ANNUAL REPORT

GERMAN NATIONAL FISHERIES DATA COLLECTION

2014

CONTENTS

I GENERAL FRAMEWORK

The German National Programme (NP) 2014-2016 for fisheries data collection refers to the Community and National Programme defined in Articles 3 and 4 of Council Regulation 199/2008, to Article 1 of Commission Regulation 665/2008 and the Annex of Commission Decision 2010/93/EU. The Annual Report (AR) 2014 on the German NP refers to Article 7 of Council Regulation 199/2008, to Article 5 of Commission Regulation 665/2008 and to the Annex of Commission Decision 2010/93/EU.

The report year is 2014. If the reference year differs from the report year, it is accordingly stated in the sections for Modules IV and V.

Standard tables: This AR is based on the "Guidelines for the submission of Annual Reports on the National Data Collection Programmes under Council Regulation (EC) 199/2008, Commission Regulation (EC) 665/2008 and Commission Decision 2010/93/EU, Version 2 (26.2.2015)".

Table I.A.1 provides a comprehensive list of derogations including previously approved derogations that are still valid. Table I.A.2 provides a comprehensive list of bilateral and multilateral agreements regarding the data collection. Apart from regional agreements established at the RCMs, Germany currently holds bilateral agreements with Denmark, Sweden, The Netherlands and the UK on sampling foreign-flag vessels, as well as with Poland on eel sampling, see Annex 3. These agreements are of general nature and are being discussed in detail (sampling levels etc.) at the relevant RCMs. See sections on 'regional coordination' for the various sampling parameters in the individual sections below. In addition, Germany is part of a multilateral agreement on sampling in the CECAF area (see Annex 3).

II NATIONAL DATA COLLECTION ORGANISATION

II A NATIONAL CORRESPONDENT AND PARTICIPATING INSTITUTES

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The following two institutions contribute to the National Programme:

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Within these institutions, the following four institutes and units are responsible for data collection and reporting:

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E-mail: sf@ti.bund.de
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The **BLE** (Unit 522) holds the fishing vessel list including capacity data based on EU Regulations 2090/98, 2091/98 and 2092/98 as well as landings and effort data based on EU Regulations 2807/83 and 2897/93. The BLE Unit 414 is responsible for the central database of all national fisheries-related data and central IT services.

The **TI** collects biological data from surveys-at-sea and from sampling commercial fishing vessels under German flag, as well as economic data from the fishing fleet, processing industry and aquaculture. The TI-OF is responsible for the Baltic Sea and recreational fisheries sampling, while the TI-SF is responsible for the North Sea & Eastern Arctic, Northeast Atlantic and the other areas, as well as fisheries economics (fleet, aquaculture and processing industry). The TI-FI is responsible for eel sampling.

A part of the economic data of the fish processing industry is collected by the **German Federal Statistical Office**:

Statistisches Bundesamt (Federal Statistical Office Germany)
Gustav-Stresemann Ring 11
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BLE and TI are institutions under the auspices of the Bundesministerium für Ernährung und Landwirtschaft (**BMEL** = Federal Ministry of Food and Agriculture).

Within the institutions of BMEL, responsible persons are appointed in order to co-operate and implement the NP. The TI-SF is the national coordinator.

National co-ordination meetings with all persons involved in the German NP are held once a year (see Table II.B.1 and Annex 1). The main aim of these meetings is an exchange of experiences during the recent year of NP implementation and forward-planning of data collection in the upcoming year(s).

A **national portal website** for dissemination of information has been established in 2009 in accordance with Commission Regulation (EC) 665/2008 Article 8(2):

http://www.dcf-germany.de

II B REGIONAL AND INTERNATIONAL COORDINATION

II B1 ATTENDANCE OF INTERNATIONAL MEETINGS

In Table II.B.1, all meetings and workshops for international co-ordination with German participation are listed. If Germany was not able to participate in a planned meeting,it was due to conflicting dates with regard to other commitments for the staff involved.

II B2 FOLLOW-UP OF REGIONAL AND INTERNATIONAL RECOMMENDATIONS

Germany participates in the Regional Co-ordination Meetings (RCMs) for the Baltic, North Sea & Eastern Arctic, North Atlantic and Long Distance Fisheries. Following the compilation of recommendations from the 2013 Liasion Meeting and the 2013 STECF Plenary meetings prepared by DGMARE in October 2014, only one recommendation from the RCM NA was addressed to MS (see Table II.B.2).

III MODULE OF THE EVALUATION OF THE FISHING SECTOR

III A GENERAL DESCRIPTION OF THE FISHING SECTOR

Table III.A.1 shows a general overview on the German fisheries activities in 2014. In the Baltic and North Sea & Eastern Arctic regions, demersal, pelagic and a small fraction of industrial fisheries were conducted. In the North Atlantic, pelagic fisheries were dominating over demersal fisheries.

III B ECONOMIC VARIABLES

BALTIC SEA, NORTH SEA AND EASTERN ARCTIC, AND NORTH ATLANTIC

III B 1 ACHIEVEMENTS: RESULTS AND DEVIATION FROM NP PROPOSAL

The numbers of vessels per fleet segment have been updated throughout. If segments had no more vessels left they were still kept in the table for consistency with the NP.

Following the guidelines the values for "achieved sample rate" and "response rate" would be identical. For the sake of meaningfulness "achieved sample rate" was determined as ratio between "achieved sample number" and "total number" and "response rate" as ratio between "achieved sample number" and "total sample number".

On the "Imputed value of unpaid labour": The basis number for an average annual salary has been adjusted to 34.030 €, which in the meantime had been published by the Federal Statistical Office as update.

On "Energy costs": A distinction between types of fuel has been applied. Based on experts' interviews and evidence from collected data, three different average fuel prices per liter have been calculated: one for vessels < 30kW (often fuelled with petrol), one for vessels between 30 and 3000 kW (gasoil, tax reduced) and one for larger vessels > 3000 kW (crude oil).

On the Value of physical capital (**estimation of capital value and capital costs**): As **implemented in the previous AR** and thus approved, the basis for the calculation of physical capital has been the price per GT unit. The price per GT unit has been determined as gross value from net prices of new built vessels during the last ten years. In the NP, it was stated the price per GT will be distinguished by fleet segment. Due to the low number of actual building prices, this concept could not be applied. Instead the same price per GT unit has been applied to all fleet segments. Based on the price index for 2010 (producer price for commercial products, investment goods) a gross price of € 9.608 per GT was applied. The transformation to 2013 is being done using the 2013 price index as part of the PIM procedure. The determination of price per capacity unit is clearly described in the National Programme.
For **2013, a gross price of € 9887 per GT** was determined.
Several experts have been interviewed to receive specific life time and share information, but it transpired that there is no uniform pattern. Therefore the figures as used in the Study on Capital Value ("FISH/2005/03") have been applied: Shares per cent of total investment were 60-20-10-10, and life times were 25-10-5-7 years (hull-engine-electronics-other). Depreciation rates are directly linked to the life times.
According to **recent recommendations (PGECON 2012**), the depreciation scheme has been changed **from linear to degressive**. Therefore the depreciation rates had to be **changed to 0.07 (hull), 0.25 (engine), 0.5 (electronics) and 0.35 (other eq.)**, again following the study "FISH/2005/03".
Moreover, the current value (formely known as replacement value) has been used as basis for depreciation, following the advice issued by the workshop on the PIM method in Naples (2011)

Clustering has been applied as described in the NP. Clustering of the pelagic vessels is irrelevant in practice, as the data cannot be published for confidentiality reasons anyway.

In the Commission Decision 2010/93/EU, active vessels are defined as having "been engaged in any fishing operation (more than zero days) during a calendar year". For vessels without logbook obligation (i.e. vessels < 8m LOA) there is no exhaustive information on fishing days. However, information on landings is exhaustively available. Germany resolved that vessels < 8m are regarded as inactive if no landings have been reported.
This procedure has been applied for as derogation in the NP and has been approved by STECF.
In Table III.B.1, numbers and rates refer to unit response rates, as described in the guidelines.

III B 2 DATA QUALITY: RESULTS AND DEVIATION FROM NP PROPOSAL

Error and accuracy indicators for variables related to employment and capital values or imputed value of unpaid labour: these variables are calculated using different input parameters/variables, e.g. effort data, like days at sea (for FTE), or estimates for prices per capacity units (€/GT) or capacity data. These input data can be regarded as constants, which are implemented in the models as provided by the studies on FTE and capital value estimation. Accuracy and precision of the results are therefore determined by the quality of the stipulated procedures and not so much by the input variables, the quality of which is indicated in the table anyway. Therefore it is more than doubtful whether the indication of accuracy and sampling strategy are really appropriate or conducive in any respect. The same applies to the debt/asset ratio, of which the capital value is a component.
SGRN 10-02 had asked the European Commission for clarification on this issue, but this has not been provided in due time.

Often a non-reported variable is identical with zero. Rather than providing the value "zero" the respondents tend to leave the field blank, which is in a first automatic approach interpreted as non-reporting. In the case of obviousness (e.g. missing crew wages for small vessels with a crew number of 1, i.e. the owner alone), a zero has been assumed. In other cases, no straightforward assumption of that kind was made, following a conservative approach. Then a non-filled item was regarded as non-response. This might in several cases lead to virtually low response rates, e.g. for "other income".

The data collection scheme "C" (non-probability sampling) as indicated in the NP has been changed to "B" (probability sampling) in 2011, as during the SGECA 10-03 meeting (harmonisation of sampling strategies) it has been decided that the data derived from FADN are to be regarded as random (=probability) sampling. This has already been endorsed for NP2012 by STECF 11-19.

In several cases the **coefficient of variation** (CV) could not be calculated, because the population and/or the number of responses was very small. In the frequent case of small population numbers of unclustered segments, no CV could be provided, and the related box is marked **"NA"**.

Inactive vessels have been introduced into Table III.B.1. A sample rate of 100% has been indicated as the requested economic variables have been derived from other variables which have been collected exhaustively.

For very few segments with few vessels and with minor general importance it was only some of the economic data could be collected, even though all these segments were sampled exhaustively. Respective owners had been contacted repetitively to push the issue, though without success in some cases. National legislation has no sway to enforce responses and the segments are negligible compared with others. Therefore Germany has concluded to do reasonable estimates as a feasible approach.

As there is no common approach to "**evaluate the representativeness of the data** collected on the respondents", Germany has applied the same approach as comprehensively described in the National Programme. This is based upon a comparison of fractions of different transversal variables, which are associated with the vessel with responses. E.g. if the relative number of vessels for which answers have been received is similar to the relative number of days at sea or income from landings, then there

is good evidence that the sample is representative. It has to be stated repetitively that the concept of "representativeness" is not scientifically or statistically defined. In particular, there is no quantitative indicator of "representativeness".

As a "**qualitative description regarding the assessment of quality of data collected**", it can be stated that the quality of data could be kept at high level, in particular due to sufficient coverage and response numbers. Germany has managed to achieve very high sample rates for all segments which are of major importance with respect to total landings or employment. Low rates or non-responses almost exclusively occurred on segments with few vessels and also on segments with few and small vessels. Visually these small segments of minor importance cannot be distinguished from the important ones in the report table. However, a closer look at the size of both the segments and the vessels associated with it highlights the comprehensiveness of the data collected for the German fleet.

As Germany applies **no non-probablity sampling**, the column "Other variability indicators (d)" in Table III.B.3 has been left blank.

Information about calculation procedures of derived indicators (e.g. FTE) is provided comprehensively in the German NP. In almost all cases they are **derived using transversal data** which are available exhaustively. Therefore they can be regarded as highly accurate.

III B 3 Follow-up of regional and international Recommendations

No recommendations.

III B 4 Actions to avoid deviations

No deviations.

Other Regions

For 2014, no German vessel was assigned to "Other Regions".

III C METIER-RELATED VARIABLES

For information collected during the sampling year regarding the number of sampled trips and numbers of age and length sampling, refer to Tables III.C4, III.C.3 and III.C.6.

III C BALTIC SEA

III C 1 Achievements: Results and Deviation from NP Proposal

Legend:
At sea: Number of trips sampled by an observer on board fishing vessel (concurrent) at sea
Other: Number of trips sampled in a harbour or by a fisherman at sea (self sampling)
Total: Sum of all trips
NP: No trip planned

2224 PTM_SPF_32-104_0_0
Sampled metiers: PTM_SPF_32-104_0_0, PTB_SPF_32-104_0_0, PTB_SPF_32-89_0_0,
At sea: 0 / 2 = 0%, Other: 7/10=70%, Total: 7 / 12 = 75%.
Since the bycatch of this metier is negligible (virtually 100% herring), the at-sea sampling effort had been stopped since 2012. Instead, the two trips planned for at-sea sampling were sampled on shore. Only 7 instead of 10 planned "other" samples were taken because in 2014 the fishing season for herring (Jan-May; Nov-Dec) was relatively short (due to a strong winter and quota restrictions) so that the biweekly sampling programme could not be conducted in January and April/May.

2224 PTB_SPF_16-31_0_0
Sampled metiers: PTB_SPF_16-31_0_0
At sea: 0 / 0 = NP, Other: 2 / 2 = 100% , Total: 2 / 2 = 100%
2224 GNS_SPF_32-109_0_0
Sampled metiers: GNS_SPF_32-109_0_0, FYK_SPF_>0_0_0 , FPN_SPF_>0_0_0
At sea: 0 / 0 = NP, Other: 17 / 16 = 106%, Total: 17 / 16 = 106%

2224 OTB_DEF_>=105_1_120
Sampled metiers: OTB_DEF_>=105_1_120, PTB_DEF_>=105_1_120, PTM_DEF_>=105_1_120, OTB_DEF_>=90_0_0, PTB_DEF_>=90_0_0
At sea: 8 / 10 = 80%, Other: 22 / 20 = 110%, Total: 30 / 30 = 100%

2224 GNS_DEF_110-156_0_0
Sampled metiers: GNS_DEF_110-156_0_0 , GTR_DEF_110-156_0_0 ; LLS_DEF_0_0_0
At sea: 17 / 6 = 283%, Other: 15/ 2 = 750%, Total: 32 / 8 = 400%
This metier is sampled more intensively than proposed in the National Programme in the last years for several reasons. This metier contributes significant amounts to the total landings, especially of Western Baltic cod (>30%) but also for flatfish. Despite this importance, there is a lack in biological data from this metier, not only regarding length distributions but also the discards (e.g. discard assumed as zero by Denmark). Thus, our sampling fills an important gap in the stock assessment input data. Moreover, this fleet involves a great proportion of the German fishing vessels in the Baltic Sea with considerable variations in species composition, gear settings, temporal and spatial extent, which was not fully recognised when the NP was designed. Finally, potential bycatch issues exist (marine mammals and birds) and more intensive sampling was initiated to fullfill national and international requirements.

2224 GNS_FWS_>0_0_0 - Derogation in place since 2012.
Sampled metiers: FPO_CAT_0_0_0, FWR_FWS_0_0_0, GNS_FWS_0_0_0
At sea (FPO_CAT_>0_0_0): 7 / 0 = NP; Total: 7 / 0 = NP
According to the National Programme, FPO_CAT_>0_0_0 is merged to the metier GNS_FWS_>0_0_0. However, FPO_CAT_>0_0_0 was not sampled for freshwater species (for which Germany has a derogation since 2012), but for young cod which are captured alive and used within a

national age validation experiment and a mark-recapture study of Western Baltic cod in SD22. Only the length distribution of the market-sized cod is used to raise the landings part.

2532 PTM_SPF_32-104_0_0
Sampled metiers: PTB_SPF_32-104_0_0, PTM_SPF_32-104_0_0
At sea: 0 / 0 = NP, Other: 0 / 1 = 0%, Total: 0 / 1= 0%
This metier was not sampled during the randomized activities in 2014. However, our improved sampling covered the commercial fishing activities on the target species (sprat) – see '2532 PTM_SPF_16_31_0_0' below.

2532 OTB_DEF_>=105_1_120
Sampled metiers: OTB_DEF_>=105_1_120, OTM_DEF_>=105_1_120, OTB_DEF_>=105_1_110
At sea: 1 / 4 = 25%, Other: 5 / 6 = 83%, Total: 6 / 10 = 60%
In 2014, Germany only fished 13,7% of the national quota of Eastern Baltic cod. Hence, the number of possible observer trips was massively reduced as was the length of the fishing season.

2532 PTB_SPF_16-31_0_0
Sampled metiers: OTB_SPF_16-31_0_0, PTM_SPF_16-31_0_0, PTB_SPF_16-31_0_0
At sea: 0 / 0 = NP, Other: 17 / 1 = 1700%, Total: 17/ 1= 1700%
A self-sampling cooperation was initiated with the two main trawlers targeting sprat in 2012 and successfully continued in 2013 and 2014.
The overall number of commercial samples in the Baltic in 2013 and 2014 was higher than in previous years for two reasons: 1) improved vessel selection and contact procedure, resulting in more at-sea sampling and self-sampling opportunities (however, without causing additional costs); 2) improved work organization in the lab, where more samples were worked up.

III C 2 Data quality: Results and Deviation from NP Proposal

Sampling procedures and analysis are described and documented (see e.g. http://www.dcf-germany.de/fileadmin/sites/default/downloads/Beprobungsanleitung_2011-12.pdf). Data quality is checked by national routines. Germany is taken part in relevant age reading and maturity workshops in order to ensure international agreement.

On international level data quality is ensured by uploading with data checking into the RDBs (regional data bases - used for the international sampling coordination), InterCatch (relevant data for the assessment of fish stocks) and EU databases (e.g. JRC).

III C 3 Follow-up of regional and international recommendations

No recommendations.

III C 4 Actions to avoid shortfalls

In accordance with the recommendations from WKACCU 2008, WKPRECISE 2009, WKMERGE 2010, SGPIDS 2011 and WKPICS1 2011, the TI-OF started in 2011 to improve the catch sampling program of the German commercial fishing fleet in the Baltic Sea. Hence, 2012 was the first year in which a randomized sampling scheme was implemented on a test stage. This involved a randomized vessel selection procedure. For the years 2008, 2009 and 2010, all vessels were stratified by target species, subdivision, vessel length class, gear type and month. The vessels in each stratum were ranked by their relative share to the stratum landing and those within the 90% threshold of cumulative landing (for active gear) were listed (60% for passive gear). From these lists, vessel owners are contacted randomly and the phone calls are documented. In addition, a number of quality indicators are recorded in accordance with SGPIDS 2012 and WKPICS2 2012. Since 2013, vessel drawlists are only compiled by stock and gear type (active, passive) using the list of active vessels from the last but one year.

It is important to note that once a randomized sampling is working, the primary sampling unit is no longer a métier but a vessel or a trip that has been randomly selected (WKPICS2 2012). The randomization process will result in métier coverage proportional to their use by the fisheries so that the completion of a planned number of samples by métier can no longer be the aim of a sampling program.

Through various trust-building programs such as ecolabelling initiatives, scientific cooperation and round tables with the fisheries associations, the TI-OF continuously works on mainting good relationships to the fishing industry and attempts to further improve the cooperation with fishers.

Planning the number of sampled trips must reflect the sampling capacity and the scientific need for sampling. Usually, there is a significant discrepancy between the scientifically required sampling intensity and the sampling capacity in terms of (sea-going) staff. Thus, the number of trips was planned conservatively for 2014. On the other hand, conservative planning leads to exceeding the sampling plan resulting in so-called 'oversampling'. However, oversampling may not be the right term, as for statistical purposes, the sampling intensities in terms of trips are usually not too high.

III C North Sea and Eastern Arctic

III C 1 Achievements: Results and Deviation from NP Proposal

Sampling of fishing trips
According to the NP 2014-2016 which is a rollover from the NP 2011-2013 (updated in October 2011), 14 fisheries were selected either by landings, effort or value. As the majority of the German North Sea fleet is landing in foreign countries and thus landings in German harbours are only minor (see section III.E General remarks), the main sampling strategy for all trips is concurrent sampling-at-sea.

In the following, each metier is listed and shortfalls are explained:

Fishing ground: Eastern Arctic (ICES Sub-areas I and II)

OTB_DEF_>=120_0_0
Target species: Saithe and cod. Peak season: 1st and 3rd quarter. Area: Northeast Arctic waters. Duration of trips: 4 weeks to 3 months. Sampling effort: Two observer trips were planned. Due to staff shortage during summer it was only possible to sample one trip at the beginning of the year.

OTM_SPF_32-69_0_0
Target species: Atlanto-Scandian herring. Peak season: August to November. Area: Norwegian Sea. Duration of trips: 3 to 4 weeks. Sampling effort: One observer trip was planned. Due to short-term changes in the fishery, the observer schedules could not be adapted at short notice, and it was not possible to observe this fishery.

Fishing ground: North Sea and Skagerrak (ICES Sub-area IV and Divisions IIIa and VIId)

PTM_SPF_32-69_0_0
Target species: Herring. Peak season: September to November. Area: Skagerrak. Duration of trips: 1 week. Sampling effort: Sampled by Denmark and/or Sweden (Regional agreement).

GNS_DEF_100-119_0_0
Target species: Dab, sole and plaice. Peak season: April - June, September - October. Area: Skagerrak and Kattegat. Duration of trips: 1 to 3 days. Sampling effort: Sampled by Denmark and/or Sweden (Regional agreement).

OTB_CRU_90-119_0_0
Target species: Norway lobster. Peak season: June to December. Area: Skagerrak and Kattegat. Duration of trips: 1 to 3 days. Sampling effort: Sampled by Denmark and/or Sweden (Regional agreement).

GNS_DEF_90-99_0_0
Target species: Dab, sole and plaice. Peak season: July - October. Area: Skagerrak and Kattegat. Duration of trips: 1 to 3 days. Sampling effort: Sampled by Denmark and/or Sweden (Regional agreement).

OTB_DEF_>=120_0_0 (merged with PTB_DEF_>= 120_0_0, OTB_DEF_90-119_0_0, OTB_DEF_100-119 _0_ and SSC_DEF_>= 120_0_0)
Target species: Saithe, cod, haddock. Peak season: All year round. Area: Northern North Sea and Skagerrak. Duration of trips: 1 to 2 weeks. Sampling effort: 6 observer trips were planned, all trips were carried out.

TBB_CRU_16-31_0_0
Target species: Brown shrimp. Peak season: March to October with peaks in the 2nd and 3rd quarter. Area: German North Sea coastal waters. Duration of trips: 1 to 3 days. Sampling effort: 8 observer trips were planned, 6 trips were carried out. Two trips are missing due to bad weather conditions especially during the peak summer season.

OTM_SPF_32-69_0_0
Target species: Herring, mackerel. Peak season: Restricted fishing season for mackerel in the North Sea – January/February and 4th quarter; Herring – 3rd quarter/December. Area: North Sea and English Channel. Duration of trips: 3 to 4 weeks. Sampling effort: 2 observer trips were planned. One observer trip was carried out and two additional trips sampled by self-sampling.

PTM_DEF_<16_0_0
Target species: Sandeel. Restricted fishing season. Area: Northern North Sea. Duration of trips: 6 to 10 days. Sampling effort: This metier changed and is recently carried out by single boats only (OTB_DEF_<16_0_0 and OTM_DEF_<16_0_0). However, the German share of the sandeel Union TAC was 0.14% (Council Regulation 315/2014) and thus negligible. At the RCM NS&EA, the sampling coverage by Denmark (94.3% of TAC) and Sweden (3.5% of TAC) was regarded as sufficient.

TBB_DEF_70-99_0_0
Target species: Sole and plaice. Peak season: All year round. Area: Southern North Sea. Duration of trips: 4 to 6 days. Sampling effort: 4 observer trips were planned, 5 trips were carried out.

OTB_DEF_70-99_0_0
Target species: Flatfish. Peak season: All year round. Area: Central and Southern North Sea. Duration of trips: 5 to 8 days. Sampling effort: 2 observer trips were planned and carried out, but the fishery switched to the bigger mesh size range of 100-119mm.

OTB_MCD_70-99_0_0
Target species: Mixed crustaceans (*Nephrops*) and demersal fish. Peak season: June to October. Area: Southern North Sea. Duration of trips: 4 to 6 days. Sampling effort: sampling done by Denmark according to regional (RCM NS&EA) agreement.

III C 2 Data quality: Results and Deviation from NP Proposal

Sampling procedures and analysis are described and documented (see e.g. http://www.dcf-germany.de/fileadmin/sites/default/downloads/Beprobungsanleitung_2011-12.pdf). Data quality is

checked by national routines. Germany is participating in relevant age reading and maturity workshops in order to ensure international agreement.

On international level data quality is ensured by uploading with data checking into the RDBs (regional data bases - used for the international sampling coordination), InterCatch (relevant data for the assessment of fish stocks) and EU databases (e.g. JRC).

III C 3 Follow-up of regional and international recommendations

No recommendations.

III C 4 Actions to avoid shortfalls

Based on the list of fishing vessels supplied by the Federal Agency for Agriculture and Food (BLE), Germany is always trying to reach a wide participation of vessels in the observer programme and to include vessels which have not been sampled by observers before. Although this is partially successful, there are always vessel owners, of smaller vessels in particular, which are not willing to allow observers onboard. Based on the present situation, random sampling of the fleet is yet not fully implemented.
This leads also to an opportunistic sampling strategy, taking sampling opportunities when they occur, irrespective if they are planned or not. Other deviations occurred because of short-notice changes in the fishing behaviour. When more or other than the planned trips were carried out, opportunities for samplings were taken which arose due to contacts with the fishing industry.
Although Council Regulation 199/2008 states that vessel owners "shall take observers on board" and the Federal fisheries research institutes hold a co-operation agreement with the German Fisheries Association, this situation remains to be difficult for several metiers.
Germany, however, participates in the MARE/2014/19 Strengthening regional cooperation in the area of fisheries data collection, where regional statistical sound sampling schemes will be tested.

III C NORTH ATLANTIC AND NAFO

III C 1 Achievements: Results and Deviation from NP Proposal

Sampling of fishing trips:
After metier merging, six fisheries were selected either by landings, effort or value. Four of these metiers are dealt with by the RCM North Sea and Eastern Arctic since autumn 2009, but belong to the North Atlantic region according to Commission Regulation 665/2008 and Commission Decision 2010/93/EU. As the majority of the German North Atlantic fleet is landing in foreign countries and thus landings in German harbours are only minor (see section III.E General Remarks), the main sampling strategy for all trips is concurrent sampling-at-sea.

In the following, each metier is listed and shortfalls are explained:

Fishing ground: Iceland, Greenland and Irminger Sea (ICES Sub-areas XII and XIV and Division Va)

OTB_DEF_>=130_0_0
Target species: Greenland halibut and cod. Peak season: 2nd/3rd quarter. Area: East Greenland (ICES Div. XIVb). Duration of trips: 4 weeks to 3 months. Sampling effort: 2 observer trips were planned and carried out.

OTM_DEF_100-129 _0_0
Target species: Redfish. Peak season: 2nd/3rd quarter. Area: Irminger/Labrador Sea (ICES Sub-areas XII and XIV, NAFO Sub-areas 1-2). Duration of trips: 4 weeks to 3 months. In 2014, this fishery has been carried out by only one German-flagged vessel in one trip. The planned sampling of this fishery could not be carried out due to logistic problems indicated by the ships owners. However, redfish in this fishing ground could be sampled as by-catch of the *OTB_DEF_>=130_0_0* metier.

Fishing ground: NAFO areas

OTB_DEF_>=120_0_0
Target species: Greenland halibut and cod. Peak season: 3rd/4th quarter. Area: West Greenland (NAFO Div. 1D). Duration of trips: 6 weeks to 3 months. Sampling effort: 1 observer trip was planned and carried out.

Fishing grounds: Western waters (ICES Sub-areas VI-VIII, mainly West of Scotland and West of Ireland)

OTM_SPF_32-69_0_0
Target species: Mackerel, horse mackerel, blue whiting. Peak season: March to June/October/November. Area: West British waters and Bay of Biscay. Duration of trips: 3 to 4 weeks. Sampling effort: 3 observer trips were planned, two trips were conducted. Due to logistic problems indicated by the ship owners, it was not possible to place an observer onboard of an additional third trip. However, one additional trip on a German-flagged vessel was sampled by a Dutch colleague.

FPO_CRU_all_0_0
Target species: Deep-sea red crab. Peak season: All year round. Area: West of Ireland, West of Scotland. Duration of trips: Long soaking times of the pots simulate high effort - 4 weeks. Fishing by landings and value is negligible. Germany applied for derogation for this métier because this fishery consists of four Spanish-owned but German-flagged vessels which are exclusively operating from Spanish and Irish ports.The RCM NA 2012 regarded the "onboard monitoring unnecessary owing to 1) the small by-catch of finfish, and 2) the return of undersized crustaceans alive.". The target species *Chaecon affinis*, however, is not listed in Appendix VII of COM Decision 2010/93/EU.

GNS_DEF_>=220_0_0
Target species: Anglerfish. Peak season: All year round. Area: North East Atlantic. Duration of trips: 4 weeks. Target species: Deep water crustaceans. Peak season: All year round. Area: West of Ireland, West of Scotland. Duration of trips: Long soaking times of the set nets simulate high effort - 4 weeks. Landings are <500t (2013). Germany applied for derogation for this métier because this fishery consists of four Spanish-owned but German-flagged vessels which are exclusively operating from Spanish and Irish ports. Germany will re-evaluate the current international fishing situation in order to reach a sampling agreement with relevant MS.

III C 2 Data quality: Results and Deviation from NP Proposal

Sampling procedures and analysis are described and documented (see e.g. http://www.dcf-germany.de/fileadmin/sites/default/downloads/Beprobungsanleitung_2011-12.pdf). Data quality is checked by national routines. Germany is participating in relevant age reading and maturity workshops in order to ensure international agreement.

On international level data quality is ensured by uploading with data checking into the RDBs (regional data bases - used for the international sampling coordination), InterCatch (relevant data for the assessment of fish stocks) and EU databases (e.g. JRC).

III C 3 Follow-up of regional and international recommendations

See table II.B.2.

III C 4 Actions to avoid shortfalls

Based on the list of fishing vessels supplied by the Federal Agency for Agriculture and Food (BLE), Germany is always trying to reach a wide participation of vessels in the observer programme and to include vessels which have not been sampled by observers before. Although this is partially successful, there are always vessel owners, of smaller vessels in particular, which are not willing to

allow observers onboard. Based on the present situation, random sampling of the fleet is yet not fully implemented.
This leads also to an opportunistic sampling strategy, taking sampling opportunities when they occur, irrespective if they are planned or not. Other deviations occurred because of short-notice changes in the fishing behaviour. When more or other than the planned trips were carried out, opportunities for samplings were taken which arose due to contacts with the fishing industry.
Although Council Regulation 199/2008 states that vessel owners "shall take observers on board" and the Federal fisheries research institutes hold a co-operation agreement with the German Fisheries Association, this situation remains to be difficult for several metiers.
Germany, however, participates in the MARE/2014/19 Strengthening regional cooperation in the area of fisheries data collection, where regional statistical sound sampling schemes will be tested.

III C LONG DISTANCE FISHERIES

III C 1 Achievements: Results and Deviation from NP Proposal

Two fisheries were selected either by landings, effort or value. These parts of the fleet are entirely landing in foreign countries and were not sampled by Germany. In the following, both metiers are listed and the shortfalls are explained:

OTM_SPF_32-69_0_0
Target species: *Sardinella*. Peak season: -. Area: Mauritanian/Moroccan waters (CECAF area). Duration of trips: 3 to 4 weeks A multilateral sampling agreement was reached in 2011 (see Annex 3) and renewed in 2013 and 2015. Sampling is carried out by The Netherlands.

OTM_SPF_32-69_0_0
Target species: Jack Mackerel. Peak season: -. Area: South Pacific. Duration of trips: 4 weeks to three months. A multilateral sampling agreement was reached in 2015 and a sampling plan implemented for the next NP period. Sampling is carried out by The Netherlands.

III C 2 Data quality: Results and Deviation from NP Proposal

not relevant

III C 3 Follow-up of regional and international recommendations

No recommendations.

III C 4 Actions to avoid shortfalls

No actions necessary.

III D RECREATIONAL FISHERIES

III D BALTIC SEA

III D 1 Achievements: Results and Deviation from NP Proposal

Cod

The German marine recreational data collection programme follows a multiannual multi-stage survey design (for further information, see Strehlow *et al.*, 2012). An off-site survey (mail-diary) is used to estimate effort. On-site, a stratified random sample of access points and days is used to estimate catch rates (CPUE). The sampling protocol covers the entire year. Length distributions of recreational catches are collected by onboard measurements of charter vessels trips. Commercial/survey length-weight relationships and age-length keys were used for conversion of recreational catch numbers to biomass and length at age.

The planned and achieved sampling is summarised in the following tables. The sampling area responds to SD 22 & SD 24. There is no recreational fishery of cod in SD 25-32 by Germany.

The table below compares the number of samples planned with the number of samples realised and explains the reasons for the shortfalls. In addition, the numbers of interviewed anglers are given.

Shore angling and wading				
No. of samples planned	No. of samples achieved	Deviation to planned sampling	Reason(s) for shortfalls	No. of anglers interviewed
84	84	0		278
Boat, charter boat angling, trolling				
192	231	+39	The oversampling is a result of on-board sampling of charter boats to obtain length distributions	2571

The table below provides the numbers of samples and length measurements of cod from charter vessel sampling.

Sample Type	Samples	Harvest n	Release n
Boat, charter boat angling, trolling	42	3736	2455

A nationwide telephone screening survey was initiated 2014. From 26 May to 24 October 2014, 51754 households (50200 representative sample & 1554 angler sample) were called and 930 panelists recruited for a 1-year telephone-diary study with quarterly contacts. This survey will estimate catch and effort for the entire German marine recreational fishery in the Baltic Sea. Preliminary findings from the screening survey revealed that the total number of estimated anglers in the Baltic Sea deviates less than 10% from the effort estimates used so far.

Marine recreational fisheries surveys conducted by MS revealed that the recreational fishery removes considerable amounts of biomass from the western Baltic cod stock (ICES, 2010; ICES, 2011; Sparrevohn & Storr-Paulsen, 2012; Strehlow *et al.*, 2012). Recreational harvest of western Baltic cod in 2010 accounted for 25% of the total landings (commercial landings + recreational harvest). Due to the large impact of the marine recreational fishery, recreational fisheries data were included into the western Baltic cod stock assessment in 2013. This decision was corroborated during WKBALTCOD 2015. MS covered by this decision are Germany, Denmark and Sweden. The longest available time series of recreational fisheries including biological data is from Germany. Accordingly, German data

were included in the assessment. The incorporation of Danish and Swedish data is still lacking, mainly due to missing biological information in SD 23. WGRFS 2015 will address this issue.

A pan-European study revealed that the release proportions for Atlantic cod were high (> 60% in at least one of the studied European countries; Ferter *et al.,* 2013). In Germany, release proportions for western Baltic cod varied from 60% to 27% between years (Strehlow *et al.,* 2012). A post-release containment study of caught and released cod in the western Baltic recreational fisheries was carried out in 2012 (Weltersbach and Strehlow, 2013). The adjusted survival rates for angled cod ranged from 100.0 to 72.7% (overall mean 88.8% ±22.0%). Our findings suggest that a substantial amount of recreationally released cod survive and thus cannot be classified as removals from the western Baltic cod stock. In 2014 further studies were carried out to estimate survival of cod showing signs of barotrauma and the effects of capture depth (Ferter *et al. in press*). While 97.8% of cod managed to dive showing 100% survival; 2.2% were floaters and would have likely died in a natural setting.

Salmon/Sea trout

According to the NP, a derogation to sample the recreational salmon fishery was requested for 2013 and the development of the fishery was observed. Observation showed that this fishery is rapdily expanding and requires sampling. In 2013, a pelagic longliner was sampled to obtain biological salmon data (length, weight, scales (age), tissue samples (genetics)) for future use in the recreational catch sampling program. Furthermore, first contacts were made with relevant stakeholders in the recreational salmon fishery. An outcome of these meetings was that recreational salmon surveys would meet large resistance by the angling community. Another outcome was that the trolling fishery for salmon is a mixed fishery also targeting sea trout. Accordingly, a survey attempt was selected targeting the recreational sea trout fishery (pilot study 2013) but targeting the entire catch, i.e. also salmon as bycatch, since anglers were less reluctant to provide recreational catch data when asked for sea trout. This survey was conducted within the financial remits of the European DCF.
In 2014, 400 diaries were distributed to the German Boat Angling Association, in which a majority of private boat owners are organized targeting salmon. First finding will be available 2015. In addition, a video-based port sampling survey is planned for 2015 to count the number of trolling boats targeting salmon.
Further to the mixed fishery aspect (salmon/sea trout), ICES WGBAST 2013 & WGRFS 2012 both recommended to carry out studies to estimate recreational sea trout catches due to the potential important impact on the population dynamics of these stocks. Preliminary analysis revealed that the recreational sea trout fishery removals were about twice as large as the commercial landings.

Eels

In 2012, an eel pilot study was carried out as planned in the NP. Preliminary analysis showed that eel catches from the recreational passive gear fishery are negligible. First estimates reveal that the required precision level of 1 is achieved. In 2014, a nationwide telephone screening survey followed by a 1-year telephone diary survey was initiated and will provide eel data of the recreational rod and line fishery.

Sharks

Derogation requested, as there is no recreational fishery for sharks in German Baltic Sea waters or from German vessels.

III D 2 Data quality: Results and Deviation from NP Proposal

An analysis of the estimated annual recreational cod harvest data by means of bootstrapping analysis (95% confidence interval, $\alpha = 0.025$) estimated a relative deviation between 14.9% as minimum and 17.3% as maximum for the harvest in numbers from 2005-2010.

Year	Minimum estimates ($\alpha = 0.025$)	Maximum estimates ($\alpha = 0.025$)
2005	-13.3	12.6
2006	-11.8	12.1
2007	-10.7	12.5
2008	-14.9	17.3
2009	-12.2	13.2
2010	-11.7	12.9

No bootstrap was calculated for the 2012/2013/2014 estimates, but it would be expected to fall into the same boundaries as in the previous years (see table above). For an overview of statistical estimators from effort and CPUE data, see Strehlow *et al.* (2012).

During ICES WGRFS 2013, the scorecard system to evaluate the quality of recreational catch estimates was further developed – building on experiences from WKACCU, WKPICS, etc. This included the development of guidelines for best practice in recreational sampling schemes together with a set of guiding questions. The German multiannual on-site survey was evaluated using the set of questions and no major concerns for bias were detected. The off-site survey was evalauetd accordingly and several bias issues identified. Accordingly, a new nationwide telephone screening survey and associated 1-year telephone diary survey with quartery recalls was designed and launched in May 2014.

At the end of 2014, all regional survey agents were visited and an on-site quality control of their work performed.

III D 3 Follow-up of regional and international recommendations

not relevant

III D 4 Actions to avoid shortfalls

A nationwide telephone screening survey followed by an associated 1-year telephone diary survey was launched in May 2014. This survey will yield a complete update of catch and effort estimates for all recreationally caught species in the North and Baltic Sea. The planned nationwide telephone survey is one of the state-of-the-art methods to obtain recreational catch estimates. This survey will cover all marine recreational species.

III D 1 Achievements: Results and Deviation from NP Proposal

Cod

Derogation requested (see Table I.A.1), as the German recreational cod fishery in the North Sea is marginal.

According to a pilot study from 2004-2006 (Schultz *et al.* 2007), German recreational fishery cod catches in the North Sea have no impact on the stock. Annual cod catches from charter vessels amount to approximately 30 t. Other fishing techniques (e.g. boat angling, shore angling) as well as the recreational passive gear fishery have no further relevance concerning cod catches. A second pilot study was carried out in August 2011 to verify these findings. Preliminary results show that there has been no change and that catches have even declined due to a decline in the charter boat fishery.

A nationwide telephone screening survey was planned and funding secured in June 2013. The nationwide screener of 50000 households will be followed by a 1-year telephone-diary recall survey and quarterly recalls. This survey will estimate catch and effort for the entire German marine recreational fishery in the North Sea and started in May 2014. It will further deliver new effort estimates for a number of target species and fishing modes as well as capture the socio-economic importance of the marine recreational sector.

Eels

Derogation requested, as the German recreational eel fishery in the North Sea is marginal (see Table I.A.1).
In 2012, an eel pilot study was carried out as planned in the NP. Preliminary analysis showed that eel catches from the recreational passive gear fishery are negligible. First estimates reveal that the required precision level of 1 is achieved. In 2014 a nationwide telephone screening survey followed by a 1-year telephone diary survey was initiated and will provide eel data of the recreational rod and line fishery.

Sharks

Derogation requested, as there is no directed German recreational fishery targeting sharks (see Table I.A.1).
A pilot study was carried out in August 2011 to estimate recreational shark catches in the German North Sea. Preliminary findings show that recreational shark catches are marginal and have no impact on the stocks.

III D 2 Data quality: Results and Deviation from NP Proposal

not relevant

III D 3 Follow-up of regional and international recommendations

not relevant

III D 4 Actions to avoid shortfalls

A nationwide telephone screening survey followed by an associated 1-year telephone diary survey was launched in May 2014. This survey will yield a complete update of catch and effort estimates for all recreationally caught species in the North and Baltic Sea. The planned nationwide telephone survey is one of the state-of-the-art methods to obtain recreational catch estimates. This survey will cover all marine recreational species.

III D North Atlantic

No recreational fisheries in this region.

III D Long Distance Fisheries

No recreational fisheries in this region.

III E BIOLOGICAL STOCK-RELATED VARIABLES

GENERAL REMARKS

Several reasons imply that the collection of metier-related variables (section III.C) as well as the collection of stock-related variables (section III.E) should be handled at the same time in the German NP. Sampling-at-sea is an optimal strategy to reach this goal, due to

- the necessity to sample on board of freezer trawlers and trawlers with processing units. This is the case in the fishery for pelagic species, as these are landed in frozen packages. The same is true for landings of demersal species from waters off Norway and Greenland which are landed as partly processed products.
- monitoring discarding. It would be highly ineffective not to sample the landings and other biological data at the same time.
- providing the possibility to sample at the same time landings, discards and to take otoliths and samples for sex and maturity.
- discards of species listed in Appendix VII of Commission Decision 2010/93/EU as by-catch in fisheries directed towards other species can only be recorded on board.
- 62%, 68% and 64% of the landings in 2012, 2013 and 2014 respectively, occurred in foreign countries.

Due to the reasons mentioned above, Germany prefers in most cases to sample catches **at sea** (especially in the North Sea and North Atlantic). This is still the case with the entry into force of the landings obligation in parts of the fleet.

The status of a scientific observer on board of a German fishing vessel still is a guest status. Article 11(3) of Council Regulation 199/2008 stipulates that samplers shall be accepted onboard, which did however not improve this situation. The possibility for biological sampling depends on the hospitality of ship owners and companies. Based on the present situation, random sampling of the fleet is still difficult and might be not optimal in future (even if a new legal basis for onboard sampling is in place), since there will remain some excuses to refuse an observer.

Data are gathered in connection with sampling of commercial sources (observer trips, harbour and self sampling) and on scientific surveys. Data are sampled on a yearly basis. Table III.E.3 provides an overview over the species by region/fishing ground/area/stock that were sampled during 2014. Note that for some species (e.g. redfish and Greenland halibut), otoliths were only taken but not read due to lacking consensus on age reading methodology and validity.

The indications of the planned minimum numbers of individuals to be measured for the different variables are based on experiences with the German sampling scheme and survey catches. Even with the possibilities to adjust the numbers within the updates for the programm it is not always possible to predict accurately if these planned numbers are reachable and realistic. In the following the most common reasons for over- and undersampling are listed:

Reasons for *oversampling*:
For most of the fish stocks and brown shrimp, the number of length and age measurements well exceeded the planned and requested minimum number of measurements. As most of the measurements are taken on observer trips, the reason for "oversampling" is often that all fish of a once randomly chosen subsample have to be measured in order to calculate the retained and discarded fraction of the whole catch. Another reason is that once an observer is onboard, the entire trip is being sampled (i.e. sampling does not stop after a few hauls or fishing days, but lasts until the end of that trip). This additional sampling onboard is done without any additional costs. However, minor additional costs occur in the home laboratory in form of additional staff time for sampling processing. The sometimes very high numbers for weight@length (=individual weights) are taken on observer trips without additional costs in order to get reliable weight-length relationsships.

Reasons for *undersampling*:
In several cases, the planned sample sizes have not been achieved. In some cases this is due to the general rule for observers to collect stock-based variables of 12 fish per length class and area. If only very few length classes occur during a fishing trip, this rule can lead to undersampling in terms of the planned numbers.

III E Baltic Sea

III E 1 Achievements: Results and Deviation from NP Proposal

The required, planned and achieved sampling is summarized in Table III.E.3. General reasons for oversampling are explained above under "General remarks". Oversampling did not cause significant additional eligible costs.

Germany is obliged to sample seven stocks in the Baltic Sea.

See Annex 2 for a description of the European eel (*Anguilla anguilla*) data collection in German freshwaters.

Clupea harengus SD22-24 IIIa: This species was sampled according to the plan.

Gadus morhua SD22-24, SD25-32: Baltic cod was sampled according to the plan.

Limanda limanda SD22-32: Achieved dab sampling exceeded the plan. The planned number of 200 individuals was set precautionarily low due to limitations in age reading capacity. However, the age reading capacity in the institute increased recently, allowing an increase in sampling intensity. Increased stock size led to increased sample sizes in BITS surveys (*cf.* ICES WGBFAS 2012). The randomized sampling scheme inmproved coverage of fishing activities and hence, the coverage of fishing acitivites targeting flatfishes.

Platichthys flesus SD22-32: Flounder was sampled in excess due to conservative planning. The increased age reading capacity of staff allowed for increased sampling intensity. The by-catch sampling in the cod fishery contributed largely to the high number of fish sampled. The randomized sampling scheme inmproved coverage of fishing activities and hence, the coverage of fishing acitivites targeting flatfishes.

Sprattus sprattus SD22-32: Baltic sprat was sampled slightly in excess due to conservative planning.

Sander lucioperca IIId: No pikeperch were sampled during 2014, as no FWS metiers were sampled. A derogation for Germany to sample freshwater species metiers is in force since 2012.

Additional sampling:
Flatfish species such as brill, turbot and plaice were sampled without obligation within the German DCF. Specimens of these species are obtained as by-catch from the commercial cod fishery and from survey samples. In 2014, the first two self-samples from GNS_DEF_110-156_0_0 targeting turbot from the Oderbank (SD24) were purchased. Biological parameters from these species are length, weight, age, sex and maturity. The sampling of all flatfish species in the Baltic Sea is justified with respect to the HELCOM and ICES initiatives on stock assessment strategies for Baltic flatfish (WKFLABA 2010 and 2012, WGBFAS 2013, WKBALFLAT 2013, WKBALFLAT 2014). Germany received a derogation to sample freshwater species from 2012 onwards.

III E 2 Data quality: Results and Deviation from NP Proposal

Sampling procedures and analysis are described and documented (see e.g. http://www.dcf-germany.de/fileadmin/sites/default/downloads/Beprobungsanleitung_2011-12.pdf). Data quality is checked by national routines. Germany is participating in relevant age reading and maturity workshops in order to ensure international agreement.

On international level data quality is ensured by uploading with data checking into the RDBs (regional data bases - used for the international sampling coordination), InterCatch (relevant data for the assessment of fish stocks) and EU databases (e.g. JRC).

III E 3 Follow-up of regional and international recommendations

No recommendations.

III E 4 Actions to avoid shortfalls

Achieved sampling intensities higher than the planned values are explained above.

For statistical reasons, the achieved sampling intensities cannot be considered too high. The occurrence of oversampling rather reflects conservative planning.

III E North Sea and Eastern Arctic

III E 1 Achievements: Results and Deviation from NP Proposal

Table III.E.3 provides an overview on planned and achieved numbers of fish for age, weight, sex and maturity. **Reasons for oversampling and undersampling are** explained **in the beginning of this chapter under "General remarks".** Germany was obliged to sample 14 stocks in this region, after applying the exemption rules for stock-related variables (Commission Decision 2010/93/EU, chapter III.B.B2.5).

See Annex 2 for a description of the European eel (*Anguilla anguilla*) data collection in German freshwaters.

Skagerrak and Kattegat (ICES Division IIIa):
Pollachius virens: According to Commission Decision 2010/93/EU, saithe in the Skagerrak has to be sampled. Catches in the Skagerrak, however, are belonging to the same saithe stock as in the northern North Sea targeted by the same fishing metier. As fishing activities in the Skagerrak occur only irregularly, the stock was sampled mainly in the North Sea. Therefore, sampling numbers are merged for ICES areas IIIa, IVabc and VIId.

North Sea and Eastern Channel (ICES Sub-area IV and Division VIId)*:*
The planned numbers for *Pollachius virens* and *Gadus morhus* for weight@age, maturity@length, maturity@age, sex-ratio@length and sex-ratio@age could not be fulfilled. Also, maturity@length and maturity@age numbers for *Limanda limanda* could not be fulfilled. This is mainly due to very bad weather conditions during the International Bottom Trawl Survey in quarter 1 which caused a very limited coverage (see also III.G.1). Usually, these parameters are collected on surveys and not by commercial sampling.

Eastern Arctic (ICES Sub-areas I and II):
The planned numbers for *Pollachius virens* for length@age and weight@age, and for *Melanogrammus aeglefinus* length@age could not be fulfilled. *Pollachius virens* was only caught in low numbers. In the case of *Melanogrammus aeglefinus* the age-length distribution was very similar throughout the hauls so it was not necessary to take 500 age samples. Other variables for the listed species are not collected by Germany, as the ICES AFWG receives sufficient data from Norway and Russia, which are the main fishing nations in this area. This was stated in the 2011 AR and accepted by the evaluators.
As stated in the section III.C.1 of this report it was not possible to place an observer on a trip directed on *Clupea harengus* in ICES I/II (Atlantoscandian herring) in 2014. Therefore, no achieved

measurements can be listed. Germany has no DCF obligation to sample this stock but does this normally for assessment purposes (see next paragraph).

Additional sampling:
For the North Sea and Eastern Arctic region, several stocks were sampled by Germany despite there is no obligation by the DCF rules for stock-related variables to do so. However, sampling data are used regularly for assessment purposes in the ICES WGNSSK and WGWIDE. Furthermore, all stocks are targeted by fishing metiers which have to be sampled by Germany. These stocks are highlighted in green colour in Table III.E.3: *Clupea harengus* in ICES Sub-areas I and II; *Melanogrammus aeglefinus, Pleuronectes platessa* and *Solea solea* in the North Sea and Eastern Channel.

III E 2 Data quality: Results and Deviation from NP Proposal

Sampling procedures and analysis are described and documented (see e.g. http://www.dcf-germany.de/fileadmin/sites/default/downloads/Beprobungsanleitung_2011-12.pdf). Data quality is checked by national routines. Germany is participating in relevant age reading and maturity workshops in order to ensure international agreement.

On international level data quality is ensured by uploading with data checking into the RDBs (regional data bases - used for the international sampling coordination), InterCatch (relevant data for the assessment of fish stocks) and EU databases (e.g. JRC).

III E 3 Follow-up of regional and international recommendations

No recommendations.

III E 4 Actions to avoid shortfalls

See at the beginning of this chapter under "General remarks" and paragraph III C4 for the North Sea area.

III E North Atlantic and NAFO SA1-2

III E 1 Achievements: Results and Deviation from NP Proposal

Table III.E.3 provides an overview on planned and achieved numbers of fish for age, weight, sex and maturity. **Reasons for oversampling and undersampling are** explained **in the beginning of this chapter under "General remarks".**

Stocks in the NAFO area:
Reinhardtius hippoglossoides. The under-sampling for age of Greenland halibut was due to the fact that the observer was not allowed to take otoliths of all animals necessary because of the reduction of product value by cutting the fish. Every part of the body of Greenland halibut is commercially utilised. Even the heads are sold separately to Asian markets. As there is still no agreement on the methods of age reading for the use of age reading in the assessment, Germany did not insist to take all otoliths.

Gadus morhua. As it was only possible to place an observer on one trip, which was directed on *Reinhardtius hippoglossoides,* sampling was carried out on the German Greenland Survey only. However, 62% of the planned number for maturity and sex sampling was reached.

Additional sampling:
Three stocks were sampled by Germany despite there is no obligation by the DCF rules for stock related variables to do so. However, sampling data are used regularly for assessment purposes at ICES WGWIDE. Furthermore, all stocks are targeted by fishing metiers which must be sampled by Germany. These stocks are highlighted in green colour in Table III.E.1: *Micromesistius poutassou, Scomber scombrus, Trachurus trachurus*.

However, due to logistical reasons, a fishing trip directed on blue whiting could not be observed. Only a very limited number of length measurements and age samples could be derived from by-catches in other fisheries and the planned numbers of measurements were not reached.

III E 2 Data quality: Results and Deviation from NP Proposal

Sampling procedures and analysis are described and documented (see e.g. http://www.dcf-germany.de/fileadmin/sites/default/downloads/Beprobungsanleitung_2011-12.pdf). Data quality is checked by national routines. Germany is participating in relevant age reading and maturity workshops in order to ensure international agreement.

On international level data quality is ensured by uploading with data checking into the RDBs (regional data bases - used for the international sampling coordination), InterCatch (relevant data for the assessment of fish stocks) and EU databases (e.g. JRC).

III E 3 Follow-up of regional and international recommendations

See table II.B.2.

III E 4 Actions to avoid shortfalls

See at the beginning of this chapter under "General remarks" and paragraph III C4 for the North Atlantic area.

III E LONG DISTANCE FISHERIES

III E 1 Achievements: Results and Deviation from NP Proposal

Table III.E.3 provides an overview on required, planned and achieved numbers of fish for age, weight, sex and maturity. Germany was obliged to sample two stocks after applying the exemption rules for stock-related variables (Commission Decision 2010/93/EU, chapter III.B.B2.5) for other regions, namely: *Sardinella aurita* and *Trachurus* spp.

Germany had received a derogation to sample these stocks (ref. Ares(2010)512785 of 16/08/2010). Furthermore, a multilateral sampling agreement for the CECAF area was reached in 2011 (see Annex 3) and a sampling plan implemented from 2012 onwards. For the SPRFMO area a similar agreement was reached in 2015.

III E 2 Data quality: Results and Deviation from NP Proposal

not relevant

III E 3 Follow-up of regional and international recommendations

No recommendations.

III E 4 Actions to avoid shortfalls

not relevant

III F TRANSVERSAL VARIABLES

III F 1 CAPACITY

III F 1 1 Achievements: Results and Deviation from NP Proposal

All results achieved as planned, no deviation.

III F 1 2 Data quality: Results and Deviation from NP Proposal

As all capacity data are derived from the fleet register, which by definition represents the population, it is not meaningful to apply any data quality issues in the context of the DCF.

III F 1 3 Follow-up of regional and international recommendations

No recommendations.

III F 1 4 Actions to avoid deviations

No deviations.

III F 2 EFFORT

III F 2 1 Achievements: Results and Deviation from NP Proposal

All results achieved as planned, no deviation.

III F 2 2 Data quality: Results and Deviation from NP Proposal

As all effort data for vessels > 8m are derived from the logbooks, which are to be submitted exhaustively by European legislation, it is neither required (see footnote "c" in corresponding table) nor meaningful to apply any data quality issues in the context of the DCF.

Effort data for vessels < 8m have been collected via random sampling survey. For these data, statistical characteristics have been calculated and provided in Table III.F.1.

III F 2 3 Follow-up of regional and international recommendations

No recommendations.

III F 2 4 Actions to avoid deviations

No deviations.

III F 3 LANDINGS

III F 3 1 Achievements: Results and Deviation from NP Proposal

All results achieved as planned, no deviation.

III F 3 2 Data quality: Results and Deviation from NP Proposal

As all landings data are derived from the sales notes, which are to be submitted exhaustively by European legislation, it is not meaningful to apply any data quality issues in the context of the DCF.

III F 3 3 Follow-up of regional and international recommendations

No recommendations.

III F 3 4 Actions to avoid deviations

No deviations.

III G Research surveys at sea

III G 1 Achievements: Results and Deviation from NP Proposal

In 2014, Germany conducted 12 surveys supported within the DCF and participated in the Atlanto-Scandian Herring Acoustic Survey conducted by Denmark, as well as the Blue Whiting Survey conducted by The Netherlands and Ireland. There were no changes in strategy or design, except when it was co-ordinated with the relevant ICES planning/working group. Of course, the number of hauls and length of hydroacoustic tracks depended on weather conditions as well as on the performance of the equipment and/or of the vessel, but these were for almost all surveys within the range of records for the former survey years. For the number of hauls and sampling activities, refer to Table III.G.1. The following text provides a short description of all surveys carried out in 2014, with a map of the achieved sampling activities.
Note that possible small deviations from days-at-sea planned to days-at-sea achieved are – if not otherwise stated – due to minor adaptations of the 2014 vessel schedule during late 2013 and early 2014.

Baltic Sea:

1 Baltic International Trawl Survey (BITS) in the 1st and 4th Quarter

The BITS survey in the 1st quarter 2014 was planned from 03/02 to 21/02 with FRV "Solea", but due to technical problems, it took place from 05/02/14 to 21/02/14. The BITS survey in the 4th quarter 2014 was conducted from 24/10 to 08/11 also with FRV "Solea".
Refer to Fig. III.G.1a and III.G.1b for the fishery hauls and hydrography stations conducted on the German parts of the BITS in spring and autumn.

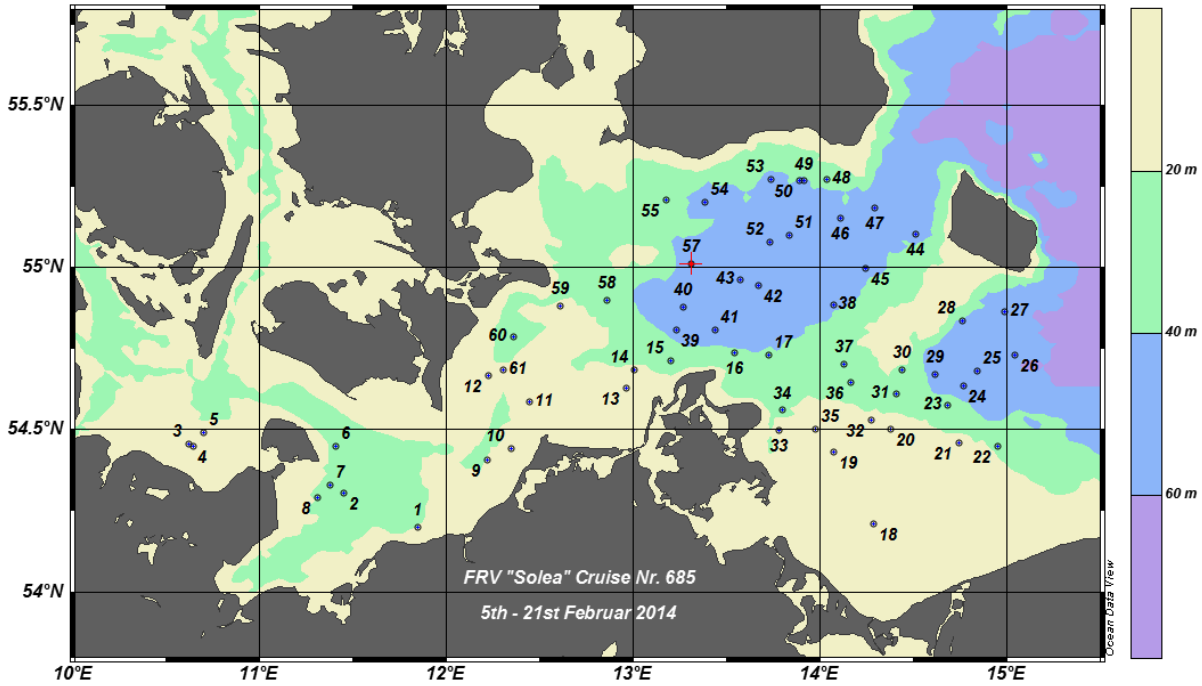

Fig. III.G.1a: Baltic International Trawl Survey – Station grid (BITS, 1st quarter 2014).

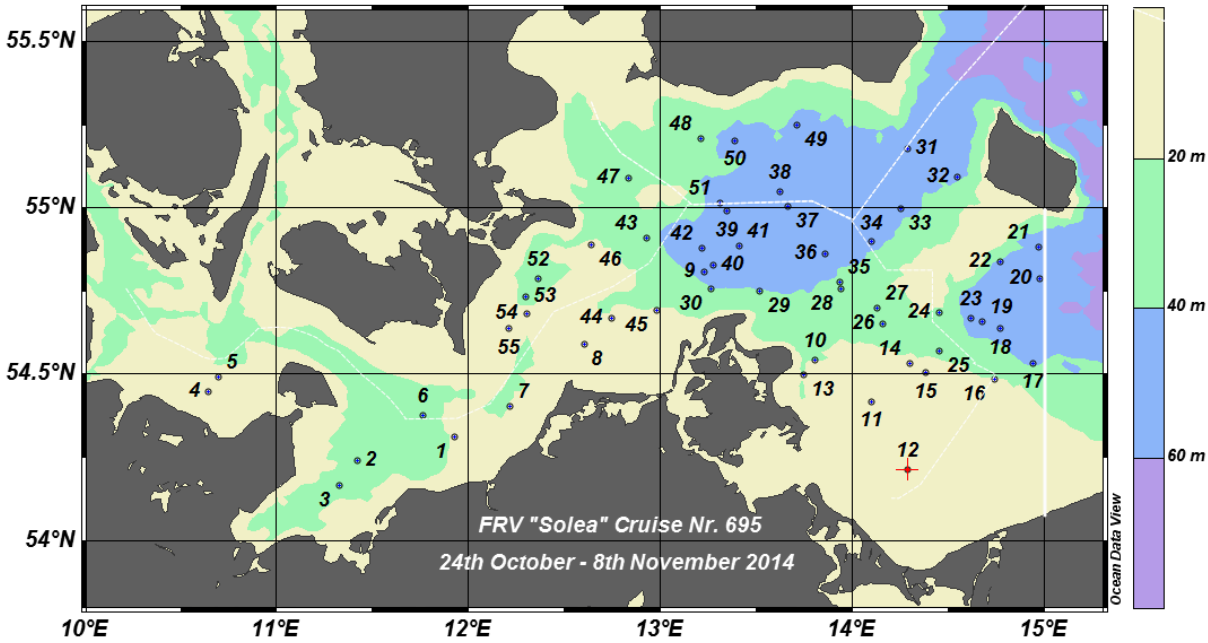

Fig. III.G.1b: Baltic International Trawl Survey – Station grid (BITS, 4th quarter 2014).

2 Baltic International Acoustic Survey (BIAS)

The survey took place from 30/09/14 to 20/10/14 with FRV "Solea". Refer to Fig. III.G.2 for the cruise track and fishery stations conducted on the German part of the Baltic International Acoustic Survey (BIAS).

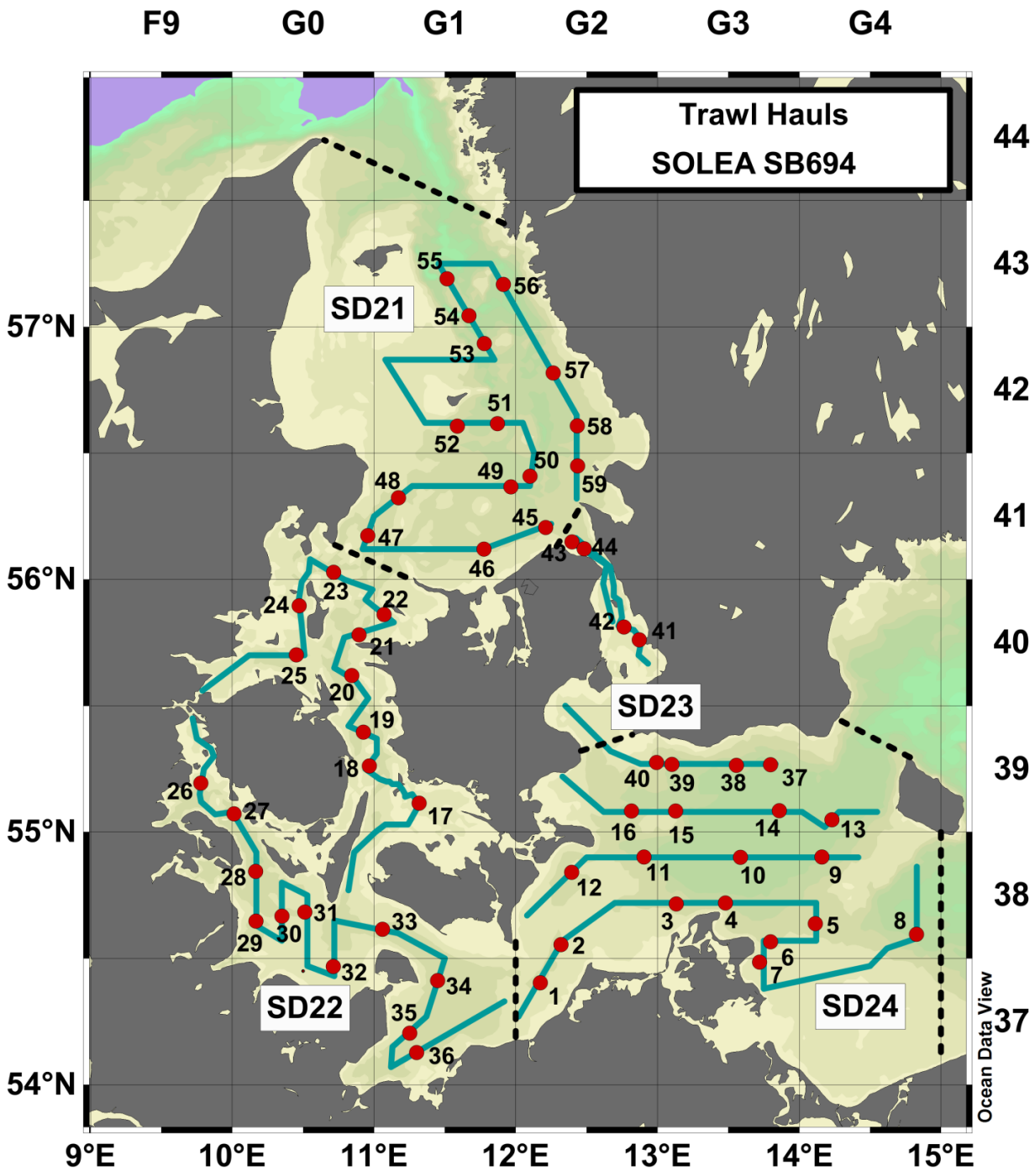

Fig. III.G.2: FRV "Solea" cruise 694/2014. Cruise track (lines) and fishery hauls (red dots). ICES statistical rectangles are indicated in the top and right axis. Thick dashed lines separate ICES subdivisions (SD).

3 Baltic Sprat Acoustic Survey

The survey took place from14/05/14 to 04/06/14 with FRV "Walther Herwig III". Refer to Fig. III.G.3 for the cruise track and trawl stations conducted on the German part of the Baltic Sprat Acoustic Survey (SPRAS). Occurring shortfalls/oversamplings were under the margin of 10%.

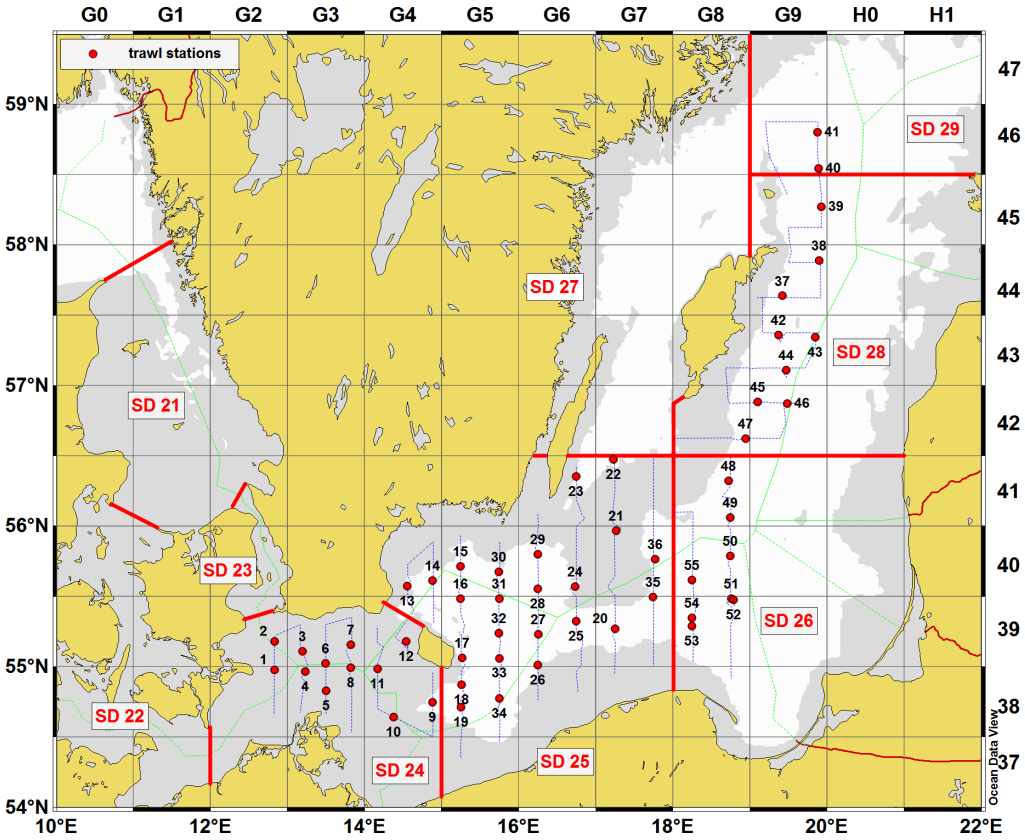

Fig. III G.3: Hydroacoustic tracks and trawl stations (FRV "Walther Herwig III", May 2014)

4 Rügen Herring Larvae Survey

The Rügen Herring Larvae Survey (RHLS) in the western Baltic (ICES area IIId/ 24) took place during 16 weeks in March-June in 2014 on FRV "Clupea". Additionally, the last week of February was included in the survey, since the retreating ice cover allowed for it. Sampling in week 4 had to be cancelled due to vessel engine failures. The following week, sampling continued on a chartered vessel from Greifswald University. However, the survey duration during this week fell one day short. Figure III.G.4 shows the survey area and station grid. 100% of the planned sampling programme could be realised.

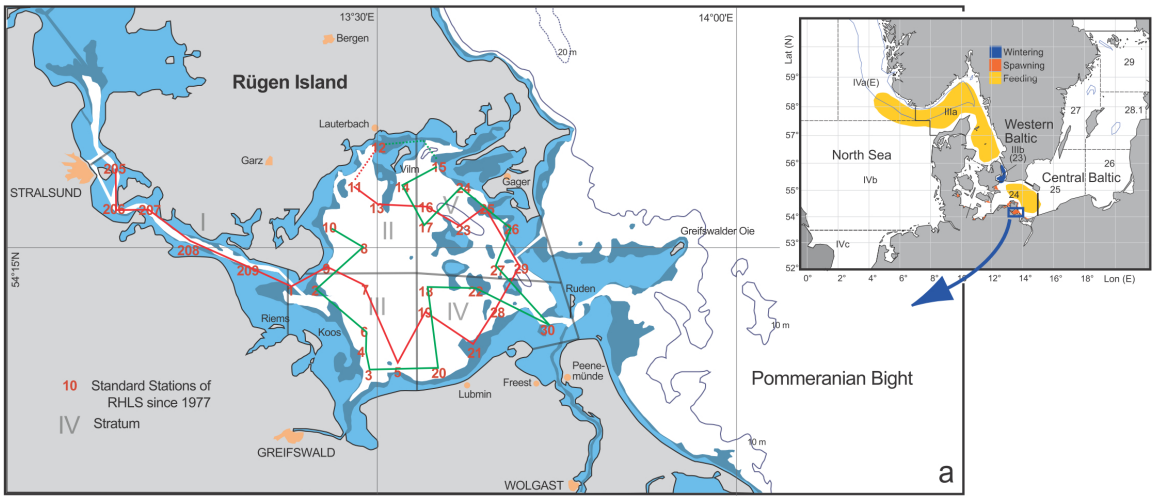

Fig. III G.4: Rügen Herring Larvae Survey in 2014. Stations for ichthyoplankton hauls and CTD casts.

5 International Bottom Trawl Survey (IBTS) in Quarter 1

In 2014, the survey in quarter 1 was conducted from 23/01/14 to 23/02/14 on FRV "Walther Herwig III". Bad weather conditions over the entire survey impaired the progress of the survey. Therefore, only 46 of the planned 77 rectangles could be sampled. Please refer to Fig III.G.5 for the allocation of the fishing positions.

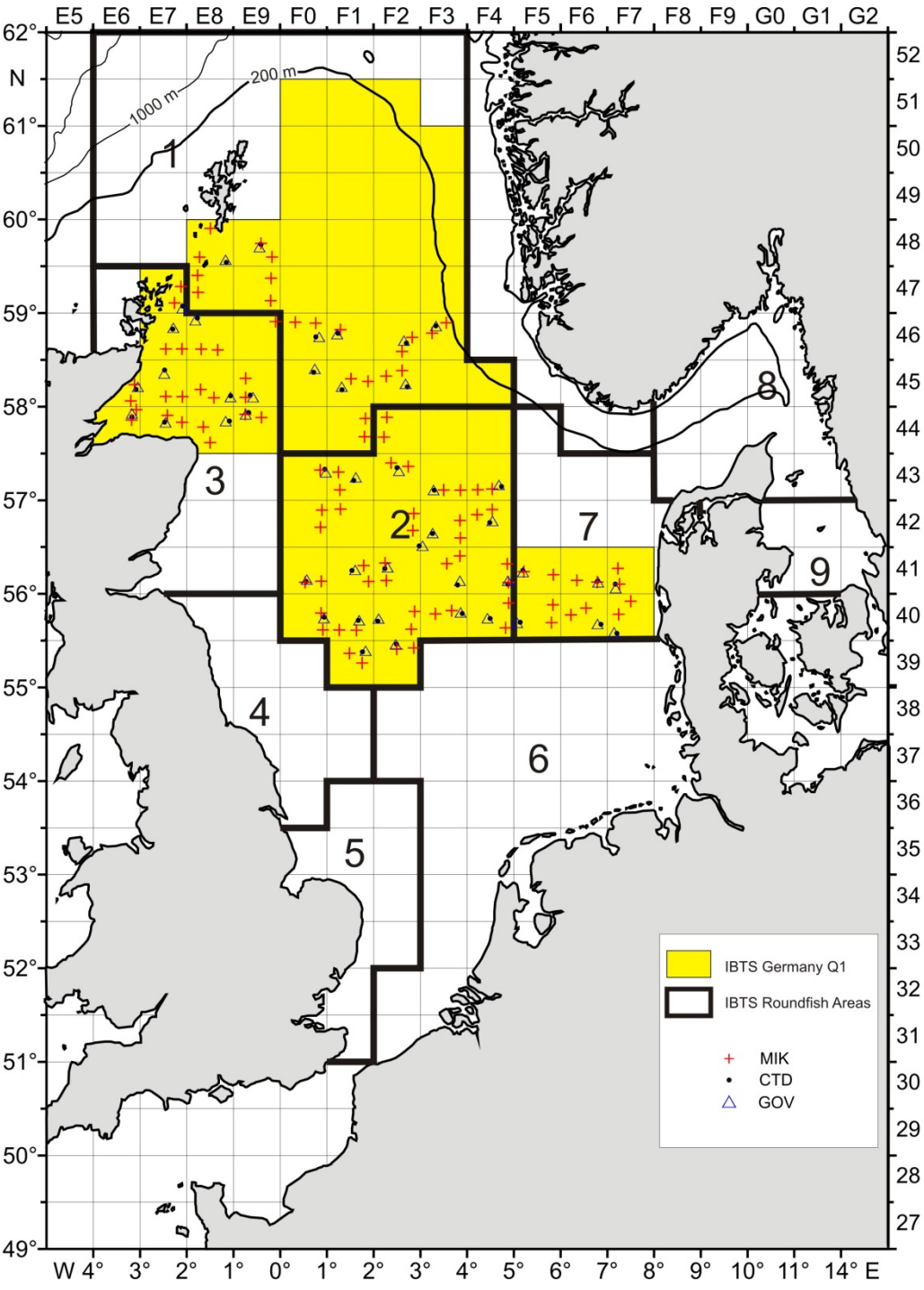

Fig. III G.5: International Bottom Trawl Survey (IBTS) 1st quarter. GOV-hauls, CTDs und MIK-stations within the "Walther Herwig III" cruise.

6 International Bottom Trawl Survey (IBTS) in Quarter 3

The IBTS survey in Quarter 3 was conducted in conjunction with a national survey from 28/07/14 to 23/08/14 on FRV "Walther Herwig III". 10 days within this period were devoted to IBTS, the other days to a programme on national expenses (German Small-scale Bottom Trawl Survey, GSBTS). Two extra days were needed due to exceptionally stormy weather conditions during the entire second half of the cruise. Please refer to Fig. III.G.6 for the cruise track of the German part of the IBTS in Quarter 3.

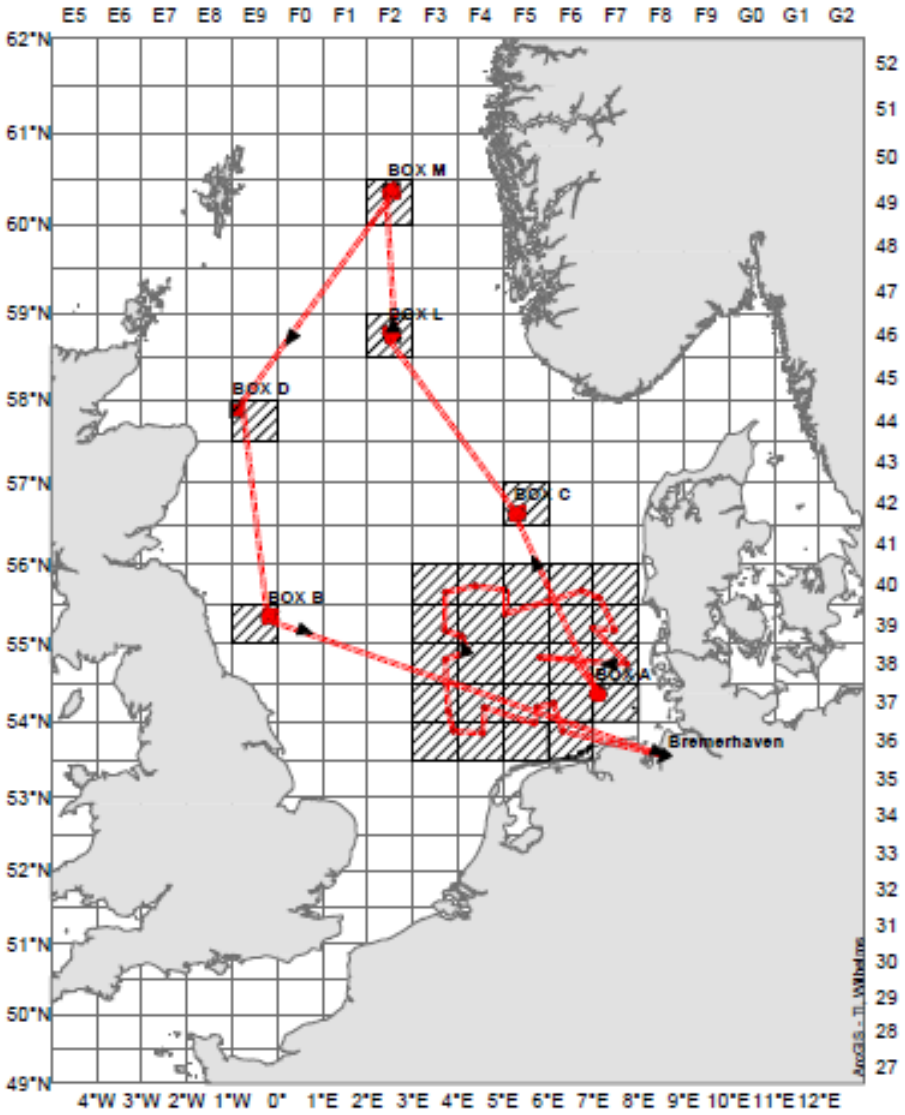

Fig. III.G.6: International Bottom Trawl Survey (IBTS) 3rd quarter: Cruise track of GSBTS and IBTS 28/07/14 to 23/08/14. Hatched area: ICES rectangles sampled within the IBTS, letters: areas of investigation (Boxes) within the GSBTS.

7 North Sea Beam Trawl Survey (BTS)

In 2014, the survey took place from 11/08/14 to 24/08/14 on FRV “Solea”. Fig. III.G.7 shows the trawl positions of the German part of the BTS in 2014. Shortfalls and deviations: Due to bad weather conditions the survey was shortened by several days and only 30 hauls where carried out with priority to coastal rectangles with a reduced intensity of two hauls per square instead of planned four.

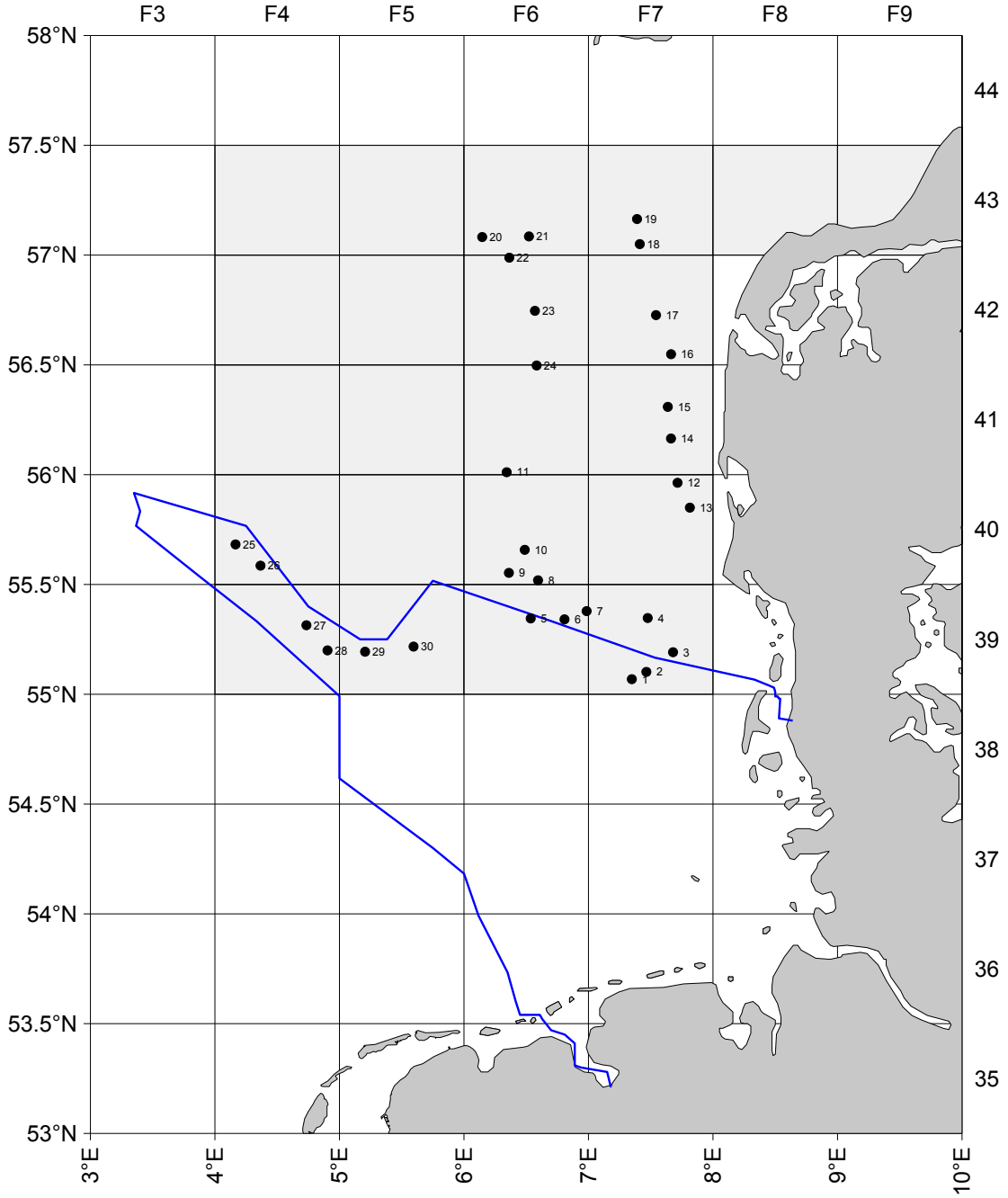

Fig. III.G.7: North Sea Beam Trawl Survey (BTS). Trawl positions 2014.

8 Demersal Young Fish Survey (DYFS)

The German part of the survey, which is conducted GER and NL, consisted of five components (short trips on chartered small fishing cutters) which took place in five different areas (Fig. III.G.8) in Sep/Oct 2014. Since the new German research vessel FRV "CLUPEA" came in operation in 2012, it was finally possible to improve the regional coverage and sampling intensity along the German coast line. In accordance with ICES WGBEAM and WGCRAN, "CLUPEA" fished for 12 days in that area to improve data for the combined surveys, which resulted in a considerable increase of achieved days at sea as well as hauls achieved.

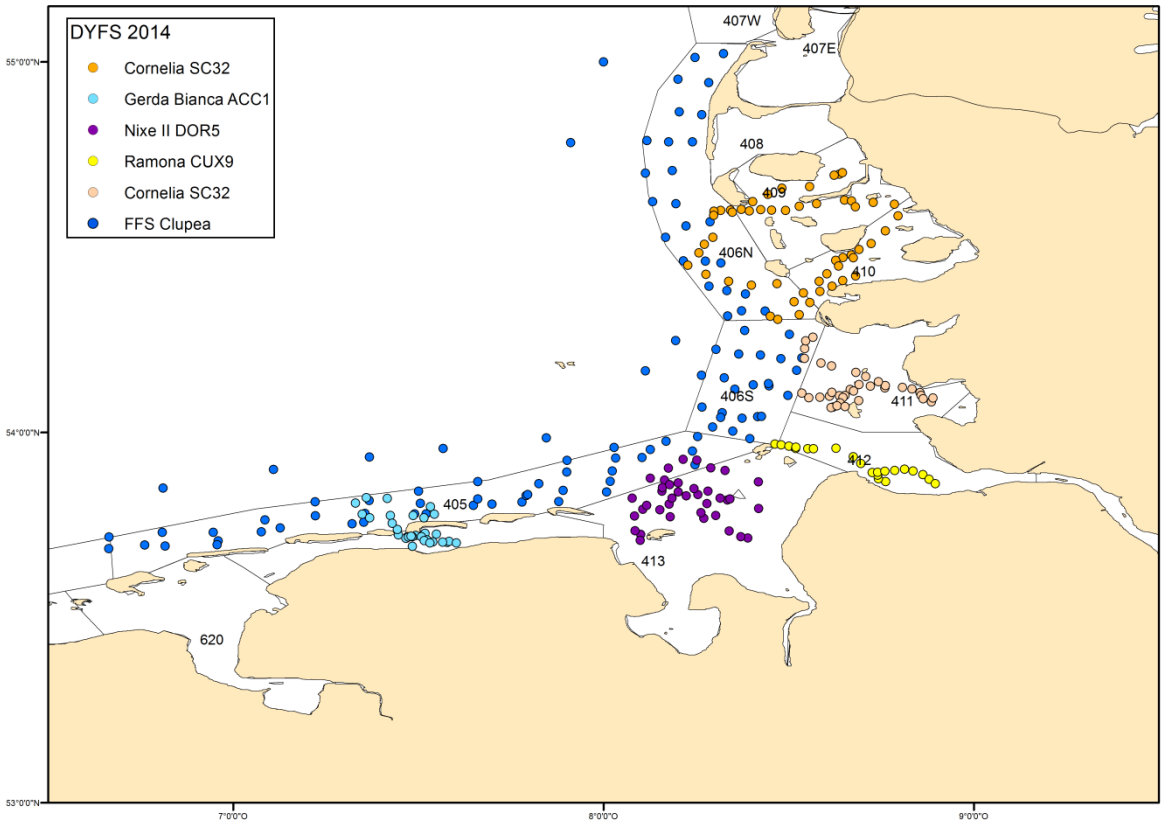

Fig. III.G.8: Stations sampled in the German DYFS 2014.

9 International Ecosystem Survey in the Nordic Seas

Germany participated in this survey with one scientist and contributed to the financial share in order to support Denmark to conduct the survey. The survey took place from 11/05/14 to 06/06/14.

10 International Redfish Survey (Norwegian Sea)

Based on the decision of ICES WGIDEEPS, no survey was planned in 2014.

11 Herring Larvae Survey (North Sea)

The herring larvae surveys took place in the Channel area of the North Sea from 02/01/14-13/01/14 and in the Orkney/Shetland area from 22/09/14-02/10/14 on FRV "Walther Herwig III". Fig. III.G.11 a) and b) shows the positions of the plankton hauls:

Shortfalls and deviations: Shortfalls in number of days at sea are due to bad weather conditions. However, with regard to the ICES Working Group for International Pelagic Surveys (WGIPS), only 75 stations are left to be covered in the first half of January leading to 88% coverage. Due to unfavourable weather conditions, no samples could be obtained from the western survey area in September, leading to a 64% achievement.

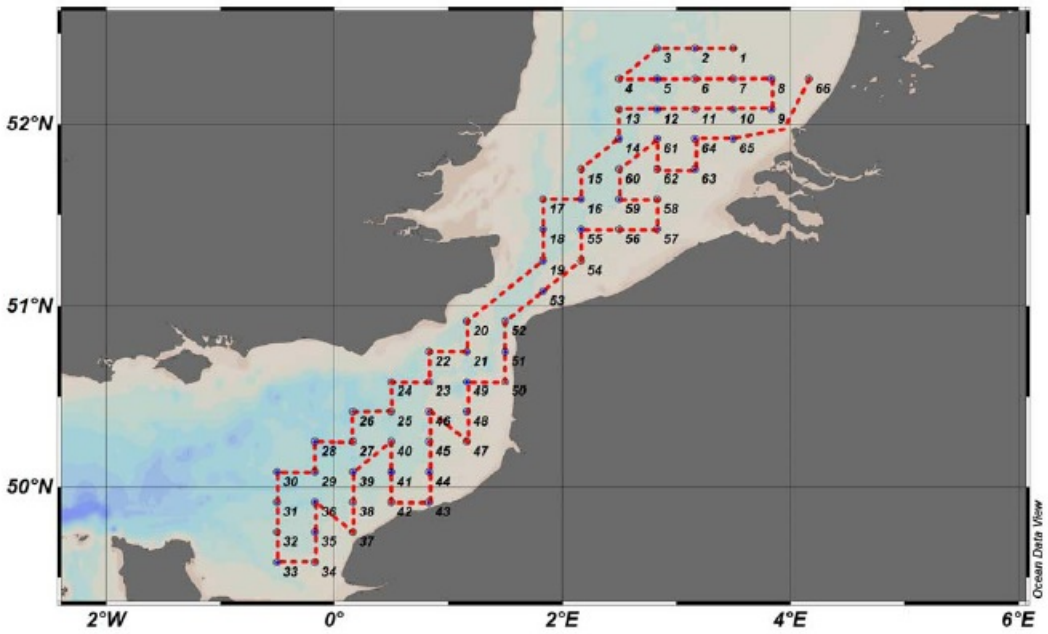

Figure III. G 11a: Cruise track WH 371 (January 2014)

b

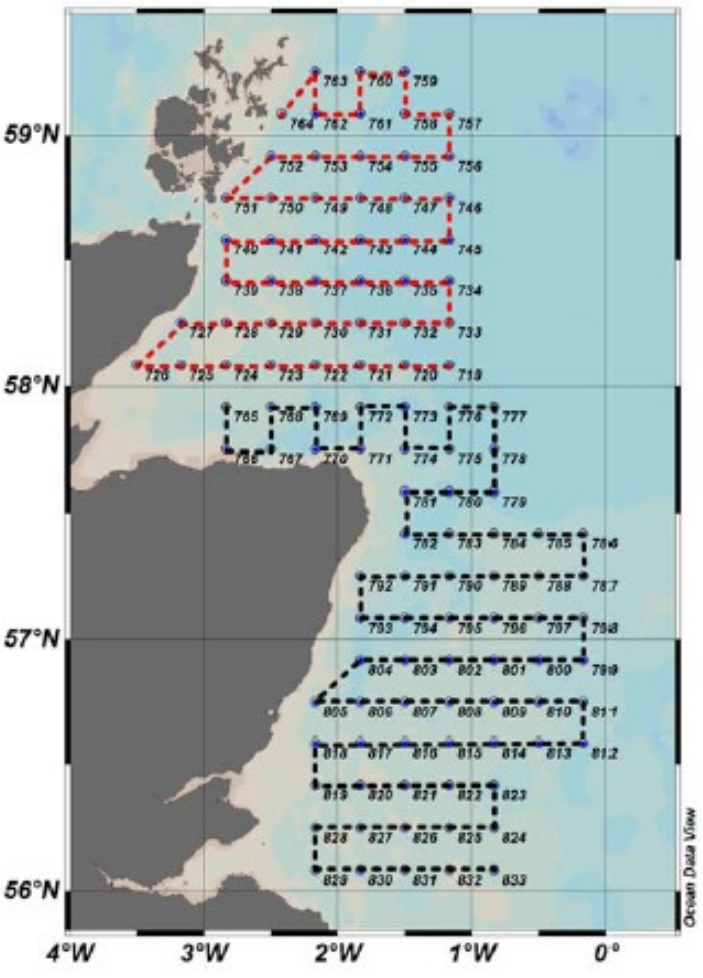

Figure III. G 11b: Cruise track WH 378 (September 2014, dotted red line: Orkney/Shetlands area, dotted blue line: Buchan area).

12 North Sea Herring Acoustic Survey

The survey took place from 25/06/14 to 15/07/14 on FRV "Solea". Fig III.G.12 shows the cruise track and trawl positions of the German part of the North Sea Herring Acoustic Survey. The cruise track was slightly prolonged to obtain finer details in the fish distribution.

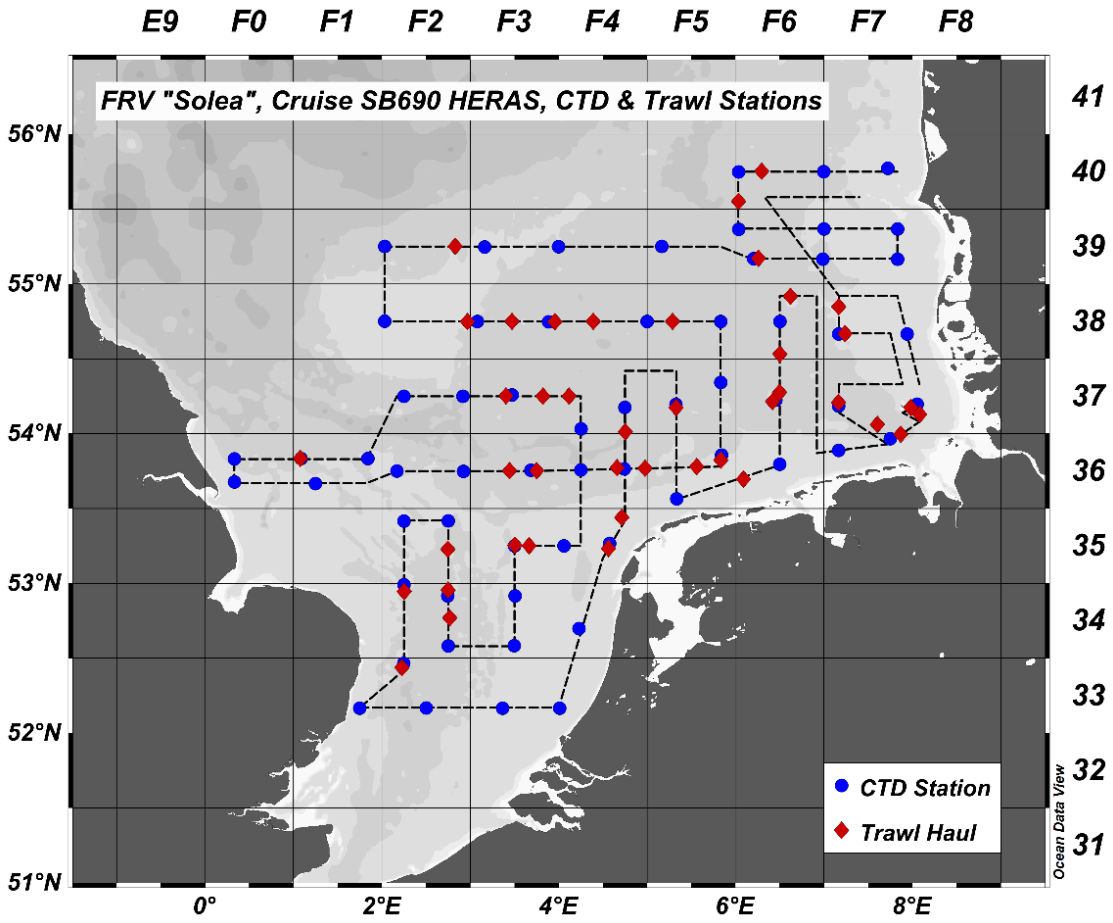

Fig. III.G.12: North Sea Herring Acoustic Survey 2014. FRV „Solea", cruise 690. Cruise track (dotted line), trawl stations (red diamonds) and CTD casts (blue dots). ICES statistical rectangles are indicated in the top and right axis.

NORTH ATLANTIC:

13 International Redfish Trawl and Acoustic Survey

The survey was not carried out in 2014, as the survey is conducted only every second year. The next survey will be conducted in 2015.

14 Greenland Groundfish Survey

The Greenland Groundfish Survey was carried out from 09/10/14-18/11/14 on FRV "Walther Herwig III". Fig III.G.14 shows the investigation area. There were no shortfalls due to very favorite weather conditions, so that survey goals were fully achieved in a shorter time than planned.

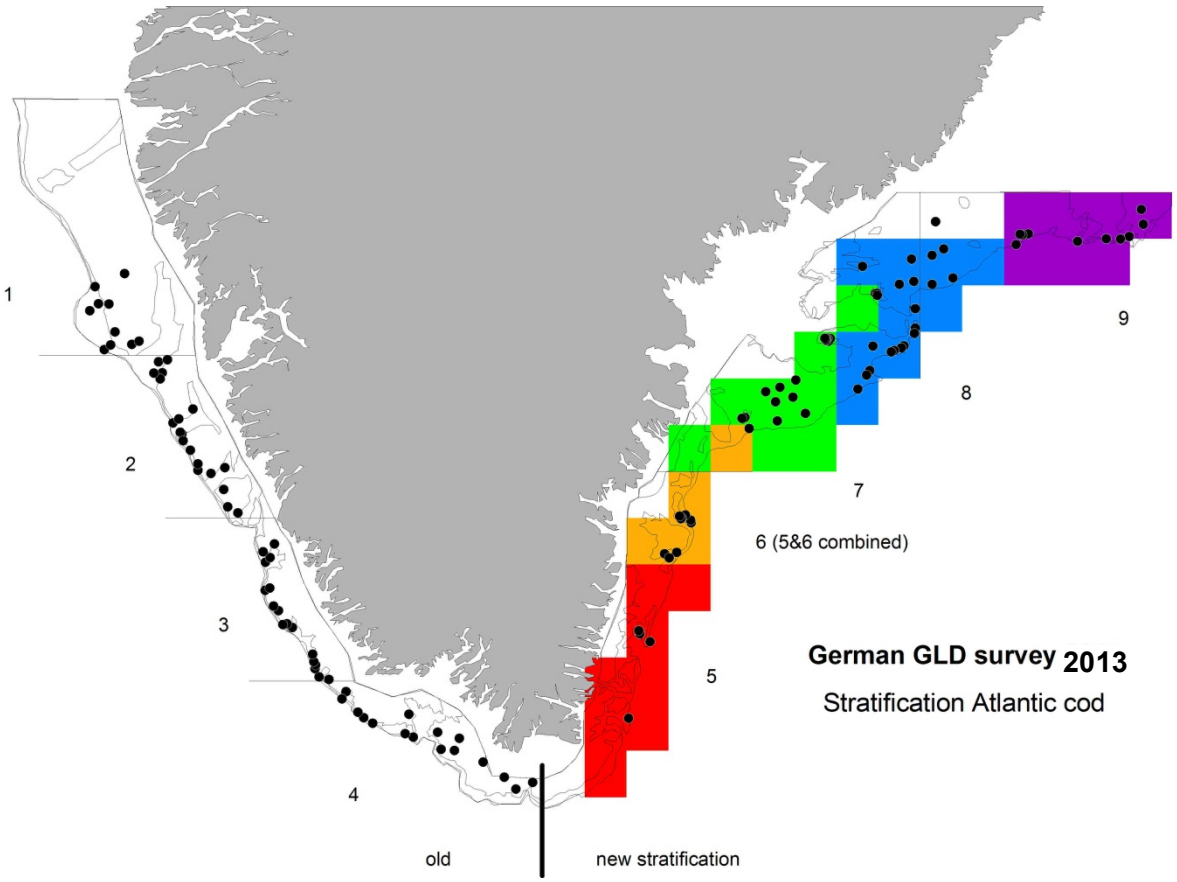

Fig. III.G.14: Greenland groundfish survey 2014. Investigation area and sampling strata.

15 Blue whiting survey

Germany participated in this survey and provided staff (one scientist) for the Dutch part of the survey and contributed to the financial share in order to support the Netherlands and Ireland to conduct the survey. The Dutch part of the survey took place from 23/03/14 to 10/04/14.

16 Mackerel and Horse Mackerel Egg Survey

The survey was not carried out in 2014, as the survey is conducted triennally. The next survey will be conducted in 2016.

III G 2 Data quality: Results and Deviation from NP Proposal

The reasons for occuring shortfalls are explained in the section above. Changes in survey design were only made within the requirements of the responsible planning/working groups.

III G 3 Follow-up of regional and international recommendations

No relevant RCM recommendations. Recommendations and requests from survey planning groups are generally followed up as part of the international collaboration within ICES.

III G 4 Actions to avoid shortfalls

Bad weather conditions: No action is possible.

Technical problems: Vessels and equipment are always kept in good conditions; however, sudden technical problems cannot be prevented.

IV MODULE OF THE EVALUATION OF THE ECONOMIC SITUATION OF THE AQUACULTURE AND THE PROCESSING INDUSTRY

IV A COLLECTION OF ECONOMIC DATA FOR THE AQUACULTURE

IV A 1 ACHIEVEMENTS: RESULTS AND DEVIATION FROM NP PROPOSAL

According to the DCF, it is mandatory to collect data on marine aquaculture and for eel and salmon companies. As there are no salmon aquaculture companies in Germany, only data for companies producing marine species and eels are in the focus of the German program. In the NP, Germany planned to sample the four eel aquaculture plants. Unfortunately, as the owners of the plants were not willing to answer very specific questionnaires especially due to confidentiality reasons, Germany has not sampled those eel plants in 2014. Due to confidentiality reasons, a publication would not have been possible. This is true for the only oyster farm in Germany as well. Hence, Germany can only provide production value numbers for the oyster farm.

For the blue mussel business, data are more easily available as they are part of the fleet. In addition to the data coming from logbooks and landing statistics, a questionnaire has been sent out. The results are given in Tables IV.A.2 and IV.A.3. Additionally, a thorough investigation of the cost structure in the sector has been undertaken (see Buck et al. 2010). The results have been used for cross-checking of the sample data in order to ensure that the data represent the sector appropriately.

The stable number of questionnaires replied seems to be a success of Germany's strategy to visit trade fairs, to take part in activities of the farmers during the mussel season and to conduct research projects in the mussel sector in order to support the blue mussel business.

IV A 2 DATA QUALITY: RESULTS AND DEVIATION FROM NP PROPOSAL

The results are presented in Table IV.A.3 with the values of the indicators. Unfortunately, a column for the values of the Coverage Rate is absent. According to the new version of the guidelines, the reporting of the values is mandatory for all types of data collection, so Germany used the standard table from last year and added a column with values for CV as well.

As the answer to the questionnaire is not mandatory and given the thorough analysis of the sector by Buck et al. (2010), the achieved sampling rate seems to be sufficient even if the planned rate of 100% was not reached. Employment data have been taken from the National Agency for Employment and from the questionnaire. Indicators on employment presented here are related to the questionnaire.

IV A 3 FOLLOW-UP OF REGIONAL AND INTERNATIONAL RECOMMENDATIONS

No relevant recommendations available.

IV A 4 ACTIONS TO AVOID SHORTFALLS

Eel and oyster farms have been contacted directly by phone call. As the results could not be published due to confidentiality reasons, Germany stated in its AR since 2011 that it is assumed that these actions are sufficient also in the following years. This means that questionnaires to the oyster company and phone calls to the eel producers have been done, but no further actions are undertaken if no response is the result in this segment. This has been accepted by STECF. For the blue mussel segment, data seem to be sufficient and no further actions will be undertaken as long as the quality of the results remains the same. Even if not mandatory, Germany tries to collect data on profitability of recirculation systems in the following years as well, since there is a trend to build and operate more of these closed systems.

IV B COLLECTION OF DATA CONCERNING THE PROCESSING INDUSTRY

IV B 1 ACHIEVEMENTS: RESULTS AND DEVIATION FROM NP PROPOSAL

Data have been collected by the Institute of Sea Fisheries and the Federal Statistical Office (Details are mentioned in the NP) and since 2012 for employment also from the Federal Agency for Employment. Results are presented in Tables IV.B.1 and IV.B.2 with the information collected during the sampling year 2014. In our view, however, It makes no sense to fill in standard tables with information from the past that is not accurate anymore, in particular information that has not been accurate for the reporting/collection year. Therefore, Germany ignored the red sentence in the standard table for this module and adapted the table to the figures that were the basis for the year in which data where collected, and not the figures from three years in the past.
Since enterprises with 20 and more employees are responsible for more than 90% of sector's sales and employment, low response rates in the segments with less employees do not affect the results in terms of representation of the sector eminently. The data collected represent between 50% and 80% of the sector's whole sales. The exceptions are data for debt and net value of assets. Here, the willingness to provide data voluntarily differs distinctly. Nonetheless, the coverage rate is still above 30%.
Data for debt are calculated from the interest payment of the enterprises, taking market interest rates for enterprises. Then it is compared with the data of the enterprises that have provided data, if the amount is in an appropriate range. In Table IV.B.2, the response to the questionnaire is reported.
Even if not mandatory, Germany asked for the volume of fish raw material, the species, the region where it came from (Germany / EU / Rest of the world) and if it was fish from wild catch or from aquaculture.

IV B 2 DATA QUALITY: RESULTS AND DEVIATION FROM NP PROPOSAL

Results of the data quality evaluation may be found in Table IV.B.2 with the values of the accuracy and other indicators. As indicated in the guidelines, Germany does not provide CV for data from Structural Business Statistics. As the volume of fish raw material is not mandatory to collect, CV has not been calculated. For the remaining variables, CV is presented in Table IV.B.2. As there is no column for CV, neither for the coverage rate (which is mandatory to report), Germany used standard table from last year and updated the figures in order to be able to fulfill the obligations.

For debt, volume of fish raw material and total value of assets coverage rate is reported as other variability indicator.

This procedure is equivalent to the accepted procedure of the former reporting years.

IV B 3 FOLLOW-UP OF REGIONAL AND INTERNATIONAL RECOMMENDATIONS

No relevant recommendations available.

IV B 4 ACTIONS TO AVOID SHORTFALLS

not relevant

V MODULE OF THE EVALUATION OF EFFECTS OF THE FISHING SECTOR ON THE MARINE ECOSYSTEM

V 1 ACHIEVEMENTS: RESULTS AND DEVIATION FROM NP PROPOSAL

No deviations occurred in 2014.

V 2 ACTIONS TO AVOID SHORTFALLS

not relevant

VI MODULE FOR MANAGEMENT AND USE OF THE DATA

VI 1 ACHIEVEMENTS: RESULTS AND DEVIATION FROM NP PROPOSAL

Central database services were provided at the BLE in Bonn as in previous years, without deviations from the aims set out in the NP.

Several data calls (Annual Economic Report, Effort, Fish Processing Industry, Aquaculture, RCMs, ICES assessment WGs) had to be answered in 2014, which was done within the respective deadlines and with complete and quality-checked data, see Table VI.1.

VI 2 ACTIONS TO AVOID SHORTFALLS

not relevant

VII FOLLOW-UP OF STECF RECOMMENDATIONS

There were no recommendations addressed to MS relating to data collection in the 2013 STECF Plenary meetings.

VIII LIST OF ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Explanation
aeglef.	aeglefinus
AFWG	ICES Arctic Fisheries Working Group
AR	Annual Report
BITS	Baltic International Trawl Survey
BLE	Bundesanstalt für Landwirtschaft und Ernährung (Federal Agency for Agriculture and Food)
BMI	Bundesministerium für Inneres (Ministry for Internal Affairs)
BMEL	Bundesministerium für Ernährung und Landwirtschaft (Ministry for Food and Agriculture) [formerly BMELV]
CPUE	Catch per unit effort
CTD	Conductivity-Temperature-Depth probe
DATRAS	Database for trawl surveys
DCF	Data Collection Framework
DYFS	Demersal Young Fish Survey
EU	European Union
EWG	Expert Working Group (of STECF)
FADN	Farm Accountancy Data Network system
FI	TI Institut für Fischereiökologie (Institute of Fisheries Ecology)
FTE	Full time employment
Funct.	Functional
FWS	Freshwater species (target species assemblage)
FYK	Fish traps
GNS	Set nets/Gill nets
gt	Gross Tonnage
HAWG	ICES Herring Assessment Working Group
JRC	Joint Research Centre
IBTS	International Bottom Trawl Survey
IBTSWG	ICES International Bottom Trawl Survey Working Group
ICES	International Council for the Exploration of the Sea
kW	kilowatt
LDF	Long-distance Fisheries
LOA	Length overall
MIX	Mixed fisheries
MV	(Federal Country of) Mecklenburg-Vorpommern
NACE	Statistical classification of economic activities in the European Community (Nomenclature statistique des Activites economiques dans la Communaute Europeenne)
NAFO	Northwest Atlantic Fishery Organisation
NASC	Nautical Area Scattering Coefficient
No	Number
NP	National Programme
NR	Not relevant
NWWG	ICES North-Western Working Group
OF	TI Institut für Ostseefischerei, Rostock (Institute of Baltic Sea Fisheries)
OTB	Otter trawl bottom
OTM	Otter trawl midwater

PGCCDBS	ICES Planning Group on Commercial Catch, Discards and Biological Sampling
poutas.	poutassou
PTB	Two ship trawl bottom
PTM	Two ship trawl midwater
RCM	Regional Co-ordinating meeting
Reg.	Regulation
SC	Scientific Council
SF	Institut für Seefischerei, Hamburg (Institute of Sea Fisheries)
SGRN	STECF Subgroup on research need and data collection
SH	(Federal Country of) Schleswig-Holstein
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total allowable catch
TBB	Beam trawl
TI	Johann Heinrich von Thünen-Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries
TTB	Twin trawl (Special gear which is used by the demersal fishery)
UK	United Kingdom
WG	Working Group
WGBAST	ICES Baltic Salmon and Trout Assessment Working Group
WGBEAM	ICES Working Group on Beam Trawl Surveys
WGBIFS	ICES Baltic International Fish Survey Working Group
WGBFAS	ICES Baltic Fisheries Assessment Working Group
WGECO	ICES Working Group on Ecosystem Effects of Fishing Activities
WGFAST	ICES Working Group on Fisheries Acoustic Science & Technology
WGIDEEPS	ICES Working Group on International Deep Pelagic Ecosystem Surveys
WGIPS	ICES Working Group for International Pelagic Surveys
WGMEGS	ICES Working Group on Mackerel and Horse Mackerel Egg Survey
WGNSSK	ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerak
WGRFS	ICES Working Group on Recreational Fisheries Surveys
WGWIDE	ICES Working Group on the Assessment of Wide Distributed Species
WKBALTCOD	ICES Benchmark Workshop on Baltic Cod Stocks
WKBALFLAT	ICES Benchmark Workshop on Baltic Flatfish Stocks
WKFLABA	ICES/HELCOM Workshop on Flatfish in the Baltic Sea

IX COMMENTS, SUGGESTIONS AND REFLECTIONS

On modules IV.A and IV.B:

It would be an advantage to have the standard tables with space for at least the mandatory information as in the standard tables in the years before. This could also avoid non-reporting of mandatory figures. Tables IV.A.3 and IV.B.2 have no columns to provide "Coverage Rate" values.

X REFERENCES

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XI ANNEXES

ANNEX 1: MINUTES OF NATIONAL CO-ORDINATION MEETING 2014 [IN GERMAN]

Protokoll des Nationalen Koordinierungstreffens 2014
[TI-OF, Rostock, Di. 09.12.2014]

Teilnehmer: TI-OF: Hr. Gebel, Dr. Gröhsler (zeitweise), Hr. Hagemann (zeitweise), Dr. Krumme, Dr. Limmer (zeitweise), Hr. Peters (zeitweise), Dr. Polte, Hr. Stötera, Hr. Weltersbach, Dr. Zimmermann;
TI-SF: Dr. Berkenhagen, Hr. Ebeling, Hr. Schulte, Hr. Schweizer, Dr. Stransky (Vorsitz), Hr. Ulleweit (Protokoll); TI-FI: Hr. Pohlmann; TI-MA: Fr. Helmert; BLE: Fr. Plum (Ref. 414)

Beginn 9:45 Uhr (Begrüßung durch Dr. Stransky, BLE Hamburg (Ref. 522) nicht vertreten, Vorstellung der Tagesordnung)

1. **Kurze Vorstellung der Teilnehmer**
2. **<u>Datenerhebung</u> 2014: Erfolge & Probleme**
    a. **Beprobung der Freizeitfischerei**
    Weltersbach: Deutsches Meeresangelprogramm:
    Durchführung von Ostsee-Angelsurvey - Bedeutung von Angelfischerei nimmt zu und schließt an kommerzielle Anlandungen an, Daten werden auch für Bestandsabschätzung verwendet
    Telefon-Fangtagebuchstudie – Aufwandstudie zum Aufwand der Meeresfischerei, bundesweite CATI-Bus Umfrage, 1/3 DCF finanziert, Aktualisierung/Validierung der 2006 erhobenen Daten, international anerkannt, Bedeutung der Meeresangelei nimmt in anderen Ländern zu, Beprobungen in anderen Ländern aber noch sehr stichprobenartig
    Nord- und Ostseesurvey zur Aalfreizeitfischerei - über 1 Jahr Telefon Fangtagebuch, erfasst Hobbyfischer mit passiven Fanggeräten
    Barotrauma-Experiment – Kooperation mit IMR Norwegen zu Überlebensraten zurückgesetzter Dorsche
    Meerforellen in der Ostsee - Pilotstudie zu Aufwand, Sammeln von biologischen Daten, Abschätzung der sozio-ökonomischen Bedeutung
    Studie zu Aal-Überlebensraten – Experimente zu Hakenausstoss-Mechanismen
    Schleppangelstudie zu Erfassung der Fänge von Lachs und Meerforelle
    Allgemeine Anmerkungen zur Freizeitfischerei: hauptsächlich in Ostsee, in Nordsee nur wenig Aktivität, Zielarten in Nordsee: Wolfsbarsch, Makrele
    Stransky: zur Meerforelle gibt es eine Empfehlung des STECF zur Aufnahme der Art in das Datenerhebungsprogramm; evtl. ist die Abrechnung von Untersuchungen, die über das eigentliche Datensammeln hinausgehen (Experimente etc.) in Zukunft möglich
    b. **Beprobung der kommerziellen Fischerei auf Aal in Binnengewässern**
    Pohlmann: mehr Zusammenarbeit mit Bundesländern, gesammelte Daten sollen in Aalmanagementplänen einfließen, Probennahmen wie zuvor, allerdings etwas geringere Aktivität als in Jahren zuvor, auch um Zeit für Probenaufarbeitung zu haben; es gibt einen *Mismatch* zwischen Anzahl an Probennahmen und tatsächlich in den Arbeitsgruppen genutzten Daten, es gibt gestiegenen Bedarf an Daten zu untermaßigen Aalen (=Männchen) zur Bestandsabschätzung
    Stransky: Vergaberichtlinien auch beim Kauf von Fischproben sind zu beachten
    c. **Datenerhebung im Bereich Ökonomie**
        i. **Flottenökonomie**
        Berkenhagen: Aufwand für Ostsee am höchsten, Daten für sämtliche Fahrzeuge über 20m werden erfasst, es gibt Probleme bei der Erfassung kleinerer Fahrzeuge; Erfassung über Fragebögen, neu mit Erinnerungsbrief, was zu höheren Rückmelderaten führt
        ii. **Fischverarbeitung**
        Ebeling: Routinearbeiten, keine Probleme
        iii. **Aquakultur**

Ebeling: Nur marine Aquakultur, hier keine Probleme, hauptsächlich Muschelfischerei, die vollständig erfasst wird; Probleme in Zukunft möglich wenn Binnenbereich mit einbezogen wird

d. Logbuch- und Anlandedaten

Stransky: wegen Anlandepflicht müssen Logbücher geändert werden, Einführung von neuen Kategorien wegen der Erfassung von Discards und von anzulandenden untermaßigen Fischen, für die die Anlandepflicht (= *unwanted catch*) gilt; ein neues Datenbanksystem (FIT) wird zur Zeit entwickelt;
ansonsten keine Änderungen (vorab von der BLE, Ref. 522, erfragt), die quartalsweise Zulieferung von Logbuchdaten von BLE ans TI läuft gut
Zur Qualität der Logbücher: technische Plausibilität wird überprüft, inhaltlich liegt die Qualitätskontrolle bei uns als Nutzer, Rückmeldung über Fehler gehen an BLE

e. Zugang zu VMS-Daten

Stransky: Zugang ist wegen Datensicherheitsbedenken durch BLE noch nicht geklärt, VMS-Datenerhebung ist aber in diversen EU-Vorschriften (u.a. DCF-Ökosystemindikatoren) vorgesehen
Es wird noch auf eine abschließende Beurteilung des zuständigen Referats in der BLE gewartet, ob es zukünftig möglich ist, das VMS-Daten quartalsweise per sicherem SFTP-Server an das TI geliefert werden können, zur Zeit erfolgt die Lieferung nur auf persönlichem Wege

f. Beprobungen auf See, Kommunikation mit der Fischerei

OF / Krumme: zufallsbasierte Auswahl der Fischerei im ersten, zweiten und vierten Quartal, im dritten Quartal „Expertenurteil" aufgrund geringer Fischereiaktivität. Bisher wurden Fischereien wie folgt beprobt: Schlepper: 9 Mitfahrten, 26 Proben; Stellnetzer: 25 Mitfahrten, 16 Proben, Hering: 17 Proben passive Fischerei, 6 Proben aktive Fischerei, Sprotte: 18 Proben aktive Fischerei.
Neu: Erfassung des Dorschbeifanges aus der Heringsfischerei in Neu-Mukran (PTB_SPF), betrifft nicht nur untermaßige, sondern auch maßige große Tiere; Stellnetzfischerei (Steinbutt auf der Oderbank) wird auch beprobt sowie Langleine (LLS) auf Dorsch und LLS auf Lachs;
Ablehnungsrate (wie viele Fischer lehnen Beprobung ab?) wird als Prozentsatz der erfolgreichen Anrufe gemessen, etwa jeder 20ste Fischer will nicht kooperieren, Kooperation läuft gut
Probenaufarbeitung wurde auf Mageninhaltsuntersuchungen an Dorschen ausgedehnt, insgesamt ist bessere Ausnutzung der Proben als gewissermaßen ganzheitlicher Ansatz vorgesehen, auch Parasiten an und in Dorschen werden in diesem Zusammenhang mit erfasst;
Zimmermann: neue Daten zu Discards in der Heringsfischerei durch Dänemark, laut deutschen Untersuchungen kommen keine Discards vor, dies wird von Dänemark nicht anerkannt, zum Teil deswegen, weil diese Daten nicht als Nullwerte an die Assessmentgruppe geliefert worden sind, d.h. unbedingt auch „null Discards" an Assessmentgruppen melden!
SF / Ulleweit: Insgesamt mit 27 Reisen etwas weniger Beprobungen als im Vorjahr, 7 Reisen in der Hochseefischerei, davon 4 mehrwöchige in der pelagischen und 3 mehrmonatige in der demersalen Hochseefischerei; andere Reisen verteilen sich auf Krabbenfischerei (6), Baumkurrenfischerei gezielt auf Plattfische, sowie Reisen in der Kabeljau- und Seelachsfischerei; Mitnahmesituation insbesondere bei der Baumkurrenfischerei auf Plattfische ist im Vergleich zu Vorjahren schwieriger geworden, ob das an bevorstehender Einführung der Anlandepflicht liegt, ist unklar;
In der Hochseefischerei ist aufgrund der geringen Flottengröße keine zufallsbasierte Beprobung möglich, bei der Küsten- und kleinen Hochseefischerei erfolgt die Auswahl der Beprobungsreisen weitestgehend opportunistisch
Diskussion: Zimmermann weist bei der Nephropsfischerei – hier gibt es ein Übereinkommen mit Dänemark, das die Beprobungen für SF übernimmt – darauf hin, dass die dänischen Beprobungen nicht mit den deutschen vergleichbar sind, hier wäre evtl. deutsche Beprobung wertvoll, allerdings fehlt Personalkapazität
Krumme / Ulleweit / Stransky und andere diskutieren Einführung der Anlandepflicht im nächsten Jahr, Konsequenzen noch weitestgehend unklar, z.B. wie bekommen wir zukünftig die Discardproben?, werden die Proben an Bord gekühlt?, wie kann die Hochrechnung auf Gesamtfänge erfolgen? etc.; Bei einer zukünftigen gesetzlichen

Regelung der Mitnahme von Beprobern über die Quotenabgabe könnte aus Sicht des OF so viel „Porzellan zerschlagen“ werden, so dass darunter im Ostseeraum die Zusammenarbeit leidet

3. **<u>Datenverarbeitung</u> und Datenbanken: Stand & Zukunft**
    a. **Nationale Datenbank(en), Logbuch-/Anlandedaten**
    Stransky: Bereitstellung der Logbuch/Anlandedaten durch BLE;
    Beprobungsdaten: SF - SQL Datenbank, Datencalls können schnell beantwortet werden, Problem ist bei Datencalls oft das unterschiedliche Abfrageformat, evtl. OF/SF Zusammenschluss
    OF/Stötera: Daten aus Surveys und kommerziellen Beprobungen in SQL, allerdings noch nicht gleiches Format
    Stransky: EU plant eine neue Länder- und Regionen-übergreifende Datenverwaltung und hat dazu 4 Szenarien zur Diskussion gestellt,
    Zukünftig sollen alle Datencalls des ICES für alle Bestände/Arbeitsgruppen am Anfang des Jahres erfolgen, mit gestaffelten Deadlines je nach Zeitpunkt der Nutzung; wichtig ist Meldung des Vollzuges als Nachweis zur EU und Sicherstellung des Hochladens von korrekten/finalen Daten
    b. **Regionale Datenbanken (RDB, FishFrame):**
    Einpflegen der deutschen Daten für alle relevanten RCMs durch Deutschland ist erfolgt, insgesamt unproblematisch für RCM Baltic und RCM NS&EA, für die Region Nordatlantik (RCM NA) ist Datenlage noch unvollständig, da noch nicht von allen Ländern (FRA; ESP) eingepflegt
4. **<u>Datennutzung</u>**
    a. Daten-Abruf durch die EU
        i. **Ökonomie**: Flotte (Feb. 2014); Aquakultur (Mai-Juni 2014); Fischverarb. (Aug-Sep 2014) => erfüllt
        ii. **Fischereiaufwand** (April-Mai 2014) => erfüllt
    b. ICES-Datenabrufe => erfüllt
    c. Datenübermittlung (Tabellen der EU-KOM auf Basis der Antworten von Datennutzern) => beantwortet
5. **<u>Regionale Koordinierung</u>: Ergebnisse der RCMs, Bilaterale/Regionale Abkommen**
    Zukünftiger Name = *Regional Co-ordination <u>Groups (RCGs)</u>*, Zweck: regionale Koordinierung der Beprobungen, werden zukünftig durch EU stärker finanziell gefördert (z.B. *Call for Proposals* zur Harmonisierung der Beprobungen, Bewerbungsfrist Mitte Januar), Bedeutung der RCGs wird im Vergleich zu RCMs größer, hier getroffene regionale Abmachungen sind zukünftig bindend, Zusammenarbeit bei kommerziellen Beprobungen soll gestärkt werden, ähnlich wie Zusammenarbeit bei Surveys.
    a. **RCM Long-Distance Fisheries** (IJmuiden/NL, 2.-5.6.2014 => Panten): Erneuerung des multilateralen Abkommens in der CEFAS-Region für 2014-2015, Privatfirma (Ad Corten) führt die Beprobungen durch
    b. **RCM Baltic** (Uppsala/SWE, 25.-29.8.2014 => Krumme): *Business as usual*, nicht alle Länder geben qualitätsmäßig gute Daten ab, Qualitätskontrolle fehlt, was sind gute Daten?; Es gibt keine Möglichkeit, Datenqualität zu bewerten, sondern nur reine Datenlieferung wird als geliefert/nicht geliefert beurteilt, Assessmentprobleme durch schlechte Qualität der Alterslesungen beim Dorsch haben neuen Denkprozess eingeleitet
    c. **RCM North Sea & Eastern Arctic** (Lysekil/SWE, 8.-12.9.2014 => Stransky): *Business as usual*, RDB immer noch nicht von allen gefüllt, Frankreich hat keine aktuellen Daten abgeben und die spanischen Daten wurden in anderer Form vorgehalten,
    Erneuerung der Abmachung zur finanziellen Beteiligung an Surveys für Bestände, bei denen Länder eine Quote haben, aber kein eigenes Schiff stellen: hier ist die Regelung erneuert worden, die finanzielle Beteiligung ist abhängig von nationaler Quote, zukünftig müssen wg. Umstellung auf EMFF volle Kosten gezahlt werden
    d. **RCM North Atlantic** (Horta, Azoren/PRT, 22.-26.9.2014 => Ulleweit): *Business as usual*, RDB immer noch nicht von allen gefüllt, Frankreich hat keine aktuellen Daten abgeben und die spanischen Daten wurden in anderer Form vorgehalten, dadurch immer noch Schwierigkeiten bei Auswertung und Koordinierung, Diskussionspunkt: Zukunft mit Anlandepflicht z.B. nötige Änderungen der nationalen und internationalen Datenbanken oder auch zur Stellung der Observer (Vermischung von Beprobung und Kontrolle), Koordinierung für Surveys wurde erneuert (siehe RCM NS&EA)

e. **Liaison Meeting** (Brüssel, 8.-9.10.2014)
Zusammenfassung der RCMs, Zukunft der Datenbanke, Projektvorschläge an die KOM

f. **Bilaterales Treffen mit den Niederlanden** (Hamburg, 3.4.2014)
Ziel: Harmonisierung der Beprobungen in der pelagischen Fischerei und der Krabbenfischerei, gegenseitiger Austausch, auch personeller Austausch, wenn im eigenen Institut niemand für eine Reise zur Verfügung steht, gemeinsame Auswertung in Form von Berichten läuft weiter

6. Ergebnisse relevanter Arbeitsgruppen, Workshops und Konferenzen

a. **STECF-Expertenarbeitsgruppen (EWGs)**
PGECON hat mehrere Studien vorgeschlagen, es hängt von Vorstellung der Kommission ab, welche berücksichtigt werden, evtl. auch methodische Arbeiten
Entwurf für EU MAP steht immer noch nicht, soll im Frühjahr kommen, Verzögerung liegt an politischer Neuordnung, selbst wenn Entwurf im Frühjahr vorliegt, wird die endgültige VO erst 2016 ratifiziert, Kommission sieht das entspannt, da DCF weiter gilt und Finanzierung gesichert ist, Finanzierung für beteiligte Thünen-Institute unkritisch, bleibt im gleichen Rahmen wie zuvor oder erfährt leichte Zuwächse

b. **ICES-Expertengruppen (PGCCDBS, WGCATCH, etc.)**
PGCCDBS aufgelöst und geht in WGCATCH = *WG on Commercial Catches*, PGDATA = *PG on Data Needs for Assessment and Advice*, WGBIOP = *WG on Biological Parameters* auf WGSIBCA = Scoping workshop for Integrated Baltic Cod Assessment, kritische Betrachtung der Eingangsparameter für Alterslesung, zukünftig altersbasiert oder längenbasiertes Assessment?, nächstes Benchmark-Treffen im März in Rostock,
evtl. zukünftige Alterslesung über Mikroinkremente wäre kostenintensiv, mögliche Koordinierung und finanzielle Beteiligungsaufteilung wie bei Surveys?, andere Lösung auch möglich wie Kohortenzuordnung nach genetischer Diveristät (Analysen der Uni Kiel) oder Ringstrukturanalysen zur Trennung von Ost- und Westdorschbeständen

7. Europäischer Meeres- und Fischereifonds (EMFF), Mehrjahresprogramm zur Datenerhebung (EU MAP)

Datenerhebung und Fischereikontrolle sind nun Bestandteil des EMFF.
EMFF-Anteil für Deutschland beläuft sich auf 220 Millionen Euro für die nächsten 7 Jahre, Datenerhebung sind davon 37 Millionen Euro, Ausstattung für Deutschland gut, da Bedarf für viele Surveys und Personal festgestellt wurde.
Neu: geteilte Mittelverwaltung!, die nationale Finanzverwaltung und Kontrolle liegt bei der BLE (Ref. 211 und 311) und BMEL, detaillierte Abrechnungen werden weiterhin nötig, Rechnungskopien sind zu beglaubigen und Vergaberegeln unbedingt einzuhalten.
Innerhalb des TI kann die zukünftige Verwaltung nur mit professionellen Kräften bewältigt werden, dafür ist eine neue Verwaltungskraft in Hamburg vorgesehen,
weitere Änderungen: vermehrtes Abrechnen mit Pauschalen, z.B. 1720 Jahresstunden für Personal, +15% indirekte Kosten ohne Nachweis;
Ansonsten: erst mal wie bisher weiterarbeiten und *learning by doing*, administrativer Arbeitsaufwand wird aber voraussichtlich steigen,
Es wird weiterhin DCF-Jahresberichte geben, dazu werden Mehrjahrespläne verfasst, zurzeit gibt es sogenanntes deutsches operationelles Programm (OP) für Gesamt-EMFF, DCF darin enthalten nur als kleiner allgemeiner Teil mit wenig Details, darüber hinaus sollen detaillierte Arbeitspläne verfasst werden;
Personalstunden sind genau zu dokumentieren!, Eigenanteil des Hauspersonals ist noch unklar, da keine Doppelabrechnung innerhalb des Bundeshaushalts möglich, Abrechnung der Surveykosten noch unklar,
Einrichtung eines eigenen Bundesmitteltitels für DCF ist erfolgt (Zugriff ab Anfang 2015), dieser Titel kann überzogen werden, falls neue DCF-Aufgaben dazukommen;
Zusammenarbeit mit Bundesländern über Strukturförderung ist möglich, um weitere Mittel aus EMFF zu schöpfen, dabei liegt die Mittelverwaltung bei den Ländern.

8. Datenqualität: Beprobungsanleitung, Datenvalidierung

OF hat ein Altersvalidierungsexperiment an Dorschen in der westl. Ostsee bei Fehmarn begonnen.

9. Pilotprojekte (Studien)

im neuen EMFF vorgesehen, siehe auch oben

10. Vollständig dokumentierte Fischerei (Kamera-Projekte): Ergebnisse 2014, Ausblick

OF / Zimmermann: Seevogel-Beifangstudie ist beendet, Beobachtung der Schleppnetzfischerei auf Dorsch (2 Schiffe) funktioniert nicht, Anreize fehlen, in der Nordsee läuft es, hier gibt es aber auch Anreize über sogenannte wissenschaftliche Quoten,

Auswertung durch BLE funktioniert nicht mehr, hier wird zur Zeit noch Unterstützung durch OF gewährleistet, 2015 evtl. Fortführung des Projektes auf Wunsch der Fischerei, aber BLE steht nicht zur Verfügung
SF / Stransky: in der pelagischen Fischerei ist ein deutsch-beflaggtes Schiff an einem Kameraprojekt, finanziert über die pelagische Fischereiorganisation (PFA), beteiligt

11. **Internetportal dcf-germany.de**
    wird laufend aktualisiert
12. **Veröffentlichungen (neu in 2014)**
    Eero M, Strehlow HV, Adams CM, Vinther M. Does recreational catch impact the TAC for commercial fisheries? ICES J Mar Sci: in press
    (http://icesjms.oxfordjournals.org/content/early/2014/07/14/icesjms.fsu121).
13. **Verwaltung (Zeiterfassung, Reisekostenabrechnungen, Finanzen -> Neuerungen unter EMFF, Personal)**
    EMFF siehe oben, ansonsten zunächst alles wie bisher,
    Es gibt keine feste Liste von für DCF-anrechenbare Meetings mehr (!), Auswahl von Meetings liegt in der Verantwortung der beteiligten Institute, Abrechnung über EMFF sollte generell möglich sein und ist nicht mehr beschränkt auf max. 2 Teilnehmer.
14. **Planung für 2015:**
    a. **Sonderfangerlaubnisse 2015**
       SF zu beantragen, OF beantragt
    b. **Bedarf an Koordinierungstreffen, bilateralen Treffen etc.**
       Sobald neue Regeln zur Finanzabrechnung DCF feststehen, werden diese kommuniziert und es wird ggf. ein Treffen dazu abgehalten; bilaterale Treffen nach Bedarf; nationales Koordinierungstreffen Ende nächsten Jahres
    c. **Jahresbericht 2014**: Einreichfrist **31.5.2015!**
15. **Sonstiges**
    keine weiteren Punkte

Schluss der Sitzung: 15:30 Uhr

ANNEX 2: EEL SAMPLING

European Eel (*Anguilla anguilla)* data collection within the EU Data Collection Framework (DCF, Reg. 199/2008) in German freshwater habitats

Introduction

The European Eel population (all stages glass eel, yellow eel and silver eel) has decreased drastically during the last century. Albeit an increase in annual glass eel recruitment during the past three years, recruitment is still low (3.7% of the 1960-19-79 average in the 'North Sea' and 12.2% in the 'Elsewhere' series). Thus, the stock situation remains critical (ICES 2014).
The European Commission adopted a multiannual community programme pursuant to Council Regulation (EC) No 199/2008 to establish a community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy (Decision 2008/949/EC). Due to its facultatively catadromous life cycle, sampling of European Eel data also in freshwater has become mandatory in the DCF since 2009.

Sampling

Sampling in 2014 started in May. Data collection was coordinated and performed by the Thünen Institute of Fisheries Ecology. Due to conceivable changes in the DCF (presumably in 2016), the national proposal for the sampling of eel in German River Basin Districts (RBDs) remained unchanged. Consequently, sampling remained similar to the approach described in the "pilot phase" (see below and Annual Reports 2009-2013).
In this "pilot" phase, sampling focused on gathering biological parameters of eel in commercial catches of inland fisheries. During the sampling period from 2011 to 2013 the proposal for the German national program intended the gathering of 600 eels from the Baltic sea and 300 eels from the North Sea, including the respective discharging river basin districts (RBD; according to Water Framework Directive (WFD), see Figure 1). However, recent sampling aimed at 300 eels from Baltic Sea and 600 eels from the North Sea, which has proven to be a more practical approach. Sampling was coordinated with German Regional Authorities in order to meet the requirements of the German Eel Management Plan. Depending on the availability of eel in the respective area sample sizes may vary between RBDs. Exceptions from this approach were made for the RBD Meuse, where no commercial fishery exists in its German part and the RBD Danube, which is not considered a natural habitat of the European eel according to Council Regulation (EC) 1100/2007. Consequently, sampling was not required based on DCF standards. Due to low numbers of commercial fishermen in the RBD Oder, no samples were available in Germany. Thus, in 2014 samples were gathered in a bilateral agreement between Poland and Germany, with Poland being responsible for reporting DCF data for the Oder RBD to the EU, allowing Germany access to the respective data. A similar approach will be used for future sampling. In total, 807 eels (excluding eel from the Oder) were sampled in 2014 (see Table 1).
Yellow eels were mostly collected in spring/summer and silver eels in autumn (for detailed information see Table 1 & Fig. 2). Analyses include length, weight, age, sex and maturity (detailed information in the list of biological variables). Although not mandatory under DCF regulations, additional parameters such as infestation with the invasive swim-bladder nematode *Anguillicola crassus,* fat content of eel muscle tissue and the infestation of eel gills with *Pseudodactylogyrus* have been analyzed for some eels, partly in cooperation with other institutions (e.g. RWTH Aachen, Institute for Environmental Research).
Due to the limited number of commercial fishermen and better comparability, sampling was restricted to only few locations. To optimize comparability, eels were preferably collected downstream in the system (Figure 2), close to the estuaries. If necessary, exceptions from this general approach were made. At present, no data on the fishery itself were gathered in the frame of DCF. Data collection on eel fisheries (including fishing efforts) has to be performed as part of the Eel Management Plans under the administrative constraints of Council Regulation (EC) 1100/2007 by German regional authorities.

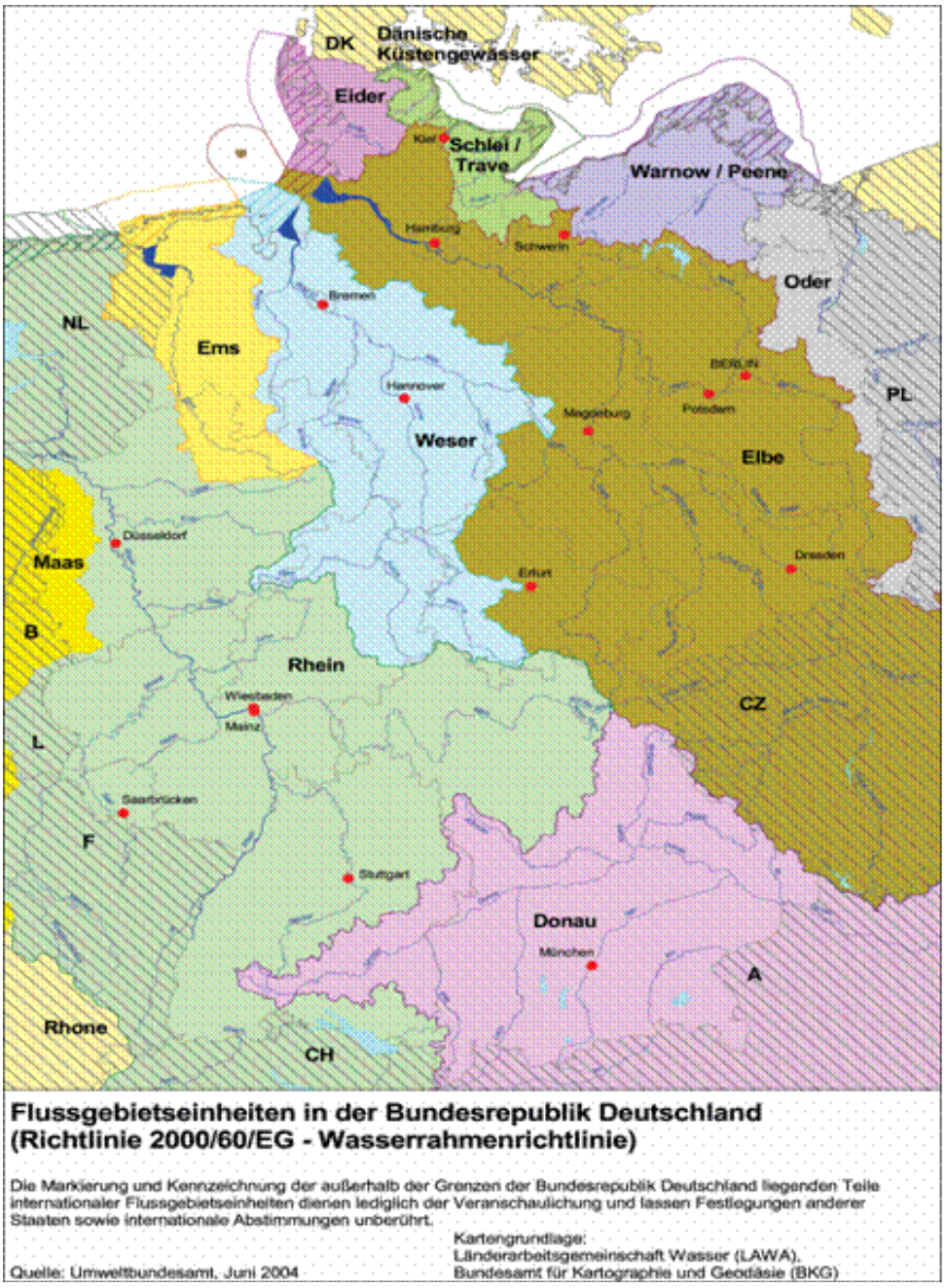

Figure 1: River Basin Districts (RBD) in the Federal Republic of Germany

Eider, Schlei/Trave, Elbe, Warnow/Peene, Oder, Weser, Ems, Rhine, Meuse and Danube. According to the submitted Eel Management Plans of Germany in December 2008 (EU Council Regulation 1100/2007), we adopted the 9 RBD's (Report on the eel stock and fishery in Germany 2008) for the EU-DCF.

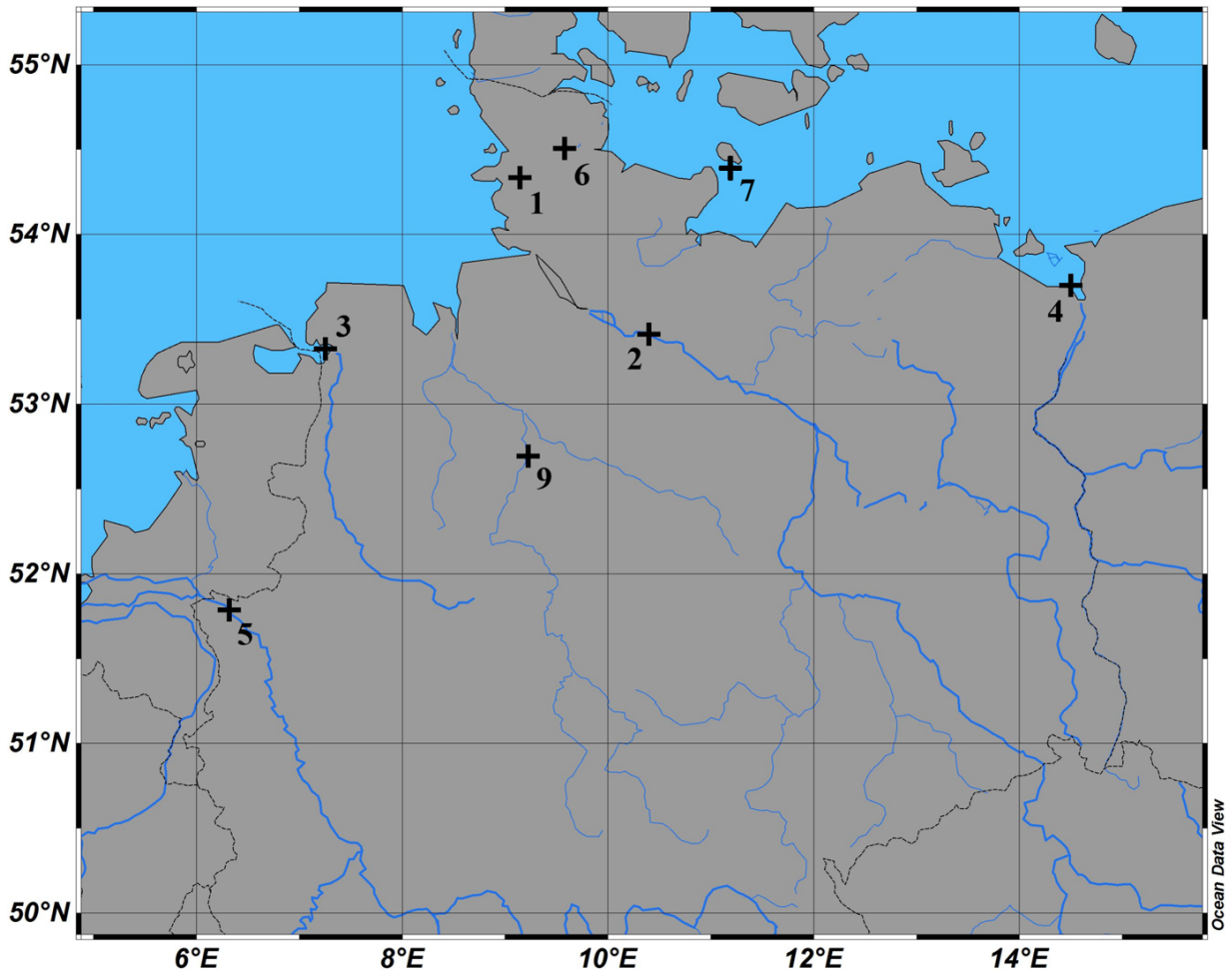

Figure 2: Overview of the spatial resolution for concurrent sampling of eels in German River Basin Districts (RBD)

Black crosses: Places of commercial eel catches, where samples were collected. For the Warnow/Peene RBD eel were collected from several small fisheries, which are not shown in this map.

Eider: 1
Elbe: 2
Ems: 3
Oder: 4
Rhine: 5
Schlei/Trave: 6-7
Warnow/Peene: 8 (not displayed)
Weser: 9

Table 1: Sampling scheme per RBD in the year 2014.

No.	RBD	Sampling Time	Sample Size (n)*			Gear
			Y	S	Total	
1	Eider	Mai 2014	52	1	53	Fyke Net
1	Eider	Oct/Nov 2014	0	53	53	Fyke Net
2	Elbe	Mai 2014	58	0	58	Fyke Net
2	Elbe	Nov 2014	0	15	15	trawl
3	Ems	Juli 2014	30	12	42	Fyke Net
3	Ems	Mai 2014	61	12	73	Fyke Net
3	Ems	Oct/Nov 2014	3	12	15	Fyke Net
4	Oder	-	-	-	-	-
5	Rhine	June 2014	142	16	158	Fyke Net
5	Rhine	Oct 2014	0	36	36	Stow Net
6	Schlei/Trave	June 2014	36	12	48	Fyke Net
6	Schlei/Trave	September 2014	4	26	30	Fyke Net
7	Schlei/Trave	Nov 14	0	21	21	Fyke Net
8	Warnow/Peene	Aug 14	13	11	24	-
8	Warnow/Peene	Oct 2014	25	23	48	-
8	Warnow/Peene	Sep 14	6	14	20	-
8	Warnow/Peene	-	0	2	2	-
9	Weser	June 2014	75	1	76	Fyke Net
9	Weser	Oct 2014	2	33	35	Stow Net

*:S=Silver Eel; Y=Yellow Eel

List of biological variables within European eel (*A. anguilla*) DCF-sampling specifications

length [a], weight [b], sex [c], maturity [d], age [e]

[a]: total length was determined either immediately after catch (to the nearest 0.5 cm) or after thawing. In the second case the values were corrected by assuming a reduction of 2.5% according to Wickström *et al*. (1986)

[b]: total weight was determined either immediately after catch or after thawing. In the second case the values were corrected by assuming a reduction of 2.8% according to Wickström *et al*. (1986)

[c]: sex determination via macroscopic assessment of gonadal development

[d]: determination of silvering index according to Durif *et al*. (2005)

[e]: according to EU Council Regulation 1100/2007, 200 eels (100 yellow and 100 silver eels separately) should be analyzed for each RBD. However, not for all RBDs 200 eels were available. Age reading of otoliths was performed using a "cutting and burning" protocol (ICES WKAREA 2009).

Proposal for the future data collection of European Eel (*Anguilla anguilla)* in the EU Data Collection Framework

The European Commission has adopted a multiannual Community program for the collection, management and use of data in the fisheries sector for the period 2011-2013 (2010/93/EU).

To further gather biological information on European eel, Germany proposes to continue data collection of its commercial catches. However, to better address the urgent questions for an eel fisheries management, sampling scheme and especially the collected parameters should be adapted as compared to the first sampling phase (2008/949/EC). Besides length, weight, age, sex and maturity of the sampled eels, parasite infestation and especially contamination with harmful substances are important parameters.

Several reviews on parasites and contaminants in eels have emphasized their negative influences on migration and reproduction. Therefore, estimation of an effective spawner biomass requires the quantification of the adverse effects of contaminants, parasites, diseases, and low fat levels on the capacity of eels to migrate and successfully spawn (EIFAC/ICES Working Group on Eels 2014).

In line with the report of the 2014 session of the Joint EIFAAC/ICES Working Group on Eels and the ICES Advice (2014), we strongly recommend that eel quality issues like *Anguillicola crassus* infestation as well as pollution with harmful contaminants like PCB's, DDT, dieldrin and heavy metals especially for silver eels should be taken into account for the new EU Data Collection programme (2010/93/EU).

Considering the limited availability of glass eel for restocking purposes, a comprehensive data collection of these parameters (contaminants, parasites etc.) under the EU-Data Collection Regulation (2010/93/EU) would significantly contribute to the identification of suitable habitats for the production of high quality eel spawners.

Furthermore, no data on fishing effort is collected within the frame of DCF. Logbook data are collected as part of the Eel Management Plans under the administrative constraints of Council Regulation (EC) 1100/2007 by German regional authorities. We recommend the implementation of fishing effort data to the DCF, establishing a link between qualitative data (age, length etc.) and quantitative data (e.g. catch per unit effort), which would allow for a better estimation of the stock status.

ANNEX 3: BI- AND MULTILALTERAL AGREEMENTS

Bilateral Agreement between Denmark (DTU-Aqua) and Germany (Johann Heinrich von Thünen Institute, vTI) for the collection of length and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2010/93/EU

Agreement:

Vessels fishing under the German register, which land for first sale into Denmark, will be sampled as part of the German National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the German National Sampling Programme 2011-2013.

Vessels fishing under the Danish register, which land for first sale into Germany, will be sampled as part of the Danish National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the Danish National Sampling Programme 2011-2013.

Description of sampling:

The sampling will be for length and age of discards and landings, sampling will be carried out in accordance with the respective National Sampling Programme.

Sampling intensity:

Levels and coverage of sampling will be as agreed at the annual meetings of the RCM Baltic and RCM North Sea & Eastern Arctic.

Data responsibility:

Germany is responsible for submitting the data from German vessels, and Denmark in the case of sampling Danish vessels, to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. Both Member States will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to the respective other Member State as and when requested.

Contact persons:

In Denmark (DTU-Aqua):	Marie Storr-Paulsen: msp@aqua.dtu.dk
In Germany (vTI):	Kay Panten (North Sea): kay.panten@vti.bund.de
	Nik Probst (Baltic): nikolaus.probst@vti.bund.de

Signatures:

For Denmark (DTU-Aqua)

Jørgen Dalskov

Danish National Correspondent

on behalf of Jørgen Dalskov

For Germany (vTI)

Dr. Christoph Stransky

German National Correspondent

Date: 18 March 2010

Bilateral Agreement between Sweden (Institute of Marine Research) and Germany (Johann Heinrich von Thünen Institute, vTI) for the collection of length and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2010/93/EU

Agreement:

Vessels fishing under the German register, which land for first sale into Sweden, will be sampled as part of the German National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the German National Sampling Programme 2011-2013.

Vessels fishing under the Swedish register, which land for first sale into Germany, will be sampled as part of the Swedish National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the Swedish National Sampling Programme 2011-2013.

Description of sampling:

The sampling will be for length and age of discards and landings, sampling will be carried out in accordance with the respective National Sampling Programme.

Sampling intensity:

Levels and coverage of sampling will be as agreed at the annual meetings of the RCM Baltic and RCM North Sea & Eastern Arctic.

Data responsibility:

Germany is responsible for submitting the data from German vessels, and Sweden in the case of sampling Swedish vessels, to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. Both Member States will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to the respective other Member State as and when requested.

Contact persons:

In Sweden (IMR):	Maria Hansson: maria.hansson@fiskeriverket.se
In Germany (vTI):	Kay Panten (North Sea): kay.panten@vti.bund.de
	Nik Probst (Baltic): nikolaus.probst@vti.bund.de

Signatures:

For Sweden (SBF)

Dr. Joakim Hjelm

Director Institute of Marine Research

Date: 18 March 2010

For Germany (vTI)

C. Stransky

Dr. Christoph Stransky

German National Correspondent

Johann Heinrich von Thünen-Institut
Bundesforschungsinstitut für
Ländliche Räume, Wald und Fischerei
Institut für Seefischerei
Palmaille 9 • 22767 Hamburg

Bilateral Agreement between The Netherlands (Centre for Fisheries Research, CVO) and Germany (Johann Heinrich von Thünen Institute, vTI) for the collection of length and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2010/93/EU

Agreement:

Pelagic freezer trawlers fishing on herring, blue whiting, mackerel and horse mackerel, and beam trawlers fishing on plaice and sole under the German register, which land for first sale into The Netherlands, will be sampled as part of the German National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the German National Sampling Programme 2011-2013.

Description of sampling:

The sampling will be for length and age of discards and landings, sampling will be carried out in accordance with the German National Sampling Programme.

Sampling intensity:

Levels and coverage of sampling will be as agreed at the annual meeting of RCM North Sea & Eastern Arctic.

Data responsibility:

Germany is responsible for submitting the data to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. Germany will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to The Netherlands as and when requested.

Contact persons:

In The Netherlands (CVO): Sieto Verver: sieto.verver@wur.nl
In Germany (vTI-SF): Jens Ulleweit: jens.ulleweit@vti.bund.de

Signatures:

For The Netherlands (CVO)

Sieto Verver
Dpt. Head Centre for Fisheries Research

For Germany (vTI)

Dr. Christoph Stransky
German National Correspondent

Date: 24 March 2010

Bilateral Agreement between the UK (Cefas) and Germany (vTI-SF) for the collection of length and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2010/93/EU

Agreement:

Fishing activities of UK vessels in ICES Sub-Area I & II, which land for first sale into Germany, will be covered within the German National Programme under the requirements of the EC Data Collection Framework (199/2008). Sampling costs will be included within the German National Sampling Programme from 2011- 2013.

Description of sampling:

These UK vessels are operating in the same metier as the German fleet and follow the same practices. Sampling for length and age of landings will be covered in accordance with the German National Sampling Programme. The metier is sampled by onboard observers.

Sampling Intensity:

Levels and coverage at the metier level will be as agreed at the annual co-ordination meeting of RCM NS&EA.

Data responsibility:

Germany will be responsible for submitting the data to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. Germany will provide the required data for the species that are requested by the relevant ICES Expert Groups, and the data for the additional species to the UK as and when requested.

Contact persons:

In the UK (Cefas): S. Warnes: steve.warnes@cefas.co.uk

In Germany (vTI-SF): K. Panten: kay.panten@vti.bund.de

Signatures:

For UK (Cefas)

Carl O'Brien

Fisheries Division Director

Date: 19th March 2010

For Germany (vTI-SF)

C. Stransky

Dr. Christoph Stransky

German National Correspondent

19 March 2010

Johann Heinrich von Thünen-Institut
Bundesforschungsinstitut für
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Institut für Seefischerei
Palmaille 9 • 22767 Hamburg

Bilateral Agreement between Poland (NMFRI) and Germany (TI) for the collection of biological data in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its commission decision 2010/93/EU.

Agreement:

Biological sampling of yellow and silver eels from commercial fisheries in the Oder River Basin District will be covered within the Polish National Programme under the requirements of the EC Data Collection Framework (Reg. 199/2008). Sampling costs will be included within the Polish National Programme.

Description of sampling:

Both Polish and German fisheries target eel in the Oder River Basin District and are using the same practices. Sampling for primary biological data will be covered in accordance with the Polish National Programme.

Sampling intensity:

The target sample sizes are 100 yellow and 100 silver eel from commercial fisheries in the Oder River Basin District. However, sample size might be adjusted to a lower level depending on the availability of eel from Polish commercial fisheries.

Data responsibility:

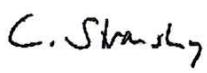
Poland will be responsible for submitting the data to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. Poland will provide the data for European eel, relevant for the Data Collection Framework, to Germany as and when requested.

Contact Persons

Poland: Tomasz Nermer; nermer@mir.gdynia.pl

Germany: Jan-Dag Pohlmann; jan.pohlmann@ti.bund.de

Signatures:

Poland	Germany
	
Dr. Zbigniew Karnicki	Dr. Christoph Stransky
Polish National Correspondent	German National Correspondent

Date: 07 May 2013

AMENDMENT TO:

Multi-lateral agreement between Germany, Latvia, Lithuania, The Netherlands and Poland for biological data collection of pelagic fisheries in CECAF waters

This Amendment replaces the initial amendment dated December 2013, to reflect the impact of the introduction of the EMFF in the co-financing options. The amendment is retrospectively accepted as per 1st January 2014.

The Multi-lateral agreement between Germany, Latvia, Lithuania, The Netherlands and Poland for biological data collection of pelagic fisheries in CECAF waters, as signed by all countries named in June 2011 (See annex) is amended as follows from 1st January 2014 onwards:

Term:

The multi-lateral agreement is extended beyond its initial end date of 31 December 2013. The new end date is 31 December 2015.

Costs:

The cost share for each country of the total costs follows a key based on the share in average landings in 2008-2012. Due to the move from direct to in-direct co-funding through national EMFF budgets, co-funding of the National expenses shall be covered through the National EMFF budget of each respective member. As of 2014, co-funding is no longer executed through the Dutch National Budget as it was in previous years.

Cost shares are maximum amounts, in case of lower costs, deductions might apply in line with the relative shares.

Total Landings 2008-2012 (RCM LDF Data) and cost shares by partners

Partner	2008	2009	2010	2011	2012	average 2008-2012	Landings share	Cost share per year
Netherlands	83,630	68,019	92,980	55,044	34,926	66,920	**22.95%**	€ **14,864**
Germany	0	0	20,650	37,088	14,582	14,464	**4.96%**	€ **3,212**
Poland	17,709	46,287	14,605	60,177	29,178	33,591	**11.52%**	€ **7,462**
Lithuania	120,100	124,480	116,040	121,000	44,133	105,151	**36.06%**	€ **23,356**
Latvia	68,410	81,283	87,237	89,667	30,723	71,464	**24.51%**	€ **15,874**
TOTAL	*289,849*	*320,069*	*331,512*	*362,976*	*153,542*	*291,590*	*100.00%*	€ ***64,768***

Signatures for agreement

Member State	Name	Function	Signature
Germany	Christoph Stransky	National Correspondent	C. Stransky Date: 2.12.2014
The Netherlands	Sieto Verver	Head Centre for Fisheries Research	Date: 1/12/2014
Latvia	Aivars Berzins	Director, Institute of Food Safety, Animal Health and Environment BIOR	Date: 15.12.14
Lithuania	Aidas Adomaitis	Deputy Director, Acting Director	Date: 8/12/2014
Poland	Ireneusz Wójcik	Head of Department of Logistics & Monitoring	Date: 8.12.2014