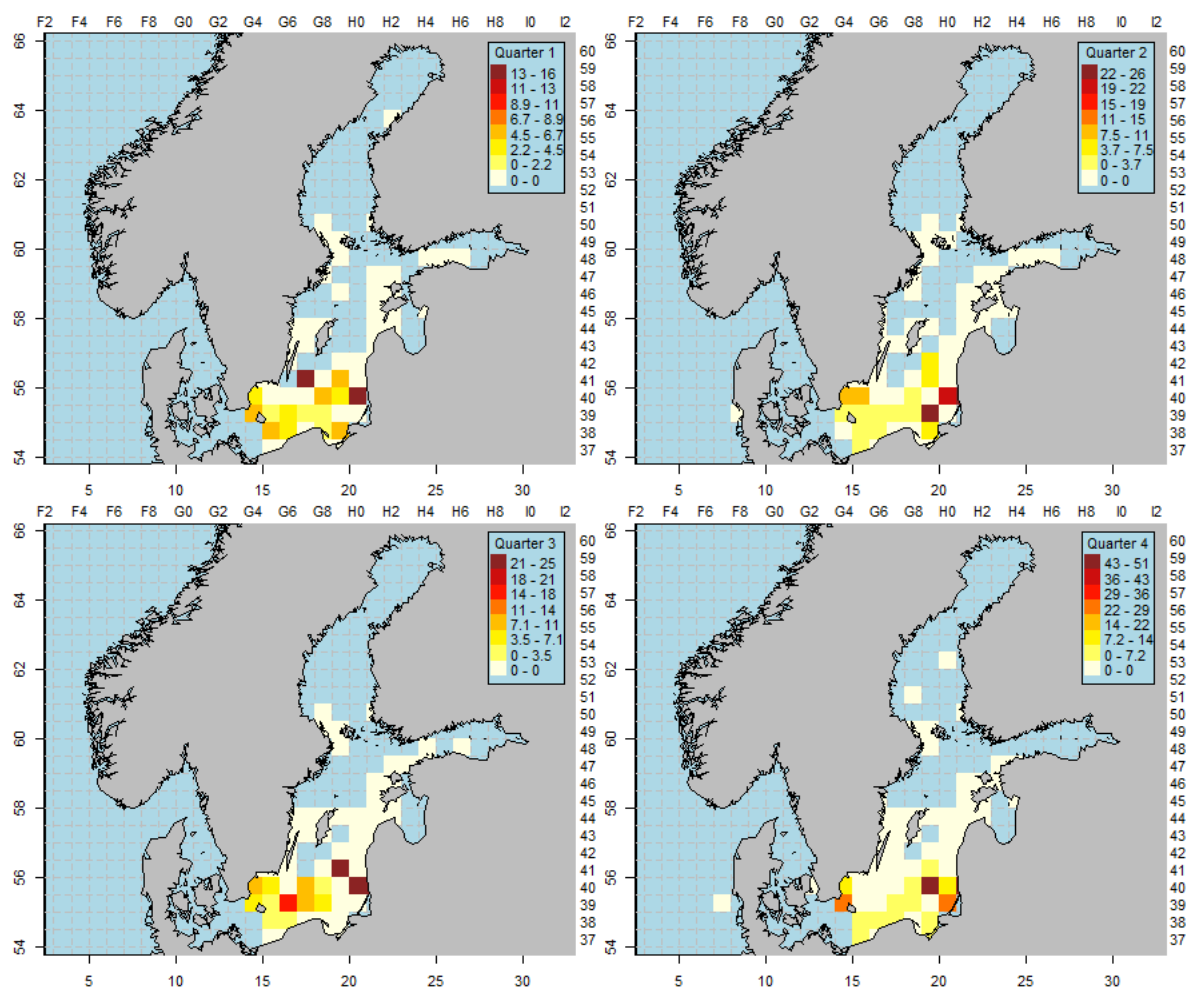
Number of length measurements for cod2532 for year 2017 for DIS



Cod.27.3.25-32: number of length measurements (HL) from the discard fraction 2017 per quarter*

Scale adjusted over the whole year

Number of length measurements / Landings (t) for cod2532 for year 2017



Cod.27.3.25-32: sampling intensity (number of length measurements per tons of landings) in 2017 per quarter

Commercial Fisheries Data

Data policy for the Regional Database (RDB) and Regional Database and Estimation System (RDBES)

4 January 2018



Goal

The present Regional Database, and the new Regional Database and Estimation System are herein referred to as the RDBES. The Regulation (EU) 2017/1004² is hereafter referred to as the Data Collection Framework (DCF).

The main aim of the RDBES is to:

- 1) To ensure that data can be made available for the coordination of regional fisheries data sampling plans, including for the DCF Regional Coordination Groups (RCGs),
- 2) To provide a regional estimation system such that statistical estimates of quantities of interest can be produced from sample data,
- 3) To serve and facilitate the production of fisheries management advice and status reports,
- 4) To increase the awareness of fisheries data collected by the users of the RDBES and the overall usage of these data.

The goal of this policy is to clearly state the conditions for data submission, data access and usage rights. The database herein is the regional database referred to in Article 18(1) of the DCF.

Scope

For the European Union Member States, the basis for data policy rules is the provisions of the DCF, specifically Article 18(1) available in the annex 1.

For non-EU countries, the basis for data policy rules is in accordance with the limitations on data use specified by each country³.

This policy applies to all providers and users of data uploaded into the RDBES, and to ICES activities for providing access to data.

Access rights

According to the DCF, provision on access rights and time frame are described under Articles 17(1), 17(3) and 17(4) provided in the annex 1 to this document.

The DCF defines:

- iii) **Detailed data** as data based on primary data in a form that does not allow natural persons or legal entities to be identified directly or indirectly
- iv) **Aggregated data** as the output resulting from summarising the primary or detailed data for specific analytical purposes

Data use for fisheries management:

² Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

³ In response to official data calls to the RDB

Advice to Fisheries Management

- v) Countries grant permission for **aggregated** data, see Annex 2, to be used by ICES in the provision of scientific advice to the European Commission and other ICES clients of scientific advice. A list of the ICES groups that require access to aggregated data will be provided to the RCG's and ACOM members by **01 DEC** each year.
- vi) EU Member States (MS) grant permission for **detailed** data to be used by the RCG's for the purposes of Article 9 of the DCF.
- vii) An ICES entity on the approved list in (i), requiring **detailed** data from the RDBES, via the RDBES host can request access in writing to each country and EU MS⁴. The EU MS will be obliged to respond within two months from the date of the request.

Other uses

- viii) An entity requiring **detailed** or **aggregated** data from the RDBES, can request access in writing to each Country. The EU MS will be obliged to respond within two months from the date of the request.

For requests related to scientific publication, for EU MS Article 17(7) of the DCF applies.

Persons from the European Commission have full access to, or can receive, EU countries' data from the RDB/RDBES.

An **inventory**, based on MS public reports, of data housed in the RDBES is available without restriction and on the RDBES website.

Access Roles

Based on the access granted in Access rights, users are given access to RDBES according to a role based matrix. For simplification and as guidance, the version presented below is shown with fewer roles and access types than are available in the actual role matrix that controls access in RDBES. All roles are managed by password controlled login, with the exception of 'Public' where no login is granted/required.

	National Responsible	Detailed Data Reader	Aggregated Data Reader	Public
Manage	X			
Process/estimate	X	X		

Read/Download data

- Detailed data	X	X		
- Aggregated data	X	X	X	
- Inventory	X	X	X	X

⁴ The focal point in EU MS being National Correspondents in consultation with individual countries or autonomous data providers within member states. For non EU countries the ICES delegate is considered the focal point.

Governance of the RDBES

The RDBES is hosted by ICES and is managed by a steering committee (SCRDBES).

Security

RDBES is hosted on a secure server and restricted to persons who have a user name and a password, a user name is for the sole use of that individual. Login is through a website secured with HTTPS protocol.

The RDBES follows the principles of personal data protection, as referred to in Article 2 of the DCF.

Data ownership

The national data in RDBES is owned by the individual countries.

Policy for Data Providers

Although the ICES Data Centre may perform some data quality/integrity control, the data providers always retain complete responsibility for data quality, according to Article 14 of the DCF.

When changes (new data and revisions) are made in the data source (the national database containing the primary data) countries are responsible to in a timely manner update and process their own data in the RDBES.

It is the responsibility of the data provider to make sure that data that cannot be identified to any individual vessel or legal entity or at a resolution violating confidentiality rules⁵.

Policy for Use of Data

ICES, as the host and maintainer of the RDBES, will make data available in a timely way according to the defined **Access rights**

- Correct and appropriate data interpretation is solely the responsibility of data users.
- Data sources (individual data providers) must be duly acknowledged.
- Data Users are obliged to inform ICES of any suspected problems in the data.
- Data Users must respect any and all restrictions on the use or reproduction of data such as restrictions on use for commercial purposes

Data can be shown in reports as described in Annex 2

Data Quality

According to Articles 14(1) of the DCF Member States are responsible for the quality and completeness of the primary data collected under national work plans, and for the detailed and aggregated data derived therefrom which are transmitted to end-users of scientific data. For non-EU countries, with reference to the ICES Data policy, data providers are responsible for the quality and completeness of data delivered to ICES.

On the basis of the recommendations made by the SCRDBES, ICES develops and applies quality assurance procedures as appropriate and feasible, and in cooperation with data providers and other organizations. ICES may also receive reports on potentially erroneous data. ICES will inform data providers of relevant quality issues.

DISCLAIMER

⁵ The principles of personal data protection, as referred to in Article 17(2) in Regulation (EU) 2017/1004.

Correct and appropriate data interpretation is solely the responsibility of data users. Data Users must not expressly or otherwise imply ICES substantiation of their work, results, conclusions and/or recommendations.

Whilst the data have been quality controlled by the supplying institutes, there are inherent flaws in gathering the information and care should be taken in analysing the data for purposes that the data were not primarily intended for. Thus users are urged to treat the data with caution.

If the user has any queries on the validity of the data, to report errors, or the conclusions to be drawn from the analysis they have undertaken, please contact RDBsupport@ices.dk. If the query is about a specific national dataset then the user may wish to contact the National Focal Point for Fisheries data collection (<http://datacollection.jrc.ec.europa.eu/national-correspondent>) or ACOM member for non-EU countries (<http://ices.dk/community/groups/Pages/ACOM.aspx>).

Data Policy Document - Annex 1: Relevant articles from “Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008”

Article 2 (Data protection): Where relevant, the processing, management and use of data collected under this Regulation shall comply with, and be without prejudice to, Directive 95/46/EC and Regulations (EC) No 45/2001 and (EC) No 223/2009.

Article 14(1): Member States shall be responsible for the quality and completeness of the primary data collected under national work plans, and for the detailed and aggregated data derived therefrom which are transmitted to end-users of scientific data

Article 17(1): EU Member States shall set up adequate processes and electronic technologies to ensure an effective application of Article 25 of Regulation (EU) No 1380/2013 and of this Regulation. They shall refrain from any unnecessary restrictions to the dissemination of detailed and aggregated data to end-users of scientific data and other interested parties.

Article 17(3): In the case of requests made by end-users of scientific data in order to serve as a basis for advice to fisheries management, Member States shall ensure that relevant detailed and aggregated data are updated and made available to the relevant end-users of scientific data within the deadlines set in the request, which shall not be shorter than 1 month from the date of receipt of a request for those data.

Article 17(4): In the case of requests other than those referred to in paragraph 3, Member States shall ensure that the relevant data are updated and made available to the relevant end-users of scientific data and other interested parties within a reasonable period of time. Within 2 months from the date of receipt of the request, the Member States shall inform the requesting party of the duration of such time, which shall be proportionate to the scope of the request, and of the possible need of additional processing of the data requested.

Article 17(7): Where detailed data are requested for scientific publication, Member States may, in order to protect the professional interests of data collectors designated by the body in charge of the implementation of the national work plan, require that the publication of data be delayed by 3 years from the date to which the data refer. Member States shall inform the end-users of scientific data and the Commission of any such decision and of the reasons therefor.

Article 18(1): With a view to reducing costs and facilitating access to detailed and aggregated data for end-users of scientific data and other interested parties, Member States, the Commission, scientific advisory bodies and any relevant end-users of scientific data shall cooperate to develop compatible data storage and exchange systems, taking into account the provisions of Directive 2007/2/EC. Those systems shall also facilitate dissemination of information to other interested parties. Such systems may take the form of regional databases. Regional work plans referred to in Article 9(8) of this Regulation may serve as a basis for agreement on such systems.

Link to Regulation

<https://publications.europa.eu/en/publication-detail/-/publication/dd3dc59f-557f-11e7-a5ca-01aa75ed71a1>

Data Policy Document - Annex 2: Use of data

Detailed and Aggregated data

According to the definitions in this Data Policy, which is taken from the EU Regulation 2017/1004, landing (CL) and effort data (CE) are considered aggregated data, and sample data (CS) are considered detailed data. The sample data (CS) will have to be aggregated to month and sub-division/unit to be considered aggregated.

Rules for use of data from the RDB

The data cannot be shared with other persons outside the specific RCG or specific ICES Expert Group and cannot be used for other purposes than within the specific RCG or specific ICES Expert Group. The data can be stored at the RCG's or ICES Expert Group's SharePoint but must be password protected, and the chair must control access to the password. All persons who have a version of the data must delete the data after the specific RCG or specific ICES Expert Group have finished its work.

Showing data in public reports

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 ⁶
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Landings (CL) and Efforts (CE) specific rules

The data that will be publicly available through the RCGs or ICES Expert Groups reports must be aggregated to at least the following highest resolution level.

In the overall data there in general must be more than two different units in each variable to be able to aggregate over the variables (e.g. to aggregate by country the data must include at least 2 different countries). 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. Only one option/figure can be shown to ensure conclusions cannot be drawn from a combination of several figures:

VESSEL FLAG COUNTRY	YEAR	MONTH	SPECIES	METIER LEVEL 4-6	VESSEL LENGTH CATEGORY	STATISTICAL RECTANGLE
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The following are some examples of this rule

Examples:

⁶ Subdivision or unit (FAO definition, <http://www.fao.org/fishery/area/Area27/en>)

Landings data can be plotted by species, statistical rectangles and year when data are aggregated over country, month, metier level 4-6 and vessel length category.

Effort data can be plotted by metier level 4-6, statistical rectangles and year when data are aggregated over country, month and vessel length category and species.

If it is needed to publish data at higher resolution the relevant National Correspondents have to be asked for approval.

Sample (CS) specific rules

The data that will be public available through the RCGs or ICES Expert Groups reports should be aggregated to the same level as the landings data.

The CS data holds information (auxiliary variables and obtained data) from sampled trips. **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.**

Data need to be aggregated before shown in tables or figures. In this context data covers both the data in the CS and data derived from the CS data e.g. estimated discard.

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, and only one option/figure can be shown to ensure conclusions cannot be drawn from a combination of several figures:

VESSEL FLAG COUNTR Y	YEA R	MONT H	SPECIE S	METIE R LEVEL 4-6	VESSEL LENGTH CATEGOR Y	VESSEL SIZE CATEGOR Y	VESSEL POWER CATEGOR Y	STATISTIC AL RECTANGL E
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The following are some examples of this rule

Sampling example:

Sampling data can be plotted by species, statistical rectangles and yearonly when data are aggregated over country, month, metier level 4-6, vessel length category, vessel size category, vessel power category.

Map Plotting

Individual hauls (HH) holds information on the geographical positions from sampled fishing operations. It is sometimes valuable to show these positions (e.g. for QA purposes). If doing so only meta data or auxiliary variables can be used in the plots - never the result of the actual sampling. When plotting maps a *maximum* of three of the following variables can be used.

VESSEL FLAG COUNTR Y	YEA R	MONT H	SPECIE S	METIE R LEVEL 4-6	VESSEL LENGTH CATEGOR Y	VESSEL SIZE CATEGOR Y	VESSEL POWER CATEGOR Y	POSITIO N
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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.

Example: It is allowed to plot the positions of fishing operations by year, species and countries as long as metiers, vessel size category, vessel power category, vessel length category and month are left out. If the data user wanted to include metiers instead then one of the other variables (year, species or country) would need to be left out

If it is needed to publish data at higher resolution the relevant National Correspondent have to be asked for approval.

Individual fish

Individual fish (CA) holds information on measurement from individual fish. It is always acceptable to show these as individual measurements.

Annex 15. A suggestion by intersessional workgroup on survey participation and share of survey days

Cost-sharing of surveys (Table 10 EU-MAP) in the Baltic region - A way forward ?

Document to RCG Baltic 2018 produced by Intersessional Subgroup on cost sharing of surveys (Maria Hansson, SLU Aqua; Ari Leskelä, Luke; Jörgen Dalskov DTU Aqua)

Introduction

In accordance to the recast of the Data Collection Framework Regulation⁷ a list of mandatory research surveys at sea should be completed. Also a thresholds is set below which it is not mandatory for Member States to carry out research surveys at sea.

According to the EU MAP⁸ a Member State's participation (physical or financial) in mandatory research surveys at sea is not mandatory when its share of a Union TAC of the survey target species is below a threshold of 3 %. Where no TAC is set, a Member State's participation (physical or financial) in research surveys at sea is not mandatory when its share of the total Union landings of the preceding 3 years of a stock or species is below a threshold of 3 %. Thresholds for multispecies and ecosystem surveys may be defined at marine region level. Within the same marine region, Member States may agree on alternative thresholds.

The first initiatives for analyzing Member States present effort in contributing to the mandatory surveys listed in table of the EU MAP were carried out at a pan-regional subgroup on cost sharing of research surveys at sea held in Gothenburg, Sweden in December 2016. More in depth analysis for the Baltic region was carried out at the RCG meeting in 2017.

At the RCG Baltic meeting in 2017 it was agreed that cost sharing of surveys at sea for the Baltic region and possible implications should be further analyzed by an intersessional subgroup.

The common cost sharing model is using only number of days as the basis for the sharing of surveys. Before taking the next step towards cost sharing, it has been discussed whether other models should be tested by using other variables as the basis for the share (e.g. number of hauls, value).

RCG Baltic 2017 also discussed the importance of starting a process to analyze if the current total number of days/number of hauls is appropriate for the end-user needs. However, this was considered a significant challenge because it would require comprehensive analyses of available data and a suitable model for testing of alternative survey strategies at sea. Therefore, there was no conclusion on how to proceed.

⁷ REGULATION (EU) 2017/1004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

⁸ COMMISSION IMPLEMENTING DECISION (EU) 2016/1251 of 12 July 2016 adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019

This document is proposing a way forward for making agreements for cost sharing of surveys for the Baltic region and is based on the outcomes and findings from the intersessional work that started in 2016.

Suggestions for moving forward

The intersessional group on “cost sharing of surveys” in the Baltic suggests and believes in the following prerequisites for cost sharing:

1. Avoid major changes in current setup since the list of surveys (table 10 in EU-MAP) will be reviewed in 2019.
2. The end-user needs (coverage in space and time) has to be confirmed before major changes should take place, like re-shuffling of effort between MS.
3. Stick to the outcome from the pan regional subgroup work - *There is no need to fix something if it ain't broken*
4. Work towards efficient and optimal use of research vessels within the region and maybe consider financial cost sharing between MS for running the surveys on a few number of vessels (like the current setup for ASH survey).

The traffic light plot below is presenting the outcome from the exercise done by pan-regional subgroup on cost sharing of research surveys at sea. Calculation of % TAC of the main species in the surveys, together with number of days performed by survey by each MS. Red cells show the cases, where a country has a TAC share larger than the 3% threshold, but is not participating in the survey. Such surveys are BIAS, RHLS and SPRAS. However, the RHLS survey is a national survey and takes place in German territorial waters. A more detailed calculation of the two surveys (BIAS and SPRAS) where we suggest actions to be taken is presented as Annexes 1 and 2.

Sum of surveydays by ms									
Row Labels	Column Labels								Grand Total
	DEU	DNK	EST	FIN	LTU	LVA	POL	SWE	
BIAS	21	0	10	12	2	10	18	13	86
BITS Q1	23	29	0	0	2	9	28	14	105
BITS Q4	18	29	5	0	2	10	23	11	98
GRAHS	0	0	10	0	0	10	0	0	20
RHLS	54	0	0	0	0	0	0	0	54
SPRAS	22	0	5	0	2	10	12	0	51
Grand Total	138	58	30	12	8	49	81	38	414

	TAC share < 3%, no survey days
	TAC share > 3%, has survey days
	TAC share > 3%, no survey days
	TAC share < 3%, has survey days

Agreements of cost sharing f surveys in the Baltic

Based on the exercise above, following is suggested to be agreed regarding cost sharing of surveys in the Baltic Region, Tables below to be discussed and agreed by NC's and text to be completed

Surveys (listed in table 10) in the Baltic

BIAS; Baltic International Acoustic Survey	
Short description of survey, justification of current setup.	Target species are small pelagic fish species, mainly Baltic herring, sprat and additionally European anchovy. The main aim is to provide information on stock parameters of small pelagics in the Baltic Sea. Target data are biomass, weight and length distributions and length-weight-age-sex-maturity of small pelagic target species in the Baltic, including Kattegat and western Baltic Sea, Belt Sea, Sound and Arkona Sea as well as hydrographic data (temperature, salinity and oxygen). Since 2005, each country has a mandatory responsible area. That means that area by about 60 NM shall be acoustically investigated and at least two fish catch-stations needs to be performed within each statistical rectangle. it is allowed for all nations to cover also other areas. All countries except Denmark having >3 % TAC are conducting the survey. Lithuania has < 3%TAC but are conducting the survey.
Suggested changes:	Action needed: Denmark to participate in the survey. Lithuania to decide if they want to maintain their participation. If "No", WGBFAS to clarify if data coverage is sufficient without. To further help the decision-making in the cost-sharing of BIAS-survey, a more detailed calculation on MS TAC shares is shown in Annex 1.
Cost sharing agreement needed (Yes/No)	Y
Agreed by all NC's (Y/N)	
Actions to be taken, timeline	

BITS Q1; Baltic International Trawl Survey	
Short description of survey, justification of current setup.	Target species are demersal fish species, mainly Baltic cod and flatfish species (flounder, plaice, dab, brill and turbot). The main aim is to determine the year-class strength of the target species. Target data are abundances, weight and length distributions of all fishes and length-weight-age-sex-maturity data of commercially important species as well as hydrographic data (temperature, salinity and oxygen). In addition, cod stomachs and marine litter are sampled.

	All countries having TAC >3 % are participating in the survey.
Suggested changes:	No changes suggested
Cost sharing agreement needed (Yes/No)	N
Agreed by all NC's (Y/N)	
Actions to be taken, timeline	No action to be taken

BITS Q4; Baltic International Trawl Survey	
Short description of survey, justification of current setup.	Target species are demersal fish species, mainly Baltic cod and flatfish species (flounder, plaice, dab, brill and turbot). The main aim is to determine the year-class strength of the target species. Target data are abundances, weight and length distributions of all fishes and length-weight-age-sex-maturity data of commercially important species as well as hydrographic data (temperature, salinity and oxygen). In addition, cod stomachs and marine litter are sampled. All countries having TAC >3 % are participating in the survey.
Suggested changes:	Estonia to decide if they want to maintain their participation. If "No", WGBFAS to clarify if data coverage is sufficient without
Cost sharing agreement needed (Yes/No)	N
Agreed by all NC's (Y/N)	
Actions to be taken, timeline	Follow up on the answer from Estonia.....

GRAHS; Gulf of Riga Acoustic Herring Survey	
Short description of survey.	The aim of the survey is to obtain the fisheries-independent information for tuning analytical stock assessment models for Baltic herring in the Gulf of Riga (Gulf of Riga herring). The information obtained during the survey is used by the Baltic Fisheries Assessment Working Group of the ICES. All countries having TAC >3 % are participating in the survey
Suggested changes	No changes suggested.
Cost sharing agreement	N

needed (Y/N)	
Agreed by all NC's (Y/N)	
Actions to be taken, timeline	No action to be taken

RHLS; Rugen Herring Larvae Survey	
Short description of survey.	Target species is the western Baltic spring-spawning herring. The main aim is to monitor the spawning activity of the spring-spawning herring of the Western Baltic Sea in its main spawning area, the Greifswald Bay. Target data are a high-resolution spatial and temporal records of the larval abundance during the entire spawning period as well as hydrographic data (temperature, salinity and oxygen). Described as a national survey only.
Suggested changes	No changes suggested
Cost sharing agreement needed (Y/N)	N
Agreed by all NC's (Y/N)	
Actions to be taken, timeline	No action to be taken

SPRAS; Sprat Acoustic Survey	
Short description of survey.	Target species is sprat. The main aim is to provide information on stock parameters of sprat in the Baltic Sea. Target data are biomass, weight and length distributions and length-weight-age-sex-maturity of sprat in the Baltic Sea including Belt Sea, Sound, Arkona Sea and Bornholm Sea as well as hydrographic data (temperature, salinity and oxygen). In some areas, sampling is also done for zooplankton and ichthyoplankton. All countries have >3 % of TAC and are obliged to take part in the survey. Denmark, Finland and Sweden are not participating in the survey.
Outstanding issues /suggested changes	Action needed:

	Denmark, Finland and Sweden to participate in the survey. WGBFAS to clarify the data needs and WGBIFS to support with survey setup. NC to suggest in which way their country best could contribute, own vesseltime ?, sending staff to other countries ? paying for costs ? or a combination ? To further help the decision-making in the cost-sharing of SPRAS-survey, a more detailed calculation on MS TAC shares is shown in Annex 2.
Cost sharing agreement needed (Y/N)	Y
Agreed by all NC's (Y/N)	
Actions to be taken, timeline	

Annex 1

BIAS survey.

Cost sharing calculation based on each MS share of the herring (75% weight) and sprat (25% weight) TACs and survey days. Member states who's TAC share is under 3% are removed from the calculation. Calculation is made separately for the three main management areas. The undermost line of the table shows the difference between each MS current participation (as survey days) and its calculated obligation based on its TAC share.

TAC shares HER SD22-24, HER SD25-29, HER SD30, SPRAT 22-32								
	DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
SD22-24	55,17 %	14,02 %	0,00 %	0,01 %	0,00 %	0,00 %	13,01 %	17,79 %
SD25-29	0,58 %	2,20 %	11,23 %	21,93 %	2,92 %	2,77 %	24,91 %	33,45 %
SD30	0,00 %	0,00 %	0,00 %	81,99 %	0,00 %	0,00 %	0,00 %	18,01 %
SPRAT 22-32	6,25 %	9,86 %	11,45 %	5,16 %	5,00 %	13,83 %	29,36 %	19,07 %
TAC shares after applying 3% threshold								
	DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
SD22-24	55,18 %	14,02 %					13,01 %	17,79 %
SD25-29,32			12,27 %	23,96 %			27,22 %	36,54 %
SD30				81,99 %				18,01 %
SPRAT 22-32	6,25 %	9,86 %	11,45 %	5,16 %	5,00 %	13,83 %	29,36 %	19,07 %
Planned number of survey days in 2017 work plans								
	SD22-24	21			Weight herring		0,75	
	SD25-29,32	59			Weight sprat		0,25	
	SD30	6						
Calculated number of survey days by country based on TAC shares								
	DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
SD22-24	9	3	1	0	0	1	4	4
SD25-29,32	1	1	7	11	1	2	16	19
SD30	0	0	0	4	0	0	0	1
Planned 2017 participation by country (WG report)								
	DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
SD22-24	21	0					0	0
SD25-29,32			10	6	2	10	18	13
SD30				6				0
Difference between planned survey days vs those based on TAC share								
	DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
SD22-24	12	-3	-1	0	0	-1	-4	-4
SD25-29,32	-1	-1	3	-5	1	8	2	-6
SD30	0	0	0	2	0	0	0	-1

Annex 2

SPRAS survey.

Cost sharing calculation based on each MS share of the sprat TAC. Cost sharing calculation for the SPRAS survey is straightforward, since there is only one target species and one management area, and all member states have TAC shares over 3%. The undermost line of the table shows the difference between each MS current participation (as survey days) and its calculated obligation based on its TAC share.

TAC shares SPRAT 22-32							
DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
6,25 %	9,86 %	11,45 %	5,16 %	5,00 %	13,83 %	29,36 %	19,07 %
Planned number of survey days for 2018							
45							
Calculated number of survey days by country based on TAC shares							
DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
3	4	5	2	2	6	13	9
Planned 2018 participation by country (WG report)							
DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
20	0	5	0	2	8	10	0
Difference between planned survey days vs those based on TAC share							
DEU	DNK	EST	FIN	LTU	LVA	POL	SWE
17	-4	0	-2	0	2	-3	-9

Annex 16. Diadromous Subgroup Report – salmon experts

ToR 1 Review progress since last year

ToR 1.3: Consider feedback from End-Users (ICES EGs) to the recommendations from RCM Baltic 2017 (elaborated as points 1-5 below), and follow up accordingly.

At the RCG Baltic meeting in 2017, the Diadromous Sub Group (RCG) directed recommendations to the ICES Expert Groups WGNAS (Working Group on North Atlantic Salmon) and WGBAST (Working Group on Baltic Salmon and Trout) and asked for a response regarding end-user needs for stock assessment. A response was delivered from WGBAST (Annex 1). Although the feedback did not cover all information/data needs, it highlighted some important issues about the process of selecting Index Rivers and a brief evaluation of the need to coordinate parts of the data collection. Due to heavy workload with a full assessment in 2017, feedback was not delivered by WGNAS although the recommendations were discussed at the working group meeting.

To cover the total data/information needs for stock assessment, the RCG has elaborated the recommendations from 2017 into the following specific points that should be addressed by ICES EGs on diadromous fish before the RCG meeting in 2019:

1. For commercial fisheries in Union waters, advise on the selection of stocks for which variables (sex-ratio, maturity, fecundity) have to be collected in support of scientific advice, and the temporal frequency and sampling level of data collection.
2. For commercial fisheries in fresh-, transitional-, and marine waters specify stock-related variables to be collected for individual specimens, on age, length, weight, sex, maturity and fecundity, by life stage. Noting that the requirement to collect annual catch quantities by age class or life stage is obligatory.
3. For recreational fisheries in all waters, advise on the end-user needs for age or other biological data, noting the requirement to collect annual volume (numbers and weights or length) of catches and releases is obligatory.
4. Define the rivers to be monitored for salmon at regional level, noting that 'rivers' in the Legal Text is interpreted to represent 'water bodies' (STECF 2017). In addition the criteria for river selection should be defined.
5. Coordinate, at regional level, the selection of stocks from which salmon variables (parr, smolts, ascending adults) have to be collected, and advise on temporal frequency (annual or not) of the collection of variables for salmon.

Based on the elaborated recommendations above, the RCG has produced a first draft of a list of data needed to assess status and provide scientific advice for salmon stocks in the North Atlantic and the Baltic Sea (see table 1). The preliminary compilation needs input to give a complete picture of the data requirements and is therefore directed to WGNAS and WGBAST for their feedback to the RCG meeting in 2019. The two EGs are encouraged to consider in their responses also quality aspects and possible needs for coordination of the data collection between countries, including standardization of methodologies (e.g. age reading, electrofishing and methods to estimate smolt abundance).

The new EU data collection regulation covers to some extent data collection on sea trout in the Baltic Sea, and the feedback from WGBAST should therefore ideally include also data needs for this species. However, there is currently no analytical assessment carried out for sea trout in the Baltic Sea because of a lack of suitable methodologies. ICES working group WGTRUTTA was established in 2017 to develop assessment models and establish biological reference points for anadromous trout. Until this developmental work has been finalized, it is not possible to identify in detail which data will be needed in the future to assess status of sea trout populations in the Baltic Sea or elsewhere. The RCG therefore suggests postponing the compilation of data requirements for sea trout until WGTRUTTA has finalized its three year term and an assessment model has been agreed upon.

The group also discussed the issue of data collection on salmon stocks that have been extirpated and currently part of a reintroduction programme. The group agreed that biological data on such stocks, although very useful in monitoring the success of the programme and thus the MS, is not of great use in any international or regional stock assessment. It therefore should not be necessary to collect data on such stocks for assessment purposes. At a time when stocks return to a self-sustaining state data collection for use in international stock assessment should resume.

The RCG recommends WGNAS and WGBAST to consider the list of possible data required for Atlantic salmon stock assessments in this report (Table 1) and to report back to DSGRCG in 2019 on this list with suggestions for changes and/or additions.

The RCG recommends WGNAS and WGBAST define the rivers to be monitored and river selection criteria for Atlantic salmon at regional level, noting that 'rivers' in the Legal Text is interpreted to represent 'water bodies' (STECF 2017).

The RCG recommends WGNAS and WGBAST suggest a selection of stocks from which salmon variables (juveniles, smolts, ascending adults) have to be collected, and advise on temporal frequency (annual or not) and sampling level of the collection of variables for salmon.

Table 1: list of suggested data needs to assess status and provide scientific advice for salmon stocks in the North Atlantic and the Baltic Sea

Data requirements for Atlantic salmon stock assessment in the Baltic		Assessment requirements			Comment			
Type of data	Parameter	Currently used	Planned to be included in near future	Potentially useful				
Commercial Marine Fisheries data	Fishing effort	x						
	Landings	x						
	Discards (seal damage and release of wild fish)	x						
Recreational Marine Fisheries data	Fishing effort		x					
	Landings		x					
	Catch and release		x					
Freshwater Fisheries data	Fishing effort			x				
	Catches	x						
	Catch and release		x					
	Broodstock fishery	x						
Biological data	Scale sampling of fisheries to determine wild/reared proportions	x						
	Scale sampling of fisheries to determine year class strength			x				
	Genetic sampling of commercial mixed stock fisheries		x					
	Parr densities by age group from all wild rivers	x						
	Counts of ascending adults on full and partial index rivers	x						
	Size and sea-age data of ascending adults on index rivers	x						
	Parr size by age group on index rivers			x	Will be used to develop the river model			
	Stocking statistics	x			Will be used to develop the river model			
	Smolt counts on full and partial index rivers	x						
	Smolt size and age on full and partial index rivers		x		Will be used to develop the river model			
	M74 monitoring including thiamine analysis	x						
	Health status monitoring of wild fish			x				
Physical data	Sea Surface Temperature (SST)	x						

Data requirements for Atlantic salmon stock assessment in the Atlantic								
Type of data	Parameter	Currently used	Planned to be included in near future	Potentially useful	Comment			
All fisheries exploiting North Atlantic salmon	Fishing effort	x						
	Number and weight of all salmon caught separated by fisheries, location, age class	x						
	Number of salmon released in recreational fisheries	x						
	Weight of ranched salmon caught	x						
Mixed salmon stock fisheries	Genetic assignment to country/region/river of origin of adult salmon at W. Greenland at least once	x						
Biological data	Counts of returning adults for at least one river stock in 30, as agreed by ICES	x						
	Sea-age composition of returning adults (using scales)	x						
	Sex ratios of returning adults by sea age at a national/regional level every 5 years	x			Should be included in the new DC-MAP			
	Annual counts of ascending adults on index rivers, as agreed by ICES			x				
	Annual smolts counts on index rivers, as agreed by ICES	x						
	Annual age composition of smolts (using scales)	x						
	Surveys for juvenile salmonids to assess stock compliance with CL and WFD			x				
	Fecundity of returning adults by sea age at a national/regional level every 5 years	x			Should be included in the new DC-MAP			
	Annual fry/parr densities on index rivers, as agreed by ICES			x				
	Egg to smolt survival timeseries on index rivers			x				
	Annual estimates of sex ratios of adults on index rivers			x				
	Annual estimates of sex ratios of smolts on index rivers			x				
	Disease monitoring in wild fish (e.g. BKD, ISA, Gyrodactylus, salmon louse, etc.)			x				
	Modelling the density dependence in the freshwater phase (this is new)		x					
	Mid point of smolt migration period	x						

1.2. Develop regional work/sampling plans for data collection and quality assurance

The RCG suggested that development of regional work and sampling plans should be undertaken at a point where there is clarity on what data needs to be collected, and at which frequency and not before feedback from the end-users has been received.

Quality assurance is closely linked to data collection. At the meeting the group discussed in plenary with the RCG NSEA on possibly working with WGBIOP (Working Group on Biological Parameters) on scale reading QA by WGBAST and WGNAS. In addition the group discussed the merit of intercalibration of electrofishing methods in the Baltic as this data is used for international stock assessment in contrast to the Atlantic area. The group however agreed that it would again be the end users of the data who should be consulted on QA of stock assessment data.

The RSG recommends WGBAST and WGNAS to comment on current quality assurance in their data, and recommend actions to improve QA in future.

1.4. Propose solutions to any of the difficulties found in completing National Workplan and Annual Report submissions in 2017/2018.

The RCG was not aware of any specifics regarding difficulties found in completing National Workplan and Annual Report submissions.

ToR 2 Review data transmissions

2.2. Report on compliance for any Salmon & sea trout data calls

On the last day of the RCG meeting (September 6th 2018) ICES representative Anna Cooper informed the RCG that a data call will be announced for Atlantic salmon for WGNAS shortly. At this point it was not yet clear if this was to be an annual data call or a data call for a benchmark. The chair of RCG 'salmonids' (Dennis Ensing, UK (NI)) was asked to assist in writing the data call, as was the WGNAS chair (Martha Robertson, Canada).

The RCG is supportive of this data call for Atlantic salmon.

ToR 3 RDB development

3.2. Review RDBES developments

ICES developed a new database named Regional Database and Estimation System (RDBES, see RDBES DATA MODEL doc. V.1.15) that is supposed to replace both the current RDB and InterCatch systems and provide a single platform for countries to produce statistical estimates of quantities of interest (such as discards and age or length distributions) which will then be used as inputs for assessment working groups.

General aims of the RDBES are:

1. To ensure that data can be made available for the coordination of regional fisheries data sampling plans, in particular for the EU DC-MAP Regional Coordination Groups (RCGs),
2. To provide a regional estimation system such that statistical estimates of quantities of interest can be produced from sample data,
3. To increase the data quality, documentation of data and ensuring of approved estimation methods are used,
4. To serve and facilitate the production of fisheries management advice and status reports,
5. To increase the awareness of fisheries data collected by the users of the RDBES and the overall usage of these data.

The RDBES data model should allow a variety of different estimation techniques to be used including the COST functions that make use of Age-Length keys, ratio estimators, and unbiased designed based estimations. Future workshops will be held to further test and develop how these estimation techniques can be used with the new model and the model adjusted if needed.

The RDBES data model should be seen as part of the movements towards:

- Statistically Sound Sampling Schemes (4S),
- Greater regional coordination,
- Transparent Assessment Framework (TAF),
- Improved estimates to ICES assessments.

Whilst the RDBES data model is designed to hold 4S data it will also be able to store data that is not sampled in a statistical manner – this is important so that data from current non- statistical programmes can be uploaded and historical data can also be stored. However, in doing so, the new RDBES data model flags those data thus allowing their appropriate interpretation during estimation.

The most important step in populating the RDBES data model is that you must first specify the design of your sampling programmes. This is because, contrary to the RDB, there is not a single set of tables that everyone must populate and upload: With a few exceptions, the tables that need to be populated and uploaded depend on the specific sampling design(s) each country used.

The RCG identified the following salmonid-related end users who could benefit from its application:

- WGNAS
- WGBAST
- WGTRUTTA
- National bodies within the EU jurisdictions
- other groups

The Subgroup considered the potential merits of the database for such end users, notably, that it may:

- act as a central repository for validated catch, stock and biological data;
- act as the primary active data resource for end users involved in stock assessments;
- mitigate for information loss as membership of assessment groups change; and
- guide standardization of data formats used and increase the informed coordination of future sampling approaches between contributors within species areas.

In addition, the RCG noted that the database can be tailored to species-specific end user needs.

Therefore, the RSG recommends that potential end users should be encouraged to consider adopting the RDBES database as their primary data resource.

The RCG noted that current awareness of the database is limited among potential end users. Therefore, the RCG suggests that a formal approach to end-user groups should be made by the RCG Subgroup Chair to better inform them of the database, promote its benefits and request that they give detailed consideration to its use. In addition, ICES should also adopt a role in this regard, particularly as membership of such end user groups comprises both EU and non-EU participants. Because of this, non-EU members may be reluctant to participate in this initiative.

3.3. Review any other developments in Salmon & sea trout data bases

Within a recent “benchmark process” WGBAST initiated work to transfer catch data from commercial salmon sea fisheries into InterCatch (database hosted by ICES). For various reasons that process could not be completely finalized, but the plan is to continue this work within the near future. Discussions are also ongoing to allow inclusion of recreational salmon catch statistics (from both sea and rivers)

Tor 4 Next steps and actions

4.1. Elect chairs and propose next venue(s).

The RCG requested the members to consider standing for the election of chair of the RCG Subgroup Diadromous Species. Any member wishing to do so should make their name known to the current co-chairs Alan Walker and Dennis Ensing. The election for new chair(s) will be held during the RCG ‘eel’ meeting in Kavala, Greece, September 18th-20th 2018. The group was of the opinion it would be best if the was chair by two chairs, as it is currently, one with a European eel background, and one with a migratory salmonid background.

In addition the subgroup suggests that from next year the RCG should meet in a single meeting, with both eel and salmon/sea trout experts present. This might put some constraints on the number of participants as it is not known at this time if the facilities at the next meeting are sufficient for a large group.

Considering the initial idea that the RCG should rotate its meetings with the meetings of the relevant RCGs the group suggest it should meet in 2019 at the RCG Atlantic.

4.2. Consider Rules and Procedures for the subgroup.

The Subgroup briefly discussed this in plenary with RCG NSEA. As the Diadromous fish Sub Group is part of an RCG the Rules and Procedures of RCGs already apply to the DSG and do not need any further discussion or formal adoption.

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

Recommendations from the RCG

Recommendation and Question for ICES Expert Groups **WBAST** and **WGNAS** to address

Recommendations for WGBAST and WGNAS
The RCG recommends WGNAS and WGBAST to consider the list of possible data required for Atlantic salmon stock assessments in the 2018 RCG report and to report back to RCG in 2019 on this list with suggestions for changes and/or additions.
The RCG recommends WGNAS and WGBAST define the rivers to be monitored and river selection criteria for Atlantic salmon at regional level, noting that 'rivers' in the Legal Text is interpreted to represent 'water bodies' (STECF 2017).
The RCG recommends WGNAS and WGBAST suggest a selection of stocks from which salmon variables (juveniles, smolts, ascending adults) have to be collected, and advise on temporal frequency (annual or not) and sampling level of the collection of variables for salmon.
The RCG recommends WGBAST and WGNAS to comment on current quality assurance in their data, and recommend actions to improve QA in future.
The RCG recommends that WGBAST and WGNAS should be encouraged to consider adopting the RDBES database as their primary data resource.

Other recommendations

The RCG recommends that a representative of the RCG should be present at the Liaison Meeting between the RCGs and STECF
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Response from WGBAST to RCG 2017 Recommendations.

COMMENTS ON RECOMMENDATIONS FROM THE “PAN-REGIONAL DIADROMOUS FISH RCG”

At the Regional Co-ordination Group Meeting for the Baltic Sea region (RCG Baltic) 2017, the following recommendations were directed to WGBAST from the diadromous species subgroup (RCG):

Recommendations for WGBAST
1. WGBAST to consider and report any benefits to Atlantic salmon and sea trout assessment of regional coordination of data collection in the Baltic.
2. The Regional Database can be modified to better incorporate the data collected for salmon, sea trout and eels under the DCF. The WGBAST, WGNAS and WGEEL are asked to list the data types that should be incorporated in the RDB to achieve this.
3. WGBAST to work out the optimal approach for selecting the appropriate index rivers in the Baltic

Below follow comments from WGBAST on these recommendations. Note that since data collection for sea trout within EU-MAP is presently restricted to commercial and recreational fishery statistics, focus is mainly on salmon.

“WGBAST to consider and report any benefits to Atlantic salmon and sea trout assessment of regional coordination of data collection in the Baltic.”

- A large portion of the data needed for stock assessment of Baltic salmon (and sea trout) is collected in fresh water (parr densities, smolt and spawner abundance, river catch statistics). This work is carried out on the national level (with EU-MAP funding). Regional coordination is needed to ensure that the data collected is comparable, of similar/high quality, and representative for the stocks (i.e. rivers) regardless of geographical location. As an example of the need for further coordination, number of sites electrofished every year varies considerably among regions and rivers/streams for both salmon and trout.
- Results from scale reading is used to “feed” the WGBAST assessment model with empirical information on relative abundance of wild and hatchery reared salmon in offshore catches from the Baltic Main Basin. Regional coordination is necessary to collect this type of data because (1) several MS are involved in the Main Basin fisheries, and (2) scales are partly analyzed in other countries than where collected.
- The commercial and recreational Baltic Sea salmon and sea trout fisheries (offshore and coastal) to varying degrees target mixtures of wild and reared stocks with various status and productivity. For reliable and precise assessment, proper information on stock specific catches is needed. Since several years, salmon scale samples from the Main Basin, Gulf of Bothnia and Gulf of Finland have been analyzed genetically and used to estimate stock composition. Although yet not directly included in the assessment model, genetic results have been used as valuable independent information for various comparisons and evaluations. Regional coordination of genetic mixed-stock analyses is necessary because (1) during their feeding and spawning migrations, Baltic salmon are exploited in multiple off-shore and coastal fisheries in several countries, (2) samples collected are to a large extent genetically and statistically analyzed in another country than where collected, and (3) to assure that all raw data produced are fully comparable. For sea trout, there is general lack of information on stock composition in coastal commercial and recreational catches and no systematic, regionally coordinated data collection is presently ongoing.
- An increasing proportion of Baltic salmon and sea trout catches are taken by recreational fisheries. Even though collection of recreational fisheries data needs to consider country-

specific characteristics such as different legislation and fishing methods, better coordination and harmonization of data collection between countries may be beneficial to provide robust data in the most efficient manner. This is particularly the case for the salmon trolling fishery in the Main Basin, where recreational fishers from multiple countries fish with similar methods on the same mixed stock.

- In future years, additional data collection within the Baltic could also be in need of regional coordination. For example, due to lack of data describing salmon year-class strength at sea, a weakness of the current assessment is to predict short term fluctuations in annual spawning-run strength. Internationally coordinated collection of data on salmon year-class strengths could be useful to inform the assessment model, but this option still needs to be evaluated by WGBAST. Likewise, adding data on variables that have been shown to affect Baltic salmon survival (e.g. temperature and prey abundance) could improve the stock assessment.

“The Regional Database can be modified to better incorporate the data collected for salmon, sea trout and eels under the DCF. The WGBAST, WGNAS and WGEEL are asked to list the data types that should be incorporated in the RDB to achieve this.”

- Within a recent “benchmark process” WGBAST initiated work to transfer **catch data** from commercial salmon sea fisheries into InterCatch (database hosted by ICES). For various reasons that process could not be completely finalized, but the plan is to continue this work within the near future. Discussions are also ongoing to allow inclusion of recreational salmon catch statistics (from both sea and rivers).
- When it comes to **biological data** for salmon stock assessment, this is mainly collected in fresh water on the national level (i.e. data on parr, smolts and returning spawners). At present, these data are kept in separate data bases at the national laboratories involved in the collection. Although WGBAST recognizes the importance of quality assured and standardized data bases, it is noted that the biological salmon data collected in fresh water is largely heterogeneous, and it can therefore not easily be merged into a single common data base (on the national or international level). Furthermore, salmon data from freshwater differs fundamentally from marine data in terms of methods for collection and presentation. Therefore, it is not obvious that incorporation of biological salmon data into RDB is possible or motivated, given the large effort that will likely be needed.

“WGBAST to work out the optimal approach for selecting the appropriate index rivers in the Baltic”

- Already in 1999, the former International Baltic Sea Fishery Commission (IBSFC) adopted a list of Index Rivers to be established as part of the IBSFC Salmon Action Plan; in total, twelve such rivers were appointed, four in Gulf of Bothnia, five in the Main Basin and three in the Gulf of Finland. Monitoring in these “full index rivers” should consist of electrofishing, smolt trapping and counting of spawners.

At present, wild Baltic salmon rivers can be divided into three main groups, according to how much data is collected:

1. Rivers with **basic data collection** to measure recruitment (i.e. electrofishing to determine parr density).
2. Rivers with **extended data collection**. In addition to electrofishing, data on smolt abundance or ascending spawners is collected. (Some of these rivers with extended data collection are occasionally referred to as “index rivers”, although monitoring of all life stages is not collected.)

3. **Full index rivers:** data is collected annually on parr densities, smolt abundance and spawner counts.

- Until present (2017) only four full index rivers have been established (Simojoki, Tornionjoki/Torneälven, Vindelälven, Mörrumsån), although it should be emphasized that data from several rivers with extended data collection is also utilized in the stock assessment. WGBAST has repeatedly stressed the importance of establishment of full index rivers representing all six assessment units (AUs) in the Baltic Sea. Without such information it is difficult to (1) monitor the actual importance of the fishery for future development of river stocks in all areas, (2) properly estimate at-sea survival, and (3) create stock–recruit functions needed for determining actual and potential smolt production. All this information is needed to assess future stock development under different exploitation scenarios. Note that regional cooperation (cf. above) is needed also when it comes to the selection of salmon index rivers.
- For sea trout, WGBAST has identified needs for a network of selected index rivers (streams) around the Baltic Sea. At present, however, collection of biological river data for sea trout is not included within EU-MAP. Furthermore, a temporary study group within ICES (WGTRUTTA) is currently evaluating various approaches for assessing sea trout stocks, and it is yet not clear if designated index rivers should be prioritized, and if so, how these rivers should be selected etc.

Response from WGBAST to DSG 2017 questions.

COMMENTS ON RECOMMENDATIONS FROM THE “PAN-REGIONAL DIADROMOUS FISH RCG”

At the Regional Co-ordination Group Meeting for the Baltic Sea region (RCG Baltic) 2017, the following recommendations were directed to WGBAST from the diadromous species subgroup (DSG):

Recommendations for WGBAST
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5. The Regional Database can be modified to better incorporate the data collected for salmon, sea trout and eels under the DCF. The WGBAST, WGNAS and WGEEL are asked to list the data types that should be incorporated in the RDB to achieve this.
6. WGBAST to work out the optimal approach for selecting the appropriate index rivers in the Baltic

Below follow comments from WGBAST on these recommendations. Note that since data collection for sea trout within EU-MAP is presently restricted to commercial and recreational fishery statistics, focus is mainly on salmon.

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- A large portion of the data needed for stock assessment of Baltic salmon (and sea trout) is collected in fresh water (parr densities, smolt and spawner abundance, river catch statistics). This work is carried out on the national level (with EU-MAP funding). Regional coordination is needed to ensure that the data collected is comparable, of similar/high quality, and representative for the stocks (i.e. rivers) regardless of geographical location. As an example of the need for further coordination, number of sites electrofished every year varies considerably among regions and rivers/streams for both salmon and trout.
- Results from scale reading is used to “feed” the WGBAST assessment model with empirical information on relative abundance of wild and hatchery reared salmon in offshore catches from the Baltic Main Basin. Regional coordination is necessary to collect this type of data

because (1) several MS are involved in the Main Basin fisheries, and (2) scales are partly analyzed in other countries than where collected.

- The commercial and recreational Baltic Sea salmon and sea trout fisheries (offshore and coastal) to varying degrees target mixtures of wild and reared stocks with various status and productivity. For reliable and precise assessment, proper information on stock specific catches is needed. Since several years, salmon scale samples from the Main Basin, Gulf of Bothnia and Gulf of Finland have been analyzed genetically and used to estimate stock composition. Although yet not directly included in the assessment model, genetic results have been used as valuable independent information for various comparisons and evaluations. Regional coordination of genetic mixed-stock analyses is necessary because (1) during their feeding and spawning migrations, Baltic salmon are exploited in multiple off-shore and coastal fisheries in several countries, (2) samples collected are to a large extent genetically and statistically analyzed in another country than where collected, and (3) to assure that all raw data produced are fully comparable. For sea trout, there is general lack of information on stock composition in coastal commercial and recreational catches and no systematic, regionally coordinated data collection is presently ongoing.
- An increasing proportion of Baltic salmon and sea trout catches are taken by recreational fisheries. Even though collection of recreational fisheries data needs to consider country-specific characteristics such as different legislation and fishing methods, better coordination and harmonization of data collection between countries may be beneficial to provide robust data in the most efficient manner. This is particularly the case for the salmon trolling fishery in the Main Basin, where recreational fishers from multiple countries fish with similar methods on the same mixed stock.
- In future years, additional data collection within the Baltic could also be in need of regional coordination. For example, due to lack of data describing salmon year-class strength at sea, a weakness of the current assessment is to predict short term fluctuations in annual spawning-run strength. Internationally coordinated collection of data on salmon year-class strengths could be useful to inform the assessment model, but this option still needs to be evaluated by WGBAST. Likewise, adding data on variables that have been shown to affect Baltic salmon survival (e.g. temperature and prey abundance) could improve the stock assessment.

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“WGBAST to work out the optimal approach for selecting the appropriate index rivers in the Baltic”

- Already in 1999, the former International Baltic Sea Fishery Commission (IBSFC) adopted a list of Index Rivers to be established as part of the IBSFC Salmon Action Plan; in total, twelve such rivers were appointed, four in Gulf of Bothnia, five in the Main Basin and three in the Gulf of Finland. Monitoring in these “full index rivers” should consist of electrofishing, smolt trapping and counting of spawners.

At present, wild Baltic salmon rivers can be divided into three main groups, according to how much data is collected:

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 6. **Full index rivers**: data is collected annually on parr densities, smolt abundance and spawner counts.
- Until present (2017) only four full index rivers have been established (Simojoki, Tornionjoki/Torneälven, Vindelälven, Mörrumsån), although it should be emphasized that data from several rivers with extended data collection is also utilized in the stock assessment. WGBAST has repeatedly stressed the importance of establishment of full index rivers representing all six assessment units (AUs) in the Baltic Sea. Without such information it is difficult to (1) monitor the actual importance of the fishery for future development of river stocks in all areas, (2) properly estimate at-sea survival, and (3) create stock–recruit functions needed for determining actual and potential smolt production. All this information is needed to assess future stock development under different exploitation scenarios. Note that regional cooperation (cf. above) is needed also when it comes to the selection of salmon index rivers.
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Annex 17. Report of the the pan-regional intersessional subgroup on the landing obligation

Intersessional Pan Regional Subgroup on the Landing Obligation

It is clear that discards will continue under various forms of exemptions (high survivability, de minimis, prohibited species etc). This obliges continued observer programs under the DCF and adds to the complexity of interpreting official catch records and observer data collected onshore and offshore. In 2016 the RCMNA proposed an intersessional task group to continue monitoring the impact of the landing obligation on data collection and catch estimates.

STECF PLEN 17-01 stated that there would appear to be a “lack of reporting by vessel operators of fish discarded under exemptions, discards of fish currently not subject to the landing obligation and catches of fish below MCRS”. This statement is validated by the lack of data coming from the control agencies on both registered discards and BMS landings. STECF PLEN 17-01 also states that “if the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, they may have a significant impact on the quality of scientific advice”.

It was therefore decided to continue this work but at a pan regional level working intersessionally.

A questionnaire from the RCM NA (Appendix I) in order to capture the practical issues and perceived concerns relating to current and pending discard plans was ammended to cover the species/fisheries/fleets under the obligation in the North Atlantic, Baltic and North Sea. This was circulated to all MS on 07/05/2018 with instructions to complete them for review by 29/06/2018. The subgroup thereafter analysed the filled questionairres and RDB data and summarised the findings in a report and presentation before the start of the RCG’s.

Initial ToRs- Implication of the Landing obligation:

Pan Regional subgroup on Implication of the Landing obligation

- Evaluate the implication of the landings obligation on national and regional catch sampling programmes
- review and analyse 2017 BMS CS and CL data on the RDB and source and review other available metrics (e.g. refusal rates)
- contribute to and review ToRs & outcomes of WGCATCH 2017
- Explore other data sources to evaluate implication of the landings obligation such as last haul data from control agencies.

The text below summarises the key findings to date from the submitted responses. Responses were received from all countries except France. Multiple responses were received from some countries who broke them down by area/region (SWE-Baltic, N Sea) (UK- ENG, WALES, NI and SCO) (ESP and Basque Country) or by Species (FIN- Salmon, Cod, herring Sprat) therefore when compiling the answers some were combined where applicable.

ToR 1 and 4: Review of questionnaires

Overview of metiers on exemptions at a national level

The EU landing obligation is phased in across fisheries and species from 2015 to 2019. Under the landing obligation, all discards of regulated commercial species have to be landed. In all areas except for the Baltic, the landing obligation is gear specific rather than stock specific resulting that the species included in the landing obligation has changed during its implementation. There are some exemptions (for fish with high survivability, and a specific *de minimis* discard allowance under certain conditions) to the landing obligation which are defined in the regional discard plans covering the North Western Waters, South Western Waters, North Sea, Baltic Sea, Mediterranean Sea and Black Sea. These catches are not counted against the quota, but must be documented in the logbook. Since October 2014 The EC has adopted several discard plans through so-called delegated acts in preparation of the implementation of the landing obligation (https://ec.europa.eu/fisheries/cfp/fishing_rules/discards_en).

MS were asked in the questionnaire to provide an overview of metiers on exemptions at national level. As this question was interpreted differently by the various MS, a general overview of the submitted responses cannot be given at present. Therefore, an overview of all exemptions that are applicable for the North Sea, Western Waters and the Baltic Sea in 2018 (and if applicable onwards) based on the EC delegated acts is provided in Appendix II. In future it would be interesting to investigate which MS are applying which exemptions

Q1. Has the MS successfully adapted or implemented their onshore sampling programme to capture all landings categories? (including BMS)

Summary: Yes; 10, No; 3, Not tested; 0 & NA; 4

Generally, it is stated that sampling sheets are generic and will record BMS landings as another category or that this category has been added so it can be registered separately. Databases allow the introduction of new categories.

Overall, the filled questionnaires indicate that landings of BMS are rare. The ability to sample BMS differs somewhat between MS. SWE has included Cod BMS in the Baltic in the sampling protocol; this catch fraction is sampled in a similar way as a size category. However, the challenge is to raise the Cod BMS and discard data to avoid “double counting”. GER also occasionally samples Cod BMS in the Baltic. LTU comment that all landings are available on the designated landing sites.

UK_Eng_Wales, NL and POL have reported that it is difficult to sample BMS landings, if present, as it is not possible to determine its origin (i.e. vessel, trip) and/or due to lack of access to BMS landings onshore.

Q2. Has the MS successfully adapted or implemented their offshore sampling programme to capture all catch categories? (Including BMS)

Summary: Yes; 13, No; 3, Not tested; 0 & NA; 1

MS can register BMS as a separate fraction on the sampling sheets. BMS can be stored in the Databases. BMS sampling is captured in most offshore sampling procedures as a separate catch category. In other words, sampling procedures allow to sample BMS. However, landings of BMS fish are rare. Some countries (ESP) have not observed any changes in the fleet behaviour but they are ready to collect data in the required format. In GER BMS information from the Baltic comes from the logbooks only, while SWE samples Cod BMS at sea in a similar way as other size categories. Similar to the onshore sampling programme, SWE note that the challenge is to raise the collected data and avoid “double counting”.

Q3. Has there been issues getting access to vessels and all components of the catch and landings (incl. BMS landings)?

Summary Onshore: Yes; 6, No; 9, Not tested; 0 & NA; 2

For those responding with a yes it was either related to lack of storage space for the BMS landing on shore, loaded directly on to lorries, high refusal rates to sampling places (POL), mixing of BMS landings by species and by vessels (NL, UK_Eng_Wales) or it being a rare event with little landings (DK, UK_SCO)

Summary Offshore: Yes; 4, No; 11, Not tested; 2 & NA; 0

For those with a yes response it was related to high refusal rates thus making it difficult to get on board vessels (POL), difficulty in accessing certain fleet segments (IRL, SWE Baltic) and one country responded (ESP) saying yes but this was related to no BMS landing being found in the samples.

Q4. Has the MS commenced the logging of responses when trying to source sampling events/observer trips?

Summary Onshore: Yes; 8, No; 4, Not tested; 2 & NA; 3

Protocols vary from full logging of all phone calls (POL), to partial logging (IRL) where there are issues in one area; In general, sampling ashore does not seem to be an issue. Countries that answered no stated that they do not have any problems therefore no need to log the responses.

Summary Offshore: Yes; 12, No; 4, Not tested; 1 & NA; 0

All countries have a system for recording the responses and the time stamps vary from 2005 (DK) being the earliest implemented to April 2018 (UK_NIR). For those countries not logging they have stated that there are no problems. In one instance (LTU), this process has not been tested.

Q5. Is there any evidence of an effect on the quality of data?

Summary Discard: Yes; 3, No; 9, Not tested; 6 & NA; 1

Summary Landings: Yes; 1, No; 12, Not tested; 3 & NA; 3

Summary Control data: Yes; 4, No; 8, Not tested; 5 & NA; 1

For half or more of the MS there has not been any evidence of an effect of the landing obligation on the quality of data.

The effects observed on the quality of discard data, tested or not, relate in general to refusal rate, more pronounced observer effects and confusion relating to the complexity of landing obligation with all the exemptions. The latter also affecting the observers work at-sea. In respect to the quality of control data, the main concerns are the very limited amount of BMS and discards recorded, incompleteness of data and in some countries the logbook has not until recently been able to hold all the information required. Further, there are concerns that the complexity of the landing obligation leads to errors in the logbooks.

Another overall conclusion is that very few countries have made any analysis of the effects, at least only a few mention any analysis. Some (DEN SWE) have tested the registered amount of BMS landings against their observer programme; the general conclusion is that the registered amounts are much lower than expected. A single country (BEL) has used last haul data from the control agency to analyse if the refusals in their discard programme causes bias.

Q6. Is there any evidence of a change in fishing behaviour? Technical (fishing gear, sorting processes) and tactical (fishing grounds and seasons)?

Summary: Yes; 5, No; 8, Not tested; 3 & NA; 1

Again, the overall conclusion is that the landing obligation has not resulted in any changes in fishing behavior and none has made adjustments to account for the ones observed in their programme.

The few changes observed relate to implementation of more selective gears.

Also again, it seems that very few countries have carried out any analysis.

Q7. Is the MS doing any analysis for any observer effect?

Summary: Yes;5, No; 9, Not tested;1 & NA; 1

Nine MS have not analysed a potential observer effect on the fishing behaviour when it comes to discarding. Reasons for this is partly because on board observing is not applicable either because of exemptions in landing obligation, de minimis rule, there are practically insignificant amounts of discarding or only harbour/self-sampling is applicable. Some MS reported that the observer effect is being analysed and a few also reported the general outcome or conclusions from the analysis. ESP has carried out some bias analysis, LAT reported that a simple analysis of observer effect has been performed and the result showed that fishermen didn't change fishing grounds in the trips with observers on the board. POL analysed VMS and logbook data in order to check whether there is any observer effect. The results showed that there is a good overlap of the spatial pattern of trips with and without observers on board. POR mentioned a preliminary study on the comparison of observer effect during offshore sampling, but for the period before the Landing Obligation (2012-2015)

SWE in the Baltic have tested but not thoroughly. However, discarding continues as usual in most observer trips and comparisons with logbooks sales slips from observed vessels do in most cases not show large differences between observer/non observer trips. SWE (North Sea) have not tested observer effect. However, they note that no BMS landings were observed on board while discards were very low in the observer trips. This suggests a possible change in fishing behaviour which needs to be tested further. While UK_Eng_Wales have also not tested observer effect, regular reviews of the observer coverage have not provided any visual evidence of an observer effect.

Q8. What additional measures has the MS put in place to implement the LO /regional discard plan?

Summary: Yes; 8, No; 6, Not tested; 0 & NA; 2

In order to improve the reporting of discards, logbooks have been amended to include the new capture categories. Also funding has been granted (IRL and UK_Eng_Wales) for improving the harbour facilities for handling, processing and storing extra landings resulting from the landing obligation. SWE has changed quota allocation system, quota allocated individually to vessels and are to some extent transferrable during the year. GER has attempted to get access to data from the last-haul project and the ESP_Basque has carried out some selectivity and survival studies. LTU have arranged meetings with fishers and fish trade stakeholders in matters of implementing the landing obligation as well as provide consultation by electronic communication devices

Q9. Is or has the MS been involved in Pilot studies concerning the implications of the LO i.e. last haul data, video monitoring, reference fleets

Summary: Yes; 12, No; 3, Not tested; 1 & NA; 0

12 of the responses indicated that there has been some studies relating to the landing obligation, these have been in the form of the analysis of last haul data, (DEN, GER, POL, SWE) others refer to survivability and selectivity studies, (Esp_Basque, NLD, UK Eng-Wales) the remaining countries have commenced or are commencing using CCTV (DEN, NLD, and the UK_Eng_Wales and SCO). Other countries (POR) have conducted studies, but before the landing obligation and more recently the Azores mention the use of the Discardless project

An example of a data sheet and protocols from EFCA for last haul data from the Baltic is presented in Appendix III

Q10. Has the LO had any implication on recreational fisheries?

Summary: Yes; 1, No; 11, Not tested; 1 & NA; 2

The vast majority of MS answered no or not tested to this question, one MS (LAT) mentioned that they commenced a pilot study in 2018 of relative share of catches of recreational fisheries compared to commercial fisheries. Another country mentioned that it has caused confusion amongst the anglers in the Baltic region (GER)

Q11. Has the MS carried out trials or desk studies on potential choke species?

Summary: Yes; 9, No; 6, Not tested; 2 & NA; 0

Definition: A choke species is a species for which the available quota is exhausted (long) before the quotas are exhausted of (some of) the other species that are caught together in a (mixed) fishery (Zimmermann et al., 2015).

Numerous countries have carried out published desk studies:

- GER (Baltic): see Zimmermann et al. 2015. Handling of and possible solutions for choke species withing the reformed CFP- Example of plaice in teh Baltic Sea IP/B/PECH/IC/2015-124.
- North Sea: Demersal species in the North Sea (mixed fisheries study) in frame of the ICES WGMIXFISH and EU project DRuMFISH (also other regions).
- IRL (Celtic Sea): Fishing trials were conducted in the Celtic Sea in 2014 and 2015 to assess possible mitigation of choking by adapting fishing behaviour. Results were mixed but in general showed that skipper modification of fishing activities (timeings and location of tows) were unlikely to reduce choking. <http://www.bim.ie/our-publications/fisheries/> BIM Desk study
- NLD (North Sea) WMR is partner in a project that is executed in cooperation with the demersal industry. For a number of demersal trips in the North Sea all quoted discards are registered. First results indicate that rays is a choke species.
- SWE mentions that it is not a big problem with choke species in the Baltic (directed cod fishery with few species under LO in the bycatch) NSEA Mostly through the Scheveningen group.
- UK Cefas have worked with seafish to create a model to identify and rank potential choke stocks based on a bioeconomic model used in previous publications (in press). Selectivity

experiments and data enhancement work using CCTV cameras looking at area VII haddock to review the extent of the issue and potential for mitigation. More selective gear will help but are not the only answer.

- DEN have completed some work in connection with the mixed fisheries working group, ESP had looked at Gadoids in Celtic Sea, mackerel and hake in Iberian waters and the Basque country have conducted studies on pelagic species caught by trawlers in the Bay of Biscay.

A more detailed report on work carried out in the North Sea is attached in Appendix IV

Q 12. Are MS monitoring de minimis (and if so, how)

Summary: Yes; 5, No; 4, Not tested;3 & NA;4

The majority of the countries are monitoring de minimis in some form. In the at sea sampling programme in BEL, the crew is sorting the catch into the different catch categories on a haul by haul basis. In case a fraction of the catch of a species is defined as de minimis by a crew member, the observer will treat this fraction as de minimis too. Information related to total weight, length and age distributions of this de minimis fraction will be collected and stored in the ILVO SmartFish database. In IRL the species will be sampled as part of the discard estimate sampled on observer trips however they do not record if this is de minimis or high survival or illegal discards. In POR a more detailed analysis is carried out; monthly evaluation of logbook data of discards declared by the vessel owners versus the corresponding accumulated catches of the species under de minimis. SWE in the Baltic, LAT and ESP rely on records in the logbooks.

ToR 2: RDB Analysis

Baltic Sea

Analysis for the Baltic focused on the demersal species in the RDB (i.e. cod and plaice). Most countries have reported BMS landings of cod and plaice (Table 1). In addition, a total of 22 kg of BMS landings of salmon for the period 2015-2017 has been reported by POL. As presented quantities are low they are not likely reflecting the actual catch. This indicates that discarding is still occurring.

The reported BMS landings of cod in the RDB in 2017 are compared with the reported BMS landings of cod in the ICES WGBFAS report (ICES, 2018) in Table 2. Some inconsistencies are found; BMS landings are reported for Germany and Latvia in the WGBFAS report but not in the RDB and the reported quantities of Polish BMS landings differ between the WGBFAS report and the RDB.

The number of countries that have reported sampling of BMS cod at sea has increased in the period 2015-2017; sampling by two countries in 2015, 3 countries in 2016 and 4 countries in 2017 (Table 3a). GER and LAT have reported sampling of BMS cod at sea in 2017 (Table 3a) while BMS landings are not reported in the RDB (Table 1). All countries except Lithuania also reported sampling of discards at sea. LTU and SWE consistently reported sampling of BMS landings of cod at the market in the period 2015-2017 (Table 3b).

Only a few records of logbook registered discards are reported in the RDB.

Table 1: Total BMS (t) landings reported to RDB 2015-2017 in the Baltic Sea

	Cod (<i>Gadus morhua</i>)			Plaice (<i>Pleuronectes platessa</i>)		
	2015	2016	2017	2015	2016	2017
DEU						
DNK	128	36	32			2
EST						
FIN						
LTU	108	63	15			
LVA	117	61				
POL	43	49	93			3
SWE	238	218	93			2
Total	634	427	233			7

Table 2: Comparison between BMS landings of cod submitted to RDB and to ICES WGBFAS (Eastern Baltic cod only) for 2017

	BMS landings cod submitted to RDB			BMS landings cod submitted to WGBFAS		
	BMS (t)	HUC (t)	% BMS (of total landings)	BMS (t)	HUC (t)	% BMS (of total landings)
DEU		350	0.0	10	337	2.7
DNK	31	6111	0.5	31	6109	0.5
EST		1	0.0		1	0.0
FIN		191	0.0		191	0.0
LTU	15	1715	0.9	14	1712	0.8
LVA		2	0.0	21	2058	1.0
POL	75	6542	1.1	15	6468	0.2
SWE	89	4316	2.0	89	4316	2.0

Table 3a: BMS sampling (indicated as nr of trips) at sea reported to the RDB 2015-2017 in the Baltic Sea

	Cod		
	2015	2016	2017
DEU			22
DNK			
EST			
FIN			
LTU	6	3	3
LVA		10	8
POL			
SWE	6	60	44

Table 3b: BMS sampling (indicated with x) at market reported to the RDB 2015-2017 in the Baltic Sea. * Error in uploaded data; BMS cod was sampled in 2016 and 2017.

	Cod		
	2015	2016	2017
DEU			
DNK			
LTU	X	X	X
POL			
SWE	X	*	*

North Sea

DEN and SWE have reported BMS landings for 2017 (Table 4). Where the Swedish BMS landings consisted mostly (295 t) of herring. Three countries have reported sampling of BMS landings of plaice, cod, haddock and whiting at sea, where BEL and SWE sampled one trip and Scotland 11-21 trips (Table 5). Furthermore, Scotland has reported sampling of BMS landings of haddock and whiting for 1 trip at the market (Table 5). Only Belgium reported logbook registered discards for sole for 19 trips in the RDB.

Table 4: Total BMS (t) landings reported to RDB 2017 in the North Sea

	BMS (t)
BEL	0.5
CHA	
DEU	
DNK	
ENG	
ESP	
EST	
IRL	
LTU	
NIR	
NLD	
POL	
SCT	
SWE	
WLS	297
Total	297.5

Table 5: BMS sampling (indicated as nr of trips) at sea and at the market reported to the RDB 2017 in the North Sea

	Plaice	At sea sampling			Market sampling	
		Cod	Haddock	Whiting	Haddock	Whiting
BEL	1					
DEU						

DNK						
ENG						
NIR						
NLD						
SCT		11	21	13	1	1
SWE		1	1	1		
WLS						

North Atlantic

IRL has reported BMS landings for 2017 (Table 6). SCO has reported sampling of BMS landings of haddock for two trips (Table 7). No countries have reported sampling BMS landings at the market. Only BEL reported logbook registered discards for sole for 13 trips in the RDB.

Table 6: Total BMS (t) landings reported to RDB 2017 in the North Atlantic

	Hake	Norway lobster	Whiting
BEL			
CHA			
DEU			
DNK			
ENG			
ESP			
EST			
IRL	0.189	0.02	10.33
LTU			
NIR			
NLD			
POL			
SCT			
WLS			
Total	0.189	0.02	10.33

Table 7: BMS sampling (indicated as nr of trips) at sea reported to the RDB 2017 in the North Atlantic

	Haddock
BEL	
DEU	
ENG	
ESP	
GBR	
IRL	
NLD	
PRT	
SCT	2
WLS	

ToR3: Contribute to and review ToRs & outcomes of WGCATCH 2017

WGCATCH have a routine ToR to 'Document and review changes in legislation that affect data collection and data quality and evaluate their impacts'

Background: The landing obligation has brought changes in reporting all catches and have implications on sampling of commercial catches. . Furthermore in 2017 the first EUMAUP will be implemented and the pace of transition to statistically sound sampling is expected to increase. The complexity of these processes has been followed up closely by WGCATCH through routine ToRs with the group meetings acting as fora where difficulties and changes can be reported, advice for sampling and estimation obtained and recommendations on best practice or data quality issues to both national laboratories and end-users.

Expected Deliverables: Forum to discuss specific problems and find appropriate solutions and recommendations of best practice

IN 2017 WGCATCH wrote "There appears to be more issues in compliance and the implementation of the LO than there are in the collection of data itself. Where access is straightforward and the different components can be easily identified then samples are continuing to be collected. However, the transition by means of a partial implementation and the current exemptions based on certain conditions make the interpretation of the samples collected onshore and offshore and the estimation complex. The industry might be recording the different components when necessary, but when the control regulation only requires a vessel to record the weight of discarded species exceeding 50kgs on each fishing event then recorded discard figures are likely less than those recorded by observers. The compilation of these questionnaires has been led by the RCM/RCGs and WGCATCH considers they are the best place to keep a watching brief on the impact of the LO on the sampling programmes. WGCATCH role is more that identifying possible issues and providing advice on the issues and problems encountered, developing ICES WGCATCH REPORT 2017 | 17 methods to assess the quality of the data retrieved and estimates produced. WGCATCH recommends members of all RCGs to fill in the questionnaires on an annual basis."

The RCG's will continue to fill in the questionnaires and identify potential issues

For discussion: Any feedback to the RCG's for future work?

Appendix I: Example of the questionnaire distributed to the relevant countries

Monitoring the impact of the landing obligation on data collection

Country:	
Completion date :	
Regions	

Overview of Species	
Gears	
Comments	
Overview of metiers on exemptions @national level	

1	<i>Has the MS sucessfully adapted or implemented their <u>onshore</u> sampling programme to capture all landings catorgies? (including BMS)</i>	
	Modifed sample sheets	
	Modified databases	
	Sampling procedures	
	If yes - how? If no - why not?	

2	<i>Has the MS successfully adapted or implemented their <u>offshore</u> sampling programme to capture all catch catorgies? (including BMS)</i>	
	Modifed sample sheets	

	Modified databases	
	Sampling procedures	
	If yes - how? If no - why not?	

3	<i>Has there been issues getting access to vessels and all components of the catch and landings (incl. BMS landings)?</i>	
	Onshore	
	If yes - what? Percieved, annecdotal, measureable?	
	Offshore	
	If yes - what? Percieved, annecdotal, measureable?	
4	<i>Has the MS commenced the logging of responses when trying to source sampling events/observer trips ?</i>	
	Onshore	
	If yes - what? Percieved, annecdotal, measureable?	
	Offshore	
	If yes - what? Percieved, annecdotal, measureable? For what time period ?	
	If no - why not?	

5	<i>Is there any evidence of an effect on the quality of data?</i>	
	Discard estimates	
	If yes - what? Percieved, annecdotal, measureable?	
	Landings data	
	If yes - what? Percieved, annecdotal, measureable?	
	Control data - Landings data (logbook, sales notes)	
	If yes - what? Percieved, annecdotal, measureable?	

6	<i>Is there any evidence of a change in fishing behaviour? Technical (fishing gear, sorting processes) and tactical (fishing grounds and seasons)?</i>	
	If yes - what? Percieved, annecdotal, measureable?	
	If measureable - have you or will you need to account for this in your programme?	

7	<i>Is the MS doing any analysis for any observer effect</i>	
	If yes - what?	

8	<i>What additional measures has the MS put in place to implement the LO /regional discard plan</i>	
	NA If yes - what?	
	NS-EA If yes - what?	
	Baltic If yes - what?	

9	<i>Is or has the MS been involved in Pilot studies concerning the implications of the LO i.e. last haul data, video monitoring, reference fleets</i>	
	If yes - what?	

10	<i>Has the LO had any implication on recreational fisheries?</i>	
	If yes - what?	

11	<i>Has the MS carried out trials or desk studies on potential choke species?</i>	
	If yes - what species and areas and provisional results?	

1 1	<i>Are MS monitoring de minimis (and if so, how)</i>	
	If yes - How?	

Appendix II: Overview exemptions

Table II.1: Overview of Survivability and *De minimis* exemptions for the demersal fisheries North Sea and in Union waters of ICES Division IIa (EU 2018/45)

Survivability exemptions				
Defined fishery			Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Pots (FPO)				<u>Norway lobster</u> shall be released whole, immediately and in the area where it has been caught
Bottom trawls (OTB, TBN)	≥70mm meshsize	Species selective grid with bar spacing of max. 35 mm	IIIa	<u>Norway lobster</u> shall be released whole, immediately and in the area where it has been caught
Bottom trawls (OTB, TBN)	≥90mm meshsize	Seltra panel	IIIa	<u>Norway lobster</u> shall be released whole, immediately and in the area where it has been caught
Bottom trawls (OTB, TBN)	≥80mm meshsize	Netgrid selective device	FU6, FU8, FU9 during winter	<u>Norway lobster</u> shall be released whole, immediately and in the area where it has been caught
Otter trawls (OTB)	Cod-end 80-99mm meshsize	Vessel max. length 10m, max. engine power 221 kW, fishing in waters depth of ≤30 m, with limited tow duration of ≤1.30 hours	Within 6nm of the coast of IVc and outside identified nursery areas	<u>Common sole</u> shall be released immediately
Pots & fyke nets (FPO, FYK)				<u>Cod, haddock, whiting, plaice, sole, hake and saithe</u> shall be released immediately and below the sea surface
De minimis exemptions				
Defined fishery			Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Trammel nets & gillnets (GN, GNS, GND, GNC, GTN, GTR, GEN, GNF)			IIIa, IV, Union waters IIa	Discard a quantity of <u>common sole</u> which shall not exceed 3% of the total annual catches of that species
Beam trawl (TBB)	80-119mm meshsize	With increased mesh size in the extension of the beam trawl, Flemish panel	IV	Discard a quantity of <u>common sole</u> below the MCRS which shall not exceed 6% of the total annual catches of that species
Bottom trawls (OTB, OTT, TB, TBN)	80-99mm meshsize		IV, Union waters IIa	Discard a quantity of <u>Norway lobster</u> below MCRS which shall not exceed 2% of the total annual catches of that species
Norway lobster fishery	≥70mm	With a species-selective grid with	IIIa	Discard a combined quantity of <u>common sole, haddock,</u>

with bottom trawls (OTB, TBN)	meshsize	bar spacing of maximum 35 mm		<u>whiting, cod and saithe</u> below MCRS, which shall not exceed 4% of the total annual catches of Norway lobster, common sole, haddock, whiting and Northern prawn, cod and saithe
North prawn fishery with bottom trawls (OTB)	≥35mm meshsize	With a species selective grid with bar spacing of max. 19 mm, with unblocked fish outlet	IIIa	Discard a combined quantity of <u>common sole, haddock, whiting, cod, plaice and saithe</u> below MCRS, which shall not exceed 1% of the total annual catches of Norway lobster, common sole, haddock, whiting, cod, saithe and plaice and Northern prawn
Mixed fishery for sole, whiting, plaice and species without catch limits with bottom trawls (OTB, OTT, SDC, SSC)	70-99mm meshsize		IVc	Discard a combined quantity of <u>whiting and cod</u> below MCRS, which shall not exceed 6% of the total annual catches of Norway lobster, haddock, sole, Northern prawn, whiting, plaice saithe and cod; the max. amount of cod that may be discarded shall be limited to 2% of those total annual catches
Bottom trawls (OTB, OTT, TBN)	90-119mm meshsize or ≥120 mm meshsize	With Seltra panel (90-199mm meshsize)	IIIa	Discard a quantity of <u>whiting</u> below MCRS, up to a max. of 2% of the total annual catches of Nephrops, cod, haddock, whiting, saithe, common sole, plaice and hake

Table II.2: Overview of Survivability and *De minimis* exemptions for certain pelagic fisheries and fisheries for industrial purposes in the North Sea (EU 2018/189 and EU 1395/2014)

Survivability exemptions			
Defined fishery		Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Purse seine fisheries			LO shall not apply to catches of <u>mackerel and herring</u> if: (i) the catch is released before 80% for mackerel fishery, 90% for herring fishery or 80% in mixed fishery, of the purse seine is closed, (ii) the purse seine gear is fitted with a visible buoy clearly marking the limit for the point of retrieval, (iii) the vessel and gear are equipped with an electronic recoding and documenting system when, where and extent to which the purse seine has been hauled for all fishing operations. Further, it is prohibited to release catches of mackerel and herring after the point of retrieval and the surrounded school of fish shall be sampled before its release to estimate the species composition, fish size composition and quantity.
<i>De minimis</i> exemptions			
Defined fishery		Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Pelagic trawlers targeting mackerel, horse mackerel and herring (OTM, PTM)	Vessel overall length up to 25 m	IVb and c south of 54 degrees north	Up to a max of 1% of the total annual catches of <u>mackerel, horse mackerel, herring and whiting</u> may be discarded in 2018, 2019 and 2020

Table II.3: Overview of Survivability and *De minimis* exemptions for demersal and deep sea fisheries in North-Western waters (EU 2018/46)

Survivability exemptions					
Defined fishery			Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area	
Pots, Traps or creels (FPO, FIX)			Subareas VI,VII	Survival exemption shall apply to catches of <u>Norway lobster</u>	
Otter trawl gears (OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX)	Cod-end meshsize 80-99mm	Vessel max. length 10m, max. engine power 221 kW, fishing in waters depth of ≤30 m, with limited tow duration of ≤1:30 hours	Within 6nm of the coast of Division VIIde and outside identified nursery areas	Survival exemption shall apply to catches of <u>common sole</u> below the MCRS	
De minimis exemptions					
Defined fishery			Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area	
Bottom trawls and seines of less than 100 mm (OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX) Pelagic trawls (OTM, PTM)			Divisions VIIde	Discard <u>whiting</u> up to 6% of the total annual catches of that species by vessels obliged to land whiting	
Bottom trawls and seines of not less than 100 mm (OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX) Pelagic trawls (OTM, PTM)			Divisions VIIb-j	Discard <u>whiting</u> up to 6% of the total annual catches of that species by vessels obliged to land whiting	
Bottom trawls and seines of less than 100 mm (OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS,			Subarea VII, except Divisions VIIade	Discard <u>whiting</u> up to 6% of the total annual catches of that species by vessels obliged to land whiting	

TB, SX, SV, OT, PT, TX) Pelagic trawls (OTM, PTM)				
Vessels obliged to land Norway lobster and fishing for Norway lobster			Subarea VII	Discard <u>Norway lobster</u> up to 6% of the total annual catches of that species
Vessels obliged to land Norway lobster and fishing for Norway lobster			Subarea VI	Discard <u>Norway lobster</u> up to 2% of the total annual catches of that species
Vessels obliged to land common sole and using trammel and gill nets to catch common sole			Divisions VIIdefg	Discard <u>common sole</u> up to a maximum of 3% of the total annual catches of that species
Vessels obliged to land common sole and using TBB gear	Meshsize 80-119mm	Increased selectivity, such as a large meh extension	Divisions VIIdefg	Discard <u>common sole</u> up to a maximum of 3% of the total annual catches of that species

Table II.4: Overview of Survivability and *De minimis* exemptions for certain pelagic fisheries in North-Western waters (EU 2018/190 and EU 1393/2014)

Survivability exemptions		
Defined fishery	Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Purse seine fisheries		LO shall not apply to catches of <u>mackerel and herring</u> if: (i) the catch is released before 80% for mackerel fishery, 90% for herring fishery or 80% in mixed fishery, of the purse seine is closed, (ii) the purse seine gear is fitted with visible buoys clearly marking the limit for the point of retrieval, (iii) the vessel and gear are equipped with an electronic recoding and documenting system when, where and extent to which the purse seine has been hauled for all fishing operations. Further, it is prohibited to release catches of mackerel and herring after the point of retrieval and the surrounded school of fish shall be sampled before its release to estimate the species composition, fish size composition and quantity.
De minimis exemptions		
Defined fishery	Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Industrial pelagic trawlers targeting blue whiting and processing it onboard to obtain surimi base	Vb, VI, VII	Discard <u>blue whiting</u> up to a max. of 6% in 2018, and 5% in 2019 and 2020 of the total annual catches of blue whiting
Albacore tuna directed fisheries using midwater pair trawls (PTM)	VII	Discard <u>albacore tuna</u> up to a max. of 6% in 2018, and 5% in 2019 and 2020 of the total annual catches of albacore tuna
Pelagic trawlers using midwater trawl targeting mackerel, horse mackerel and herring (OTM, PTM)	VIIId	Discard <u>mackerel, horse mackerel and herring and whiting</u> up to a max. of 1% 2018, 2019 and 2020 of the total annual catches of mackerel, horse mackerel and herring

Table II.5: Overview of Survivability and *De minimis* exemptions for certain demersal fisheries in South-Western waters (EU 2018/44, 2016/2374)

Survivability exemptions		
Defined fishery	Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Trawls (OTB, OTT, PTB, TBN, TBS, TB, OT, PT, TX)	VII, IX	Survival exemption shall apply <u>Norway lobster</u> in 2018
De minimis exemptions		
Defined fishery	Defined ICES Division/Area	Exemption for defined fishery and ICES Division/Area
Vessels using trawls and seins to catch hake (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV)	VIII, IX	Discard <u>hake</u> up to a maximum of 6% in 2018 of the total annual catches of this species
Vessels using beam and bottom trawls targeting common sole (OTB, OTT, PTB, TBN, TBS, TBB, OT, PT, TX)	VIIIab	Discard <u>common sole</u> up to a max. of 5% of the total annual catches of this species
Vessels using trammel nets and gillnets (GNS, GN, GND, GNC, GTN, GTR, GEN)	VIIIab	Discard <u>common sole</u> up to a max. of 3% of the total annual catches of this species

Appendix III: An example of a data sheet and protocols from EFCA for last haul data from the Baltic is presented in

BALTIC SEA - LAST HAUL DATA FROM INSPECTION				
National Inspection Reference Number				
FISHING VESSEL DATA				
FLAG STATE				
EXTERNAL MARK				
NAME				
CFR				
IRCS				
INSPECTION DATA				
DATE				
TIME (start and end of inspection, UTC)				
POSITION (N/S DD.MM.mm - E/W DD.MM.mm)				
ICES AREA and SUB AREA (e.g. 3C22)				
GEAR TYPE (according to Annex XI, 404/2011)				
MESH SIZE (measured by control)				
ESCAPE PANEL TYPE (trawl only)				
GENERAL INSPECTION REMARKS				
Expected date, time and port of landing:				
CATCH COMPOSITION (Last observed haul only)				
Last haul catch (live weight in kg):				
Quantity sampled (live weight in kg):				
SPECIES		Quantities		
HER (live weight in kg)				
SPR (live weight in kg)				
		Above MCRS	Below MCRS	
COD (live weight in kg)				
PLE (live weight in kg)				
SAL (individuals)				
		Retained	Discarded	
TRS (live weight in kg)				
OTH (live weight in kg, specify species)				
Has the last haul been checked for PETS		Yes	No	
LAST HAUL REMARKS (comments about size distribution, reason for discards, etc.)				
INSPECTION FOR HIGH GRADING OF COD (live weight in kg)				
Size 5	Size 4	Size 3	Size 2	Size 1

Recording of discards from last hauls inspected in Baltic Sea

EFCA General Guidance on Procedures

GENERAL INSPECTION REMARKS	Enter the amount of BMS COD and PLE on board before the last haul from the logbook
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<i>For last haul:</i> <i>General points</i>	○ Fish to be discarded and below minimum size (MS) should be kept separate for estimation by inspectors; ○ Estimates in kg for all species apart from salmon in individuals; ○ Develop an procedure to take a sufficiently large sample to enable an accurate estimation of the observed haul; ○ Any additional information that is relevant to the estimation may be provided in remarks section of the data collection form; ○ Data recording: see annex.
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Gear Type⁹	Recommended Sampling Strategy
<i>Trawl</i> (OT, PT, SDN)	○ Where possible observe the entire fish sorting procedure; ○ If large catches prevent this, take a sufficiently large sample and note: - Quantities of catch retained - Quantities of discarded and fish below MS estimated.
<i>Set Nets</i> (GN, GT etc.)	○ Where possible observe hauling of at least one set of nets; ○ Note length of set(s) observed; ○ Note quantities of catch retained, discards and fish below MS.
<i>Longlines</i> (LL etc.)	○ Where possible observe of at least one complete longline set; ○ Note number of hooks hauled; ○ Note quantities of catch retained, discarded and fish below MS.

Biology	Length distribution
<i>Set Nets and Longlines</i> (GN, GT, LL etc.)	○ Where possible take a length distribution of the total catch (~200 fish/ species); ○ Where possible take a subsample (1 fish/ cm) from XX species for the scientist.

⁹ Traps excluded from the project. Pelagic fisheries should not be prioritised given their scale / complexities.

Discard	Mammals/ Birds (PETS)
<i>Set Nets</i> (GN, GT etc.)	○ Observe when the gillnets are taken in; - If any mammals or birds are caught in the net register the numbers of individuals by species (if possible) in the remarks box. - Make a tick mark in the scheme if the catch have been checked for PETS

Appendix IV: Additional summary information on desk studies on choke and de minimis in the North Sea

A very detailed study has been conducted by the commission in 2018 and the main part of the following text comes from this report: Ulrich C 2018, . Research for PECH Committee – Landing Obligation and Choke Species in Multispecies and mixed Fisheries – The North Sea

Definition: A choke species is a species for which the available quota is exhausted (long) before the quotas are exhausted of (some of) the other species that are caught together in a (mixed) fishery (Zimmermann et al., 2015).

This study investigated several aspects of the landing obligation and discards problems but chapter 3 is mainly on the choke species chapter 4 on de Minimis and exemptions and main findings and conclusions are highlighted below.

KEY FINDINGS ..

- The landing obligation has triggered the need to characterise the various potential choke situations and assess the factors causing them, in order to identify the most appropriate mitigation strategies.
- For the same area different choke categories may be experienced at EU, Member State, Fleet and Individual vessel levels.
- Presently in the North Sea the most serious risks of choke situations for the main commercial stocks are estimated to be with Northern hake in trawl fisheries and North Sea plaice in small-meshed beam trawl fisheries, but for very different reasons. Issues with hake are linked with the historical relative stability key not being aligned with biological changes in the ecosystem, not least in relation to climate change. Issues with plaice are linked to the large amount of small plaice caught in the sole fishery.
- The potential choke effect of bycatch stocks has been less well studied so far.
- The discussion on possible chokes is still speculative, as these will only be actually observed under conditions of full enforcement of the landing obligation. No such situation have yet been reported by Member States.

Choke species

Levels of choke issues

Choke species situations can be derived by various types of situations, with different characterise to their causes and responsibility. It has been recognized that choke issues can potentially occur at various levels, depending whether the shortage of quota is due to a poor status of a stock or a poor distribution of fishing rights. The Advisory Councils (NSAC, 2017a) has developed a system for categorizing choke problems as follows:

Category 1: Sufficient quota at Member State level—choke is due to distribution within the Member State such that a region, a fleet segment or an individual vessel does not have enough but this can be resolved by the Member State itself.

Category 2: Sufficient quota at EU level, but insufficient quota at MS level—choke is due to a mis-match of catches and the distribution of quotas between Member States and can theoretically be resolved between themselves in a regional context.

Category 3: Insufficient quota at EU level—choke is due to insufficient quota within the relevant sea basin to cover present catches or catch levels that can be realistically reduced, resulting in a total stop of fishing for a Member State or Member States.

Category 4: Economic choking may occur at the vessel level when there is a considerable bycatch of a low value species and the boat is filled with fish that will not deliver a profit.

Initial considerations on quotas prior to landing obligation

The landing obligation has been gradual phased-in for the North Sea demersal fisheries. This has resulted in higher focus on the species first to be implemented in the landing obligation and therefore the species that are in focus today are different from the ones in focus 1-2 years ago.

Fishery	Cod	Haddock	Saithe	Whiting	N. lobster	Sole	Plaice	N. prawn	Hake
TR1	2017	2016	2016 /2018	2017	2017	2017	2016	2016	2019
TR2	2018	2016	2018	2018	2016	2016	2019	2016	2019
GN/GT	2017	2017	2018	2017	2017	2016	2019	2016	2019
LL	2017	2017	2018	2017	2017	2017	2019	2016	2016
BT1	2018	2017	2018	2017	2017	2017	2017	2016	2019
BT2	2018	2017	2018	2018	2017	2016	2019	2016	2019
TRAPS	2018	2017	2018	2017	2016	2017	2019	2016	2019
Trawl 32-69 mm	2018	2017	2018	2017	2017	2017	2019	2016	2019

Prior to the landing obligation (STECF, 2014) investigated for which species and stocks each Member State had catches (including discards) in 2012 in excess of its initial and final quota (including swaps/banking etc.). Landings in excess of initial quota but not of final quota illustrated the dependency of MS on swaps to cover their fisheries, while catches in excess of final quota illustrated potential risks of choke species at Member State level. STECF concluded at this time that these preliminary analyses demonstrated that for all Member States and for a number of primary and secondary (by-catch) stocks, catches in 2012 were well in excess of the available quota, and for some stocks, this was the case even after quota swaps and banking and borrowing. That means that while in many cases the landings were aligned with the landings quotas, TACs increases (topups) might not necessarily be sufficient to cover the discards of all Member States.

In March 2017, the NSAC conducted an updated analysis of this, comparing available quota with 2015 landings and discards data for the main species (NSAC, 2017b). The aim was to classify the stocks according to the choke categories 1 to 4 above. The analysis was hampered by concerns on the validity of the discard estimates. The outcomes of this analysis was used to advice the Scheveningen Group who agreed to postpone the phasing-in of the landing obligation for North Sea plaice and Kattegat cod in some fisheries to 2019.

Northern hake is not considered to be a “species defining the fisheries” in the article 15 of (European Parliament and Council of the European Union, 2013), and is only to be phased-in next year in 2019. Hake was thus not included in this NSAC study. However, potential issues linked to the recovery of the stock and its expansion in northern waters have been flagged, and generalized quota shortage for that stock across the North Sea was noted by the NSAC in its following advice (NSAC, 2017a).

Main choke species in the North Sea demersal fisheries in 2019

Most available analyses of potential choke species issues have dealt with the main commercial stocks, and less with the effect of the secondary species that will enter the landing obligation in 2019. Out of the information gathered here, the most important cases appear to be:

- **Northern hake in TR1/TR2 fisheries**, because of its recent expansion in the North Sea where most Member States have only small historical quota shares;
- **North Sea plaice in BT2 fisheries**, because of the very large volume of undersized plaice caught in the sole targeted fishery;
- **North Sea whiting and Kattegat cod** in all fisheries, because of their high discards rates.

Noticeably, the two first choke cases are linked to stocks that are in a very good state, with high biomass levels and fishing mortality at F_{msy}. For these two cases, choke issues are thus not of biological nature. But the issues for these two stocks are also diametrically different. For plaice, the problem is technical and economic; for hake, the problem is political, linked to the historical relative stability key being no more aligned with the spatial distribution of fish stocks in relation to climate change.

Exemptions for landing obligation

In the CFP (2013), article 15 is not only referring to the fisheries where the landing obligation is referring to but also to the situations where exemptions can be applied for. Three different scenarios can be used for applying for exemptions: The landing obligation referred to in paragraph 1 shall not apply to:

a) species in respect of which fishing is prohibited and which are identified as such in a Union legal act adopted in the area of the CFP;

- b) species for which scientific evidence demonstrates high survival rates, taking into account the characteristics of the gear, of the fishing practices and of the ecosystem;
- c) catches falling under de minimis exemptions.

Ahead of the final year of full implementation of the Landing Obligation in 2019 STECF (2018) analysed the number of exemptions proposed. The listed exemptions increased from just over 40 for 2018 to nearly 70 for 2019. STECF (2018) combined exemptions across the regions and assessed them, which meant that the total number of proposed and assessed exemptions across all regions (NS, NWW, SWW, MED) was 58 (Table 1). Presently there are no exemptions for high survival in the Baltic Sea, although scientific studies are ongoing for exemptions for high survival for plaice.

Table 1. Number of recommendations by type and region evaluated by STECF (2018). Recommendations evaluated			
Region	<i>de minimis</i>	high survivability	Total
North Sea	8	8	16
North Western Waters	5	10	15
South Western Waters	10	3	13
Mediterranean (consolidated)	8	6	14
Total	31	27	58

High survivability exemptions

In the North Sea several high survival exemptions has been applied for:

Norway lobster

The survivability exemption applies to the following catches of Norway lobster:

- Catches with pots (FPO);
- Catches in ICES Division IIIa with bottom trawls (OTB, TBN) with a mesh size of at least 70 mm equipped with a species selective grid with bar spacing of maximum 35 mm;
- Catches in ICES Division IIIa with bottom trawls (OTB, TBN) with a mesh size of at least 90 mm equipped with a seltra panel;
- In winter months (October to March), catches in the functional units Farn Deep (FU6), Firth of Forth (FU8) and Moray Firth (FU9) with bottom trawls (OTB, TBN) with a mesh size of at least 80 mm equipped with a netgrid selectivity device.

Common sole

The survivability exemption applies to TR2 catches of common sole below MCRS made within 6 nautical miles of the coast in ICES area IVc and outside identified nursery areas. The exemption only applies to small vessels (<10 metres length, <221 kW engine power), when

fishing in waters with a depth of 30 metres or less and with limited tow durations of no more than 1.30 hours.

Fish by-catch in pots and fyke nets

The survivability exemption applies to catches of cod, haddock, whiting, plaice, sole, hake and saithe with pots and fyke nets (FPO, FYK).

De Minimis exemptions

The following de Minimis derogations apply:

a) in the fisheries by vessels using trammel nets and gill nets in ICES Division IIIa, ICES Subarea IV and Union waters of ICES Division IIa: a quantity of common sole which shall not exceed 3 % of the total annual catches of that species;

b) in the fisheries by vessels using beam trawl BT2 with Flemish panel device, in ICES Subarea IV: a quantity of common sole below MCRS, which shall not exceed 6 % of the total annual catches of that species;

c) in the fisheries by vessels using TR2 in ICES Subarea IV and Union waters of ICES Division IIa: a quantity of Norway lobster below MCRS, which shall not exceed 2 % of the total annual catches of that species;

d) in the fishery for Norway lobster by vessels using bottom trawls equipped with a species-selective grid with bar spacing of maximum 35 mm in ICES Division IIIa: a combined quantity of common sole, haddock, whiting, cod and saithe below MCRS, which shall not exceed 4 % of the total annual catches of Norway lobster, common sole, haddock, whiting and Northern prawn, cod and saithe;

e) in the fishery for Northern prawn by vessels using bottom trawls (OTB) with a mesh size equal to or larger than 35 mm equipped with a species selective grid with bar spacing of maximum 19 mm, with unblocked fish outlet, in ICES Division IIIa: a combined quantity of common sole, haddock, whiting, cod, plaice and saithe below MCRS, which shall not exceed 1 % of the total annual catches of Norway lobster, common sole, haddock, whiting, cod, saithe and plaice and Northern prawn;

f) in the mixed fishery for sole, whiting, plaice and species without catch limits by vessels using bottom trawls (OTB, OTT, SDN, SSC) of mesh size 70-99 mm in ICES Division IVc: a combined quantity of whiting and cod below MCRS, which shall not exceed 6 % of the total annual catches of Norway lobster, haddock, sole, Northern prawn, whiting, plaice, saithe and cod; the maximum amount of cod that may be discarded shall be limited to 2 % of those total annual catches;

g) in the fisheries by vessels using bottom trawls (OTB, OTT, TBN) with a mesh size of 90-119 mm, equipped with Seltra panel, or with a mesh size of 120 mm and above in ICES Division IIIa: a quantity of whiting below MCRS, up to a maximum of 2 % of the total annual catches of Nephrops, cod, haddock, whiting, saithe, common sole, plaice and hake.

Monitoring of de Minimis

In a STECF earlier report (2017) STECF highlights in 2018 the “lack of [required] reporting by vessel operators of fish discarded under exemptions...”. STECF stress again (2018) the need to improve the collection of catch documentation data. If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, it will likely have a significant impact on the quality of scientific advice and may compromise the achievement of the MSY objective. As STECF PLEN 18-01 pointed out, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied in pilot studies and could be a more effective way to enforce the landing obligation (STECF EWG 13-23).

TAC removal

Removing TACs from annual TAC regulations so that associated stocks are removed from the landing obligation has been put forward by several stakeholders as a way to deal with problematic stocks, i.e. where discarding are high due to low commercial value and/or where quotas are insufficient to cover catches. In 2017 the EC proposed, and Council agreed to delete the combined TAC for dab and flounder in the North Sea, after that ICES had assessed the sustainability risk of that removal to these two stocks to be low¹¹. Several additional TACs removals are currently under discussion.

Reference

Ulrich C 2018, . Research for PECH Committee – Landing Obligation and Choke Species in Multispecies and mixed Fisheries – The North Sea, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels.

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Annex 18. Pilot studies on bycatch.

	DE	DK	EE	R	LT	LV	PL	Sweden
								Pilot Study 1
Aim of the pilot Study	Development of alternative management approaches and fishing gear and techniques towards minimizing resolving existing or potential conflicts between the activities of passive fisheries (mainly gill-net fishing) and the conservation of marine birds and marine mammals in the Baltic Sea (STELLA)	a. To estimate incidental bycatches of marine mammals and sea bird. b. To be able to calculate impact of fisheries on marine habitats	No special pilot study is conducted. As there are no active bottom trawlers at the moment (2016-17) we do not study fishery's impact to the sea floor. During coastal fish survey we study by-catch, monitor different fish species stock fluctuations and study the diet of predatory fish to understand the predator-prey relationships.	No pilot study conducted. The recording of bycatch data on birds and marine mammals has been done since 2017. The only bycatch data collected under DCF prior to 2017 is data on fish species collected under sampling of métier related variables within the DCF.	No pilot study	No pilot study	No pilot study	To generate knowledge of by-catches of birds and mammals in fisheries with gillnet and longlines
Duration of the pilot study/year concluded?	36 months (1 Jan 2017 – 31 Dec 2019)	2017-2019	NA	NA	NA	NA	NA	The pilot study was initiated in 2017 and will be ongoing until 2019. In 2017 were the sampling focused on gillnetters and longliners targeting cod in subdivision 23, 24 and 25.
Outcomes or expected outcomes	1. Better understanding of fleet dynamics of the passive fisheries; improved collection of effort data. 2. Developments in fishing gear and techniques: To reduce the by-catch of harbor porpoises, the "acoustic visibility" of net-material will be increased which is supposed to lead to a better detection of nets by means of the porpoise's biosonar. In addition, "porpoise alarm" (PAL) will be used; PAL is a harbour porpoise communication signal, which in field experiments with commercial gillnetters lead to avoidance reactions and increased the click-rate of wild harbour porpoises with a bycatch reduction of 70%. To reduce sea bird bycatches several approaches will be tested. Moreover, the performance of cod pots will be investigated in detail. 3. Better understanding of attitude, incentives and willingness of the fishermen to apply proposed solutions will be assessed.	a. In addition to the registration of incidental by-catch of sea birds and marine mammals during the standard observer programme for estimation total catches Denmark is running a pilot project outside the DCF with the aim of estimating incidental by-catches of bird and marine mammals. At the pilot project a number of smaller commercial fishing vessels are equipped with CCTV cameras and a number of sensors (GPS, winch rotation and others). b. For assessing the impact of fisheries on marine habitats, a routine has been set up using a combination of VMS and logbook, sales notes and vessel register data (DFAD). For creating the DFAD dataset, the sales notes information is distributed on the logbook data using the logbook ID and species information. In addition the vessel register is added using the vessel-id and landing date. The VMS data are merged with DFAD data using vessel-id and fishing date to get information on the gear used as well as the DCF métier. Depending on the gear type, a speed filter where fishing activity is assumed is applied to the combined DFAD/VMS data to estimate the fishing activity on a high spatial resolution that can be compared with the habitat mapping. Using these data fishing effort as well as weights and values of species landed within an area can be estimated by gear or métier.	During coastal fish survey covering different areas along the Estonian coast (see 1G.7, Coastal fish survey), 301 stations (each consisting of gill nets of different mesh size) were fished. 35 species of fish were captured, bycatch of 3 species of birds (4 – <i>Melanitta fusca</i> , 1 – <i>Somateria mollissima</i> and 1 – <i>Cepphys grylle</i>), 1 species of alien crab (2 specimens) and protected fish <i>Cottus gobio</i> and <i>Gobio gobio</i> were registered. No grey seals were recorded in bycatch, but damage of catch by seas was registered in several cases.	NA	NA	NA	NA	In 2018 are sampling on focused on gillnetters in subdivision 23 as well as on shallow gillnet fisheries in areas identified as important for birdlife in subdivision 27 and 29. In 2019 will sampling continue in sd 23 and a new area (possibly IIIa5) will be added. Frequency of by-catch events, spatial and temporal patterns, dependency of depth. Identification of areas were number of by-catch events are low.
Significant Issues encountered/conclusions drawn	project is ongoing	Data on impact of fisheries on marine habitats have been reported to the various ICES expert groups dealing with this topic. In addition the data have been used when ICES is giving advice to the HELCOM and OSPAR and development of indicators in accordance with the MSFD.		NA	NA	NA	NA	
Incorporation into NWP - progress or plans	at-sea observers document the use of PAL or pingers and unwanted bycatches of PETS	Collection on data on incidental bycatches of marine mammals and sea bird has over time developed and for 2018 and 2019 CCTV cameras are used on a number of vessels in addition the collection of data on the at-sea observer programme.	As coastal survey is conducted every year, data is already incorporated into regular sampling.	NA	NA	NA	NA	Pilot study a part of the WP. Question is if it should be included in routine monitoring or not. This is dependent on results.

