

**GERMAN NATIONAL MULTIANNUAL FISHERIES DATA
SAMPLING PROGRAMME
2011 - 2013**

based on

**EU Council Regulation 199/2008, Commission Regulation 665/2008 and Commission
Decision 2010/93/EU**

CONTENTS

General framework	6
II Organisation of the National Programme.....	6
II A National organisation and coordination	6
II B International coordination.....	8
II C Regional coordination	8
III Module of the evaluation of the fishing sector	9
III A General description of the fishing sector.....	9
III B Economic variables.....	9
Supra-region: “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”	9
III B 1 Data acquisition.....	9
III B 2 Estimation.....	13
III B 3 Data quality evaluation.....	15
III B 4 Data presentation	15
III B 5 Regional coordination.....	15
III B 6 Derogations and non conformities	15
Supra-region: “Other regions”	16
III B 1 Data acquisition	16
III B 2 Estimation.....	17
III B 3 Data quality evaluation.....	17
III B 4 Data presentation	17
III B 5 Regional coordination.....	17
III B 6 Derogations and non conformities	17
III C Biological metier related variables	18
III C Biological metier-related variables –Baltic Sea.....	18
III C 1 Data acquisition	18
III C 2 Estimation procedures.....	22
III C 3 Data quality evaluation.....	22
III C 4 Data presentation.....	22
III C 5 Regional coordination	22
III C 6 Derogations and non conformities	23
III C Biological metier-related variables –North Sea and Eastern Arctic	23
III C 1 Data acquisition	23
III C 2 Estimation procedures.....	25
III C 3 Data quality evaluation.....	26
III C 4 Data presentation.....	26
III C 5 Regional coordination.....	26

III C 6 Derogations and non conformities	27
III C Biological metier-related variables – North Atlantic	27
III C 1 Data acquisition	27
III C 2 Estimation procedures.....	29
III C 3 Data quality evaluation.....	29
III C 4 Data presentation.....	29
III C 5 Regional coordination.....	29
III C 6 Derogations and non conformities	29
III C Biological metier-related variables –Other Regions (Long Distance Fisheries).....	30
III C 1 Data acquisition	30
III C 2 Estimation procedures.....	31
III C 3 Data quality evaluation.....	31
III C 4 Data presentation.....	31
III C 5 Regional coordination.....	31
III C 6 Derogations and non conformities	31
III D Biological recreational fisheries – Baltic Sea	32
III D 1 Data acquisition.....	32
III D 2 Estimation procedures	34
III D 3 Data quality evaluation	35
III D 4 Data presentation	35
III D 5 Regional coordination	36
III D 6 Derogations and non conformities.....	36
III D Biological recreational fisheries – North Sea and Eastern Arctic.....	36
III D 1 Data acquisition.....	36
III D 2 Estimation procedures	38
III D 3 Data quality evaluation	38
III D 4 Data presentation	39
III D 5 Regional coordination	39
III D 6 Derogations and non conformities.....	39
III D Biological recreational fisheries – North Atlantic.....	39
III D Biological recreational fisheries – Other Regions.....	39
III E Biological stock-related variables – General Remarks.....	40
III E Biological stock-related variables – Baltic Sea	40
III E 1 Data acquisition.....	40
III E 2 Estimation procedures	41
III E 3 Data quality evaluation.....	41
III E 4 Regional coordination.....	41
III E 5 Derogations and non conformities	41
III E Biological stock-related variables – North Sea & Eastern Arctic	41

III E 1 Data acquisition.....	41
III E 2 Estimation procedures	42
III E 3 Data quality evaluation.....	42
III E 4 Regional coordination.....	42
III E 5 Derogations and non conformities	43
III E Biological stock-related variables – North Atlantic.....	43
III E 1 Data acquisition.....	43
III E 2 Estimation procedures	44
III E 3 Data quality evaluation.....	44
III E 4 Regional coordination.....	44
III E 5 Derogations and non conformities	44
III E Biological stock-related variables – Other regions (Long Distance Fisheries)	44
III E 1 Data acquisition.....	44
III E 2 Estimation procedures	44
III E 3 Data quality evaluation.....	45
III E 4 Regional coordination.....	45
III E 5 Derogations and non conformities	45
III F Transversal variables.....	45
III F 1 Capacity.....	45
III F 1 1 Data acquisition.....	45
III F 1 2 Data quality evaluation	45
III F 2 Effort.....	45
III F 2 1 Data acquisition.....	45
III F 2 2 Data quality evaluation	45
III F 2 3 Data presentation.....	46
III F 2 4 Regional coordination	46
III F 2 5 Derogations and non conformities.....	46
III F 3 Landings.....	46
III F 3 1 Data acquisition.....	46
III F 3 2 Data quality evaluation	46
III F 3 3 Data presentation.....	46
III F 3 4 Regional coordination	46
III F 3 5 Derogations and non conformities.....	46
III G Research surveys at sea.....	47
III G 1 Planned surveys	47
III G 2 Modifications in the surveys	60
III G 3 Data presentation	60
III G 4 Regional coordination.....	60
III G 5 Derogations and non conformities	60

IV Module of the evaluation of the economic situation of the aquaculture and the processing industry.....	61
IV A Collection of economic data for the aquaculture.....	61
IV A 1 General description of the aquaculture sector	61
IV A 2 Data acquisition.....	61
IV A 3 Estimation	62
IV A 4 Data quality evaluation.....	62
IV A 5 Data presentation	63
IV A 6 Regional coordination.....	63
IV A 7 Derogations and non conformities	63
IV B Collection of data concerning the processing industry.....	63
IV B 1 Data acquisition.....	63
IV B 2 Estimation	64
IV B 3 Data quality evaluation.....	64
IV B 4 Data presentation.....	65
IV B 5 Regional coordination.....	65
IV B 6 Derogations and non conformities	65
V Module of the evaluation of effects of the fishing sector on the marine ecosystem.....	65
VI Module for management and use of the data.....	66
VI A Management	66
VI.A.1 System architecture	66
VI B Use of the data.....	68
VII Follow-up of STECF recommendations	69
VIII List of derogations	70
IX List of acronyms and abbreviations.....	71
X Comments, suggestions and reflections.....	73
XI References	74
XII Annexes	75

GENERAL FRAMEWORK

The German National Programme (NP) for sampling of fisheries data refers to the Community Programme defined in Article 3 of Council Regulation 199/2008, Commission Regulation 665/2008 and the Annex of Commission Decision 2010/93/EU. It describes the planned actions by modules and sections of the abovementioned legal acts in accordance with the Guidelines for NP proposal submissions provided by the European Commission (Anon. 2009d).

This NP proposal covers the forthcoming three years, 2011-2013 (= NP-years).

In the transition of the NP planning and execution from the former legal basis (DCR: Council Reg. 1543/2000, COM Regs. 1639/2001 and 1581/2004) to the new Data Collection Framework (DCF) implies several changes in the structure and content of the NP, such as the move to fleet/fisheries-based sampling (see sections III.B-F), the addition of a section on economic data collection from the aquaculture sector (section IV.A) and of a module on ecosystem parameters (section V). The general rationale and methodology of the data collection, however, remains very similar to previous NPs and is based on past experience.

II ORGANISATION OF THE NATIONAL PROGRAMME

II A NATIONAL ORGANISATION AND COORDINATION

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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 621 (formerly unit 422) is responsible for the central database of all national fisheries-related data and central IT services (e.g. national DCR website: www.dcf-germany.de).

The **vTI** collects biological and economic data, biological survey data as well as data from sampling of commercial fishing vessels under German flag. The vTI-OSF is responsible for the Baltic Sea and recreational fisheries sampling, while the vTI-SF is responsible for the North Sea & Eastern Arctic, Northeast Atlantic and the other areas. The vTI-FOE is responsible for the pilot study on eel sampling.

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

Statistisches Bundesamt (StBA) (Federal Statistical Office Germany)
Gustav-Stresemann Ring 11
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BLE and vTI are institutions under the auspices of the Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz (**BMELV**) (Federal Ministry of Food, Agriculture and Consumer Protection).

Within the institutions of BMELV, responsible persons are appointed in order to co-operate and implement the NP. The vTI-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). 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 INTERNATIONAL COORDINATION

In Table II.B.1, all foreseen meetings and workshops for international co-ordination with intended German participation are listed. This list will be amended at the end of 2010 according to an updated list to be sent by the Commission during December 2010.

II C REGIONAL COORDINATION

Germany will participate in the Regional Co-ordination Meetings (RCMs) for the Baltic, North Sea & Eastern Arctic, North Atlantic and Long Distance Fisheries (Other regions). Apart from regional (multilateral) agreements to be established at the RCMs, Germany currently holds bilateral agreements with Denmark, Sweden, UK and The Netherlands (See Annexes XII.1-4) on sampling foreign-flag vessels. These agreements are of general nature and will be discussed in detail (sampling levels etc.) at the forthcoming RCMs. Also see 'regional coordination' for the various sampling parameters in the individual sections below.

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 during recent years and to be expected for the NP-years. In the Baltic and North Sea & Eastern Arctic regions, demersal, pelagic and a small fraction of industrial fisheries are conducted. In the North Atlantic, pelagic fisheries are dominating over demersal fisheries, and few vessels under German flag are conducting deep-water fisheries. With regard to 'long distance fisheries', few vessels under German flag are operating in fisheries on small pelagic species in the CECAF area (Mauritanian EEZ) and Southeast Pacific (FAO area 87).

III B ECONOMIC VARIABLES

The allocation of vessels to a supra-region is based upon weight of landings and fishing effort in 2009. These are the most recent annual data which are available by the time the NP proposal is due. There are no fishing activities of the German fleet in the Mediterranean and Black Sea, and only three vessels are assigned to the supra-region "Other regions".

SUPRA-REGION: "BALTIC SEA, NORTH SEA AND EASTERN ARCTIC, AND NORTH ATLANTIC"

III B 1 DATA ACQUISITION

III B 1 (a) Definition of variables

Gross value of landings:

The basis for the calculation is the sales notes. All first-hand sales have to be reported to the German authorities, including volume and value. For the very small amount of fish for private consumption which has to be reported too, prices are not specified. For this fraction of landings, the reported volume of fish will be multiplied by the average price estimated for species, segment and season. So the calculation of the gross value covers the landings of the whole fleet (exhaustive). The landings by value are given on geographical disaggregation level 4 (Subdivision) for the Baltic Sea and level 3 (Division) for other areas, according to Appendix I, quarterly and per species. The sampling rate is 100%, thus no precision level is needed. The Appendix III segmentation is used.

Income from leasing out quota or other fishing rights; Lease/rental payments for quota or other fishing rights:

Trading of quota is currently not permitted in Germany. Therefore no data are collected for these variables.

Imputed value of unpaid labour:

Unpaid labour will be estimated if the vessel length is below 30 m and if the total days at sea are less than 270 (3/4 of a year). If a vessel exceeds one of these thresholds, it is regarded as company-owned with no unpaid labour involved.

The imputed value of unpaid has to be regarded as dependent upon total activity and earnings from landings. It is therefore estimated based upon three elements:

- the average national salary provided by the "German Federal Statistical Office" (2008 = 30.600 €)
- the total number of days at sea
- the total earnings from landings.

The imputed value of unpaid labour will be determined per vessel by multiplying the average national income with the matching factor as indicated in the subsequent scheme:

Total days at sea	Annual earnings from landings in 1.000 €			
	20 - 49	50 - 99	100 - 299	300 +
50 – 74	1/6	1/4	1/2	3/4
75 – 149	1/4	1/2	1	5/4
150 +	1/2	2/3	1	3/2

Annual depreciation:

The annual depreciation will be calculated using linear depreciation and historical value as provided in the according table of study “FISH/2005/03”.

Value of physical capital: depreciated replacement value and depreciated historical value:

The values of physical capital will be determined using the according tables of study “FISH/2005/03”. Based upon historical values of ten vessels, a price per unit GT of € 9.524 (2008) will be applied to the tables and combined with capacity data from the according fleet register data.

Employment variables:

The employment variables will be determined in accordance with the study No. “FISH/2005/14”. The number of annual working hours per FTE is 1.800.

Methodology to calculate the “fuel efficiency of fish capture” (indicator 9 of Appendix XIII of Commission Decision 2008/949/EC):

Energy costs and energy consumption are determined on an annual basis. In order to calculate metier and quarterly data, annual data will be assigned proportional to the according days at sea, which can be more specifically assigned to metiers and quarters.

III B 1 (b) Type of data collection

All three types of data collection – census, probability sampling and non-probability sampling – will be applied in the German data collection. Further specifications are provided as requested in Standard table III.B.3 and in chapter III B 1 (d).

III B 1 (c) Target and frame population

The fleet segmentation is exhaustively characterised as requested in Standard table III.B.1.

In the case of the smallest beam trawler and passive gear segment, the target population is smaller than the frame population, because in these segments many vessels (about one third of each) have been found inactive, and therefore exhaustive sampling is required (and thus will be performed accordingly) only for capacity and physical value data.

A vessel is characterised as inactive when no landings have been reported in the sales notes during the reference year.

Clustering of fleet segments:

Clustering of fleet segments applies for reasons of confidentiality. In compliance with STECF/SGECA 09-02 (“Quality aspects”), segments which contain less than 10 vessels and are therefore subject to clustering have been characterised as important or non-important. All segments with values of landings below 3 Mill. € p.a. are regarded as non-important, no matter whether they are similar to other segments or not. In a first step, segments are being clustered with adjacent length classes. This solves the issue of confidentiality in most cases. In the case of vessels > 12m using passive gear, several segments containing just 1 or 2 vessels are clustered, even if the gear is not identical. Statistical analysis as justification for this clustering pattern is not viable in this particular context, since the number of vessels involved is by definition always very small, and scattering (variability) is always high.

The clustering of the pelagic trawlers segments remains without consequences in practice, as these segments are dominated by one owner, and therefore data cannot be published by any means. Any other clustering scheme would have strongly biased the other segments involved.

III B 1 (d) Data sources

The basis of the German data collection is the **national fleet register**. All capacity data are derived from there, and as – by definition – all relevant vessels are represented in the fleet register, the sampling strategy is a census. A comparison with the landings declaration allows for separating active from inactive vessels. Inactive vessels will be sampled only for the parameter “capital value”. Landings declarations (**sales notes**) are available exhaustively, and **logbooks** are available for all vessels > 8m.

The German data collection programme for the collection of economic fleet data in 2011-2013, which are not covered by the sources mentioned above is based on three sources:

- (i) an accountancy network which consists of about 160 vessels providing a comprehensive set of economic data annually (covering Beam trawlers 12-24 m, Demersal trawlers 12-24 m, and some Fixed netters between 8 and 18 m)
- (ii) a questionnaire which is sent by mail to owners of small-scale fisheries vessels < 10m (random sampling), and
- (iii) a questionnaire for the segments “Beam trawlers: 10-12 m*and 24-40 m*”; “Dredgers 24-40 m*”; “Demersal trawlers 24-40 m and >40 m and “Pelagic trawlers > 40 m*” (exhaustive sampling).

All surveys are carried out on a voluntary basis. The selection for random sampling is related to the vessel owner. Most fishermen own only one vessel. In case that an owner is selected for sampling and owns more than one vessel, questionnaires will be sent for each individual vessel. However, fishermen owning more than one smaller vessel do not file expenses and employment data separated by vessel. Therefore this group will be sampled on an enterprise basis, and only effort and physical value data will be surveyed on a vessel basis.

The following scheme gives an overview of the data sources:

Source	Variable groups	Segments	Type
Fleet register	Capacity	All	Census
Logbooks	Effort, gear	All > 8m	Census
Sales notes	Landings, income, price	All active vessels	Census
Questionnaire random sampling	Most economic variables; (effort for vessels < 8m)	Passive gear < 12m	Probability sampling
Questionnaire census	Most economic variables	Pelagic trawlers, demersal trawlers > 24m, dredgers, beam trawlers < 12m and > 24m	Census
Accountancy network (FADN)	Most economic variables	Beam trawlers 12-24m, Demersal trawlers 12-24m, Fixed netters between 8 and 18m (being completed with random sampling survey, see above)	Non-probability sampling

- **Logbook data** and **sales notes** are provided in compliance with the relevant commission regulations (EEC) No 2807/83 and (EC) No 500/2001, council regulation (EEC) No 2847/93, and council regulation (EC) No 1224/2009.
- **Fleet register** entries are provided in compliance with commission regulation (EC) No 2090/98.
- Data from the accountancy network (**FADN**) are derived in compliance with council regulation (EEC) No 79/65. All these sources are sufficiently described in the relevant legal documents.

- The **surveys with questionnaires** will cover all the variables which are required under the DCF and which are not accessible through the other sources mentioned. Questionnaires which are used for the surveys will be provided with the related Technical Reports.

On the consistency of data:

Fleet register, logbooks and sales notes are submitted on a legally binding basis. They are regarded as reliable sources. When hardcopies of the landings declarations are computerised, the values for landed weight and catch weight are cross-checked with the logbooks, which are available at the same moment. Landings declarations are checked by inspectors during the discharge procedure. About 20% of the annual landings in Germany are inspected.

Data collected from the accountancy network (FADN) are based upon official tax declarations. Data are provided on a voluntary basis. The providers have to pledge to submit correct data and get paid for this service. The submitted data are checked for plausibility by the collecting authorities. The check routine can be accessed through <http://www.bmelv-statistik.de/de/testbetriebsnetz/plausibilitaetspruefung-der-landwirtschaftlichen-testbetriebe-winplausi/>.

Data collected through questionnaires are scanned for potential outliers that will be further scrutinised and checked with the suppliers. However, due to the large actual variability of these data, these checks have to be restricted to extreme data.

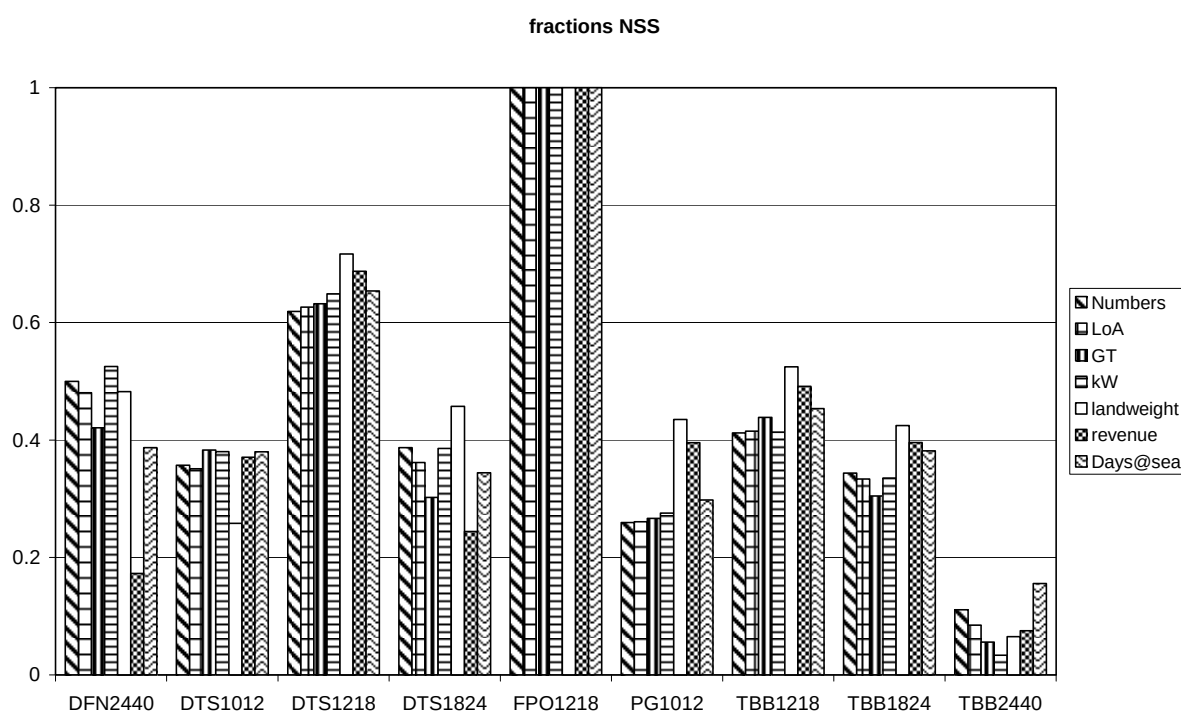
III B 1 (e) Sampling stratification and allocation scheme

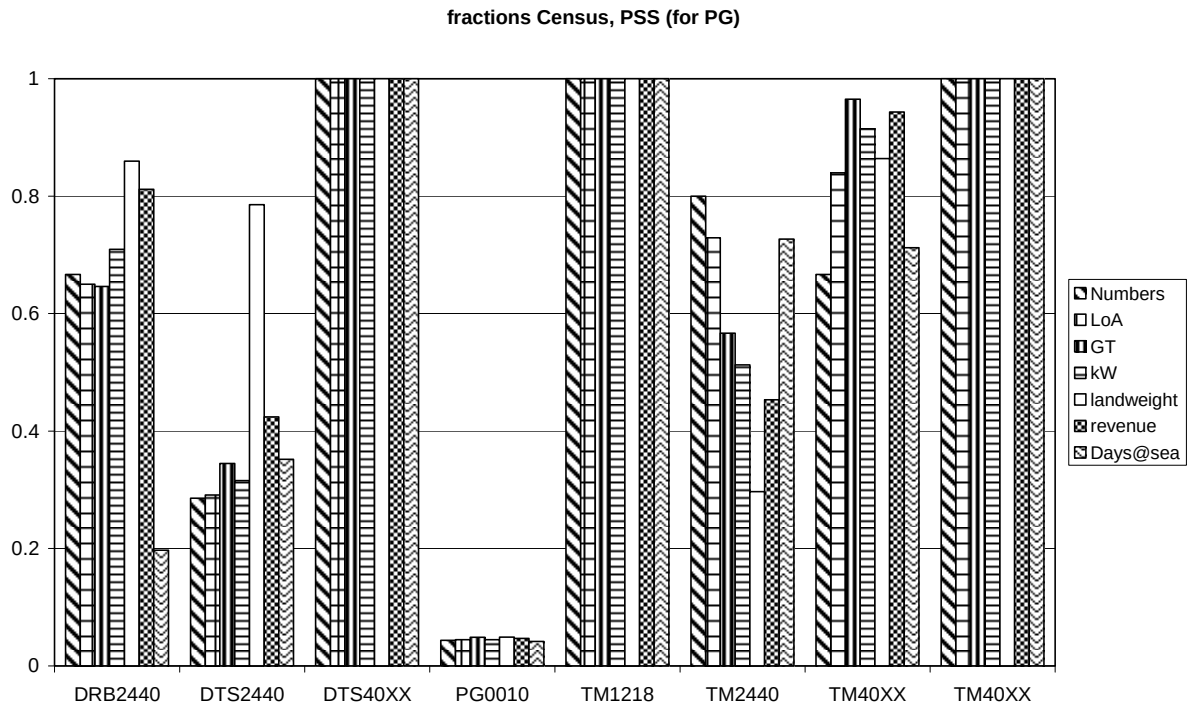
Type of sampling strategy

Probability sampling will be applied to one segment. Sampled enterprises are randomly chosen from the list of owners of the respective segment.

Non probability sampling will be applied for a number of segments given the prerequisite that the sample is balanced with respect to capacity, effort and landings data. In case of exceptional data, the reason for this will be analysed, and adjustments for estimation will be implemented where found necessary.

The following figures indicate that previous samplings have shown an excellent balance of that kind:





Further stratification within fleet segment
None.

Determination of sample size for each fleet segment

The **probability sampling** scheme is applied to the large segment of passive gear 0-10m. About 20% of the population will be sampled. This rate has been chosen as a compromise between quality requirements and inconvenience to recipients (according to the experience gathered in previous years, they are mostly operating on a sideline basis, are reluctant to accounting and tend to ignore these requests if being bothered more often than every five years). The recipients of the questionnaire are randomly chosen from the list of owners of PG0010 vessels.

For the **non-probability sampling** scheme, a response rate of 25% of the segment has been set as target. The responses received so far have shown an even distribution of capacity, effort and landings indicators (see figures above). The only outliers that have been observed (if any) refer to the weight of landing, i.e. the fraction of weight of landings achieved by sampling is different from the fraction achieved for other variables, e.g. number of vessels. However, this is not going to cause any bias, because the weight of landings is not used as an estimator (see also III.B.2). Moreover, the non-probability response rate will be further increased by the side effect of the probability sampling survey, which will deliver additional results for the segments covered by non-probability sampling. This rate can not be forecasted due to the random nature of the selection process.

Sample evolution over time, rotational groups

For the probability sampling it will be taken care that the fishermen will not receive questionnaires in subsequent years so that the willingness to respond will not decrease. Other adjustments are not planned.

III B 2 ESTIMATION

In a first step, a correlation analysis is being performed between data which are available exhaustively (capacity, landings, and in most cases effort) and those data from the surveys. The Pearson correlation coefficient is used as a first indicator of which factor has the most influence on the variable which has to be estimated (see screenshot for illustration).

The SAS System
18:03 Thursday, March 18, 2010 5

The CORR Procedure

8 Variables: Enonfish ESubvent ELDng Serloest brz Fgtq invest i kw

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
Enonfish	159	6372	10340	1013224	0	88766	Enonfish
ESubvent	158	1500	3801	300153	0	15496	ESubvent
ELDng	215	623460	2182388	134043838	50.00000	17191206	ELDng
Serloest	215	639566	2182344	135571724	49.65487	17191206	
brz	215	221.98695	1020	47727	1.00000	3082	
Fgtq	214	136.45327	54.86865	29201	2.00000	283.00000	
invest i	161	47381	30383	7724388	0	621150	
kw	215	333.62791	866.88546	71730	3.00000	7705	

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0
Number of Observations

	Enonfish	ESubvent	ELDng	Serloest	brz	Fgtq	invest i	kw
Enonfish	1.00000	-0.11300	0.03888	0.14522	0.08895	-0.00841	0.05603	0.13978
ESubvent	-0.11300	1.00000	0.11548	0.09202	-0.01002	-0.00385	0.00812	0.17572
ELDng	0.03888	0.11548	1.00000	0.39380	0.87710	0.24432	0.34373	0.31085
Serloest	0.14522	0.09202	0.39380	1.00000	0.87689	0.24775	0.28572	0.31089
brz	0.08895	-0.01002	0.87710	0.87689	1.00000	0.10981	0.16250	0.95754
Fgtq	-0.00841	-0.00385	0.24432	0.24775	0.10981	1.00000	0.04512	0.16677
invest i	0.05603	0.00812	0.34373	0.28572	0.16250	0.04512	1.00000	0.20406
kw	0.13978	0.17572	0.31085	0.31089	0.95754	0.16677	0.20406	1.00000

As a result of this analysis, a scheme is being developed, which includes not only correlation aspects, but also considerations of meaningfulness. For instance, energy costs are likely to be dependent upon both the vessel size and some effort parameter, but not so much on value of landings – even if the correlation analysis (or regression analysis in a further step) might indicate something else. The following table shows the findings of the correlation analysis for 2008 data. This concept will be applied to upcoming vintages in order to keep the approach coherent. However, a routine check will be performed in order to verify the validity:

variable to be estimated	Basis for estimation				
	GT	kW	fishing days	days at sea	value of landings
Direct subsidies		X			
Other income		X			
Wages and salaries of crew	X		X		X
Imputed value of unpaid labour	X		X		X
Energy costs	X		X		
Repair and maintenance costs	X				X
Variable costs	X		X		
Non-variable costs	X	X			
Investments in physical capital					X
Debt/asset ratio					X
Engaged crew				X	
FTE National				X	
FTE harmonised				X	

Estimation for segments with sampling results

In a next step the values are estimated for the segment for which sampled data are available. As indicated for 2008 in III B 1 (e), that the fractions, which the sample represents within the considered segment, are in most cases quite similar, e.g. in TBB1218 the sample represents about 41% of the number of vessels, 41% of LoA, 44% of GT, 41% of kW, 52% of weight of landings, 49% of revenues and 45% of days at sea.

In other words, estimations are in most cases quite robust, no matter which factor is used for estimation. Nonetheless, the estimator is chosen with respect to the scheme above. In cases where more than one variable is indicated as basis for estimation, the average of the fraction will be applied.

Estimation for segments without sampling results

According to the experience in previous years, there is a chance that for certain segments no responses to the survey are obtained. In these cases the basis for estimation will be a regression analysis of segments with the same fishing technique and an adjacent length class or with the same length class and a similar fishing technique, depending upon which version delivers the highest r^2 . The final choice can be done only when the data are available.

III B 3 DATA QUALITY EVALUATION

Bias and variability indicators will be used as quality indicators and will be provided in compliance with the guidelines and as indicated in standard table III B 3. As a precautionary measure, no cut-off limits have been applied to the sampling, which might have caused bias.

Bias as a type of error is regarded most likely in context of non-probability sampling, since the sample is self-selective. The bias might occur because maybe only the companies with higher activity or with higher efficiency are willing to participate. It seems logical that a company which provides data through a tax advisor will pay more attention to economic behaviour and might therefore be more efficient in business. Vice versa, a company that is not willing or unable to participate in the sampling might pay less attention to accurate accounting and might therefore have no indicators of economic success available, which are in most cases a prerequisite for successful business.

This will be scrutinised for bias using the schemes as provided in III B 1 (e). A bias would be evident if e.g. the share of sampled numbers would differ considerably from the share of sampled length units. This could occur if only the larger vessels within a segment are sampled. If a bias is likely to exist, it will be investigated whether it has any influence on further estimation procedures. If yes, a correction procedure will be contrived.

Bias becomes more likely with decreasing coverage rate. The coverage rates which have been experienced for non-probability sampling in the past are usually greater than 30%, which is a good precondition to have no or little bias.

According to the STECF report on quality aspects, the coefficient of variation will be used as indicator of accuracy for probability sampling. A threshold of 25% will be regarded as acceptable.

III B 4 DATA PRESENTATION

Data which are derived from logbooks and landings declarations (sales notes) are usually available within three months after the end of the reference year. Data which are derived from the accountancy network are being made available with a delay of about 14 months, according to the experience of previous years. This means, data for 2009 will be available by the first quarter of 2011 etc. A similar lag time is expected for results based upon surveys, since usually the enterprises only get their accounting finished by the end of the following year.

In compliance with the Commission Decision (EC) No 949/2008 and STECF/SGECA 09-02 recommendations, clustering is being executed for confidentiality reasons on several segments containing less than 10 vessels. It has to be pointed out that clustering only has an impact on the publication of data. Sampling is performed on the basis of non-clustered segments. For clustering, see also paragraph III B 1 (c).

III B 5 REGIONAL COORDINATION

There was no need for initiatives to coordinate chapter III of the national programme with other Member States in the same marine region with regard to the collection of economic variables. No recommendations have been issued by relevant RCMs with respect to responsive actions which have to be documented in the NP.

III B 6 DEROGATIONS AND NON CONFORMITIES

No derogations and non-conformities.

SUPRA-REGION: "OTHER REGIONS"

III B 1 DATA ACQUISITION

The population consists of only three vessels. These vessels will be sampled by questionnaire using the same approach as described for the first supra-region.

III B 1 (a) Definition of variables

Gross value of landings:

The basis for the calculation is the sales notes. All first-hand sales have to be reported to the German authorities, including volume and value. For the very small amount of fish for private consumption which has to be reported too, prices are not specified. For this fraction of landings, the reported volume of fish will be multiplied by the average price estimated for species, segment and season. So the calculation of the gross value covers the landings of the whole fleet (exhaustive). The landings by value are given on geographical disaggregation level 4 (Subdivision) for the Baltic Sea and level 3 (Division) for other areas, according to Appendix I, quarterly and per species. The sampling rate is 100%, thus no precision level is needed. The Appendix III segmentation is used.

Income from leasing out quota or other fishing rights; Lease/rental payments for quota or other fishing rights:

Trading of quota is currently not permitted in Germany. Therefore no data are collected for these variables.

Imputed value of unpaid labour:

Unpaid labour will be estimated if the vessel length is below 30 m and if the total days at sea are less than 270 (3/4 of a year). If a vessel exceeds one of these thresholds, it is regarded as company-owned with no unpaid labour involved. All vessels which are assigned to "other regions" are company-owned, therefore the concept of unpaid labour does not apply to these vessels.

Annual depreciation:

The annual depreciation will be calculated using linear depreciation and historical value as provided in the according table of study "FISH/2005/03".

Value of physical capital: depreciated replacement value and depreciated historical value:

The values of physical capital will be determined using the according tables of study "FISH/2005/03". Based upon historical values of ten vessels, a price per unit GT of € 9.524 (2008) will be applied to the tables and combined with capacity data from the according fleet register data.

Employment variables:

The employment variables will be determined in accordance with the study No. "FISH/2005/14". The number of annual working hours per FTE is 1.800.

Methodology to calculate the "fuel efficiency of fish capture" (indicator 9 of Appendix XIII of Commission Decision 2008/949/EC):

Energy costs and energy consumption are determined on an annual basis. In order to calculate metier and quarterly data, annual data will be assigned proportional to the according days at sea, which can be more specifically assigned to metiers and quarters.

III B 1 (b) Type of data collection

All economic data will be surveyed exhaustively for the three vessels concerned under this category.

III B 1 (c) Target and frame population

The target population is the frame population.

III B 1 (d) Data sources

The basis of the German data collection is the national fleet register. All capacity data are derived from there, and as – by definition – all relevant vessels are represented in the fleet register, the sampling strategy is a census. A comparison with the landings declaration allows for separating active from inactive vessels. Inactive vessels will be sampled only for the parameter “capital value”. Landings declarations and logbooks are available exhaustively for all vessels operating in the supra-region “other regions”.

All data which are not available through the sources mentioned above will be exhaustively collected using a questionnaire.

III B 1 (e) Sampling stratification and allocation scheme

The population consists of only three vessels. Sampling will be exhaustive.

III B 2 ESTIMATION

The population consists of only three vessels. Sampling will be exhaustive.

III B 3 DATA QUALITY EVALUATION

The population consists of only three vessels. Sampling will be exhaustive.

III B 4 DATA PRESENTATION

Data which are derived from logbooks and landings declarations (sales notes) are usually available within three months after the end of the reference year. Data which are derived from the accountancy network are being made available with a delay of about 14 months, according to the experience of previous years. This means, data for 2009 will be available by the first quarter of 2011 etc. A similar lag time is expected for results based upon surveys, since usually the enterprises only get their accounting finished by the end of the following year.

Data from this supra-region will not be available for publication, because the vessels are owned by one company. Clustering does not overcome this issue, as elaborated in <III B 1 (c) “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”>.

III B 5 REGIONAL COORDINATION

There was no need for initiatives to coordinate chapter III of the national programme with other Member States in the same marine region with regard to the collection of economic variables.

No recommendations have been issued by relevant RCMs with respect to responsive actions which have to be documented in the NP.

III B 6 DEROGATIONS AND NON CONFORMITIES

No derogations and non-conformities.

III C BIOLOGICAL METIER RELATED VARIABLES

III C BIOLOGICAL METIER-RELATED VARIABLES –BALTIC SEA

III C 1 DATA ACQUISITION

III C 1 (a) Codification and naming convention

The coding of metiers followed the rules and definitions in Commission Decision 2010/93/EU and as agreed during the RCM Baltic 2009 (Anon. 2009c).

III C 1 (b) Selection of metiers to sample

Data on landings, effort and value of fishing activities under German flag are gathered under the Regulations 2807/83, 2847/93, 104/2000 and 1224/2009 more recently. All vessels under German flag have to report landings declarations and, depending on the vessel length, logbook data (≥ 8 m in the Baltic) and/or trans-shipment declarations. Landings declarations contain inter alia information by species on landed processed products in terms of weight and value, landing site as well as information on the fishing trip. Logbooks contain inter alia information by species on landings, weight, effort, gear and geographical origin of landings. Information from logbook and landings declarations are merged and stored in a logbook database and a landings database. The merging process starts with the application of conversion factors for each landed processed product by species (Table III.F.2). The resulting live weight is summed by species. Using the logbook information, the species live weight is raised by sub-area, subdivision and statistical rectangles. Resulting data are stored in the landings database.

For vessels not obliged to record on logbooks, landings declarations are used to calculate live weight using conversion factors. These vessels are small boats normally not changing between divisions, as they fish more or less locally. The gathering of landings data for this part of the fleet is exhaustive, i.e. by census.

The logbook data for the German fishery in the Baltic Sea contain a large number of trips. Within trips, the subdivisions, stocks and metiers often change. Thus, a strict a “one trip-one metier” rule would result into pooling different stocks, mesh regulations and target assemblages into one inadequate metier leading to an underestimation of the importance of some metiers. As an alternative approach, for each trip metiers were assigned according to the subdivision, target assemblage within the catch, the used gear and the mean mesh opening used during the trip within a subdivision/target assemblage/gear stratum. The target assemblage was defined by the species with the highest proportion in the landed catch, the used gear was assigned according to logbook entries or vessel registration (vessels smaller 8 m are not obliged to declare the used gear, but usually operate with fixed gears such as gill nets, traps or pots). This procedure leads to the classification of metier-trips and caused a higher number of assigned metier-trips than original logbook trips. The metier-trips were then combined. For boats less than 8 m in length, having only landing declarations as data basis, the effort in terms of minutes of the catch event was allocated proportionally to the catch.

The metiers were identified by using an algorithm to account for the Baltic Sea metier matrix as defined in Council Regulation 2187/2005. Some fishing activities could not be allocated to one of the defined metiers. The main reason lies in the probably wrong gear allocation within the logbook entries or the gear-target assemblage combination (e.g. GNS_CAT) which does not appear in the matrix. Sometimes the mesh data in the logbook may be given as mesh size while it should have been declared as mesh opening. For gear-target assemblage combinations where a valid metier could be assigned, the metiers were edited and combined for the final ranking (e.g. original metier-trip GNS_ANA_0_0_0 was changed to GNS_ANA_>=157_0_0_0, as salmon and trout cannot be caught with mesh openings < 157 mm).

The selection of metiers is based on landings, effort and value data from all German fishing trips undertaken in 2007 and 2008 in accordance with Commission Decision 2010/93/EU and agreements at the RCM Baltic 2009 (Anon. 2009c). The edited metier-trips with fishing activities of the German fleet are listed in Table III.C.1. Table III.C.2 shows the metiers that have been merged for sampling purposes.

The rationales behind the decisions are as follows:

GNS_FWS_0_0_0 containing:

FPO_CAT_0_0_0

FWR_FWS_0_0_0

GNS_FWS_0_0_0

These fisheries target freshwater species in enclosed bays using pots, traps and gill nets. Often fishermen operate various gears according to season and availability of targeted fish. Targeted fish are usually perch, pike-perch and eel.

GNS_DEF_110-156_0_0 containing:

GNS_DEF_110-156_0_0

GTR_DEF_110-156_0_0

The passive-gear fisheries on demersal fish are merged for sampling due to the same target species assemblage and mesh size range. Often GTR and GNS are used within the same net row, and the two gears are used by the same fishermen.

OTB_DEF_>=105_1_110 containing:

OTB_DEF_>=105_1_110

PTB_DEF_>=105_1_110

The fishery on cod and flounder is characterized by a mixture of single-vessel and pair-trawling activities difficult to separate for sampling planning. The minimal mesh opening was usually equal or larger 105 mm before, but mesh size limits have been changed since 2010, so a renaming of this metier may become necessary during the NP period 2011-2013.

PTM_SPF_32-104_0_0 containing:

OTB_SPF_32-104_0_0

OTM_SPF_32-104_0_0

PTB_SPF_32-104_0_0

PTB_SPF_32-89_0_0

PTM_SPF_32-104_0_0

PTM_SPF_32-89_0_0

This fishery is a herring fishery using a mesh-regulation induced variety of trawl gears not to separate for sampling planning.

PTB_SPF_16-104_0_0 containing:

PTB_SPF_16-104_0_0

PTM_SPF_16-104_0_0

Trawl fisheries targeting herring with intermediate mesh sizes.

PTB_SPF_16-31_0_0 containing:

PTB_SPF_16-31_0_0

PTM_SPF_16-31_0_0

Trawl fisheries targeting sprat with small mesh sizes.

All metiers are combined which target small pelagic fish (herring or sprat) in the Central and Eastern Baltic (SD22-27), where the use of mesh sizes of up to 104 mm is allowed when targeting herring and sprat.

With regard to eel sampling (Footnote (c) in Appendix IV of Commission Decision 2010/93/EU for gear types 'pots and traps' and 'fyke nets'), see section 'III.E.1 (a) Selection of stocks to sample'.

III C 1 (c) Type of data collection

There is no national legal basis for biological sampling on board of German fishing vessels. In 2005 and 2006, a legal text was prepared for this purpose, but not implemented. The present status of a scientific observer on board of a German fishing vessel is a guest status. Article 11(3) of Council Regulation 199/2008 stipulates that samplers shall be accepted onboard, which did however not improve the situation significantly yet. The possibility for biological sampling depends on the willingness of skippers, ship owners and their Producers Organisations. Based on the present situation, random sampling of the fleet is still difficult and might not improve in the near future (even if a new legal basis for on board sampling is in place), also considering Article 11(4) of Reg. 199/2008 with the possibility to refuse an observer due to "lack of space on the vessel or for safety reasons". Therefore, the Baltic Sea data collection is based on type C, non-probability sample survey. However, in selecting the vessels for sampling, effort is put on selecting an as large variety of vessels in a given metier and quarter as possible. It is attempted that each vessel will not be sampled more than once per quarter. However, under some circumstances, the number of operating vessels in a given metier is small and a repetitive sampling of the same vessel within a quarter may occur.

For the German DCF in the Baltic, two sampling schemes are defined:

Scheme 1: comprehensive sampling of all species,

Scheme 2: The sampling events consider sampling of Group 1 or Group 2 species on shore.

The following metiers in Table III.C.3 will be sampled non-concurrently ("Other"). The rationale behind and conduction of the non-concurrent sampling is described below:

GNS_FWS_0_0_0

Depending on the outcome of an agreement at the RCM Baltic and the acceptance or decline of the German derogation to sample this target assemblage, unsorted (all sizes) catch of pike-perch and/or perch are purchased.

GNS_SPF_32-109_0_0

PTM_SPF_32-104_0_0

PTB_SPF_16-31_0_0

PTB_SPF_16-104_0_0

These metiers target small pelagic fish and have low by-catch rates of usually less than 5 % of the total landing weight. For *GNS_SPF_32-109_0_0*, concurrent sampling-at-sea is not feasible due to the small vessel size and all catches are usually landed with the nets. Thus, harbour sampling of landings is an efficient method. To assess the by-catch of non-target fish and protected species in the gill net fisheries, a pilot study with electronic monitoring is attempted. Within this pilot study, the concurrent at-sea sampling is planned.

All other identified metiers for sampling (Table III.C.3) will be sampled concurrently with sampling scheme 1. In most metiers, sampling consists of a combination of at-sea sampling and purchase of unsorted catches. For the metier *OTB_DEF_>=90_0_0*, the purchase of catch samples is planned, as due to the limited number of vessels, trips and compliance, it is very difficult to sample this metier at sea.

III C 1 (d) Target and frame population

The target populations of the given metiers are in accordance with the definitions provided by the DCF (Decision 2010/93/EU). The target and the frame populations of the Baltic metier fleets are not fully congruent, as not all vessels are fully accessible to sampling (see section III.C.1(c)). However, the

frame population for many metiers (e.g. OTB_DEF_>=105_1_110) comprises more than 50% of the total population and is thus considered as representative for the entire population.

III C 1 (e) Sampling stratification and allocation scheme

Sampling of biological metier variables will be carried out simultaneously with the collection of stock-related variables. The number of sampled trips is chosen to fulfill the DCF requirements of one sampled trip per month except for the metier GNS_DEF_110-156_0_0. Here, the number of sampled trips is less than 1 trip per month based on experience from recent NP periods. These gillnet vessels are usually around 10 m long and thus very prone to weather conditions. In combination with the remote location of many ports, a monthly sampling of this metier is difficult. Table III.C.4 shows the six sampling frames defined for the German Baltic DCF (Bal_A to Bal_F).

In the following, the sampled metiers and the allocated effort are described:

SD 22-24:

PTM_SPF_32-104_0_0

Target species: Herring. Peak season: First and second quarter. Area: SD24. Duration of trips: 1 day. Sampling effort: 2 observer trips (concurrent-at-sea) and 10 with “other”-strategy (harbour samples) are planned.

GNS_SPF_32-109_0_0

Target species: Herring. Peak season: First and second quarter. Area: SD24. Duration of trips: 1 day. Sampling effort: 16 trips with “other”-strategy (harbour samples) are planned.

OTB_DEF_>=90_0_0

Target species: Herring and whiting, but no cod. If more than 3% of cod are caught, fishermen have to switch the nets. Peak season: First and second quarter. Area: SD22-23. Duration of trips: 1 day. Sampling effort: 2 concurrent harbour samples are planned.

OTB_DEF_>=105_1_110

Target species: Cod. Peak season: First, third and fourth quarter. Area: SD 22-24. Duration of trips: 1 week. Sampling effort: 10 observer trips (concurrent-at-sea) and 20 concurrent harbour samples are planned.

GNS_DEF_110-156_0_0

Target species: Cod and flounder. Peak season: First, third and fourth quarter. Area: SD22-24. Duration of trips: 1 day. Sampling effort: 6 observer trips (concurrent-at-sea) and 3 concurrent harbour samples are planned.

PTB_SPF_16-31_0_0

Target species: Sprat. Peak season: First and second quarter. Area: SD 22-24. Duration of trips: 1 day. Sampling effort: 2 trips with concurrent harbour samples are planned.

GNS_FWS_0_0_0

Target species: Zander (Pike-perch), pike and perch. Peak season: First, second and third quarter. Area: SD 24. Duration of trips: 1 day. Sampling effort: 2 trips with “other”-strategy (harbour sampling) are planned.

SD 25-32:

PTB_SPF_16-31_0_0

Target species: Sprat. Peak season: First and second quarter. Area: SD 25-28. Duration of trips: 1 week. Sampling effort: 1 trip (concurrent-at-sea).

PTB_SPF_16-104_0_0

Target species: herring. Peak season: All year. Area: SD 25-32: Duration of trips: 1 week. Sampling effort: 1 trip (concurrent-at-sea).

OTB_DEF_>=105_1_110

Target species: Cod. Peak season: Second quarter. Area: SD 25. Duration of trips: 1 week. Sampling effort: 4 observer trips (concurrent-at-sea) and 6 with concurrent harbour sampling are planned.

III C 2 ESTIMATION PROCEDURES

The sampled fractions of the catch are raised to total catch, total landing and total discard weight on a haul basis. Raising by trip is not possible for most of the fishing operations in the Baltic Sea, because a single physical trip can cross various strata boundaries. The length-frequency distributions of each catch are weighted by the weight of the catch and subsequently pooled by stratum (defined by metier, annual quarter and subdivision). The pooled length-frequency distribution of each stratum is then used to raise the landing records for each metier to numbers. According to this procedure, length- and weight-frequency distributions for catches and discards, sex ratios-at-length and maturity ogives are calculated for each stratum. The raised number within a stratum is transformed to numbers-at-age and weight-at-age of given sex and maturity using age-length-key compiled for the according stratum (metier/quarter/SD). The precision of the length-, weight-, sex- and maturity-frequency distributions is estimated analytically by calculating confidence intervals and statistically by using re-sampling and bootstrapping.

III C 3 DATA QUALITY EVALUATION

Potential sources of bias include the non-random sampling scheme, the inaccessibility of small vessels < 8 m, the misreporting of landings of small vessels < 8 m and the working conditions onboard of vessels with limited deck space. The non-random sampling scheme may be improved by obtaining a higher level of cooperation with fishermen, which can be expected in the process of ecocertification. The sampling of small vessels, where at-sea monitoring is ineffective or impossible, may be achieved by electronic monitoring with video camera systems. Pilot studies on electronic monitoring of the gill net fisheries targeting herring are planned for 2010 onwards. The working procedures onboard of vessels will be optimised to decide in advance, if the sampling of unsorted catch only or additional discard sampling will be possible. Again, in the process of ecocertification, a higher compliance of the fishing industry to sample discards is expected. Again, electronic monitoring by video cameras may increase the estimates of discards.

III C 4 DATA PRESENTATION

Data will be delivered within the submission deadlines of the ICES WGBFAS and HAWG. In the RCM Baltic 2009 (Anon. 2009c), FishFrame 5.0 was defined as the regional database to be used. Hence, all data obtained by sampling commercial catches will be uploaded to FishFrame 5.0.

III C 5 REGIONAL COORDINATION

Germany regularly participates in the RCM Baltic and follows the agreed procedures and recommendations (see below). Bilateral agreements with Denmark and Sweden exist (see Annexes XII.1 and XII.2) in order to sample the métiers targeting small pelagic fish (PTM_SPF_32-104_0_0 and PTB_SPF_16-104_0_0). During the RCM Baltic 2010, the details (métiers, stocks, sampling levels) of these agreements will be negotiated.

Source	Recommendation to MS	MS action
RCM Baltic 2009	ON MÉTIER RELATED VARIABLES – REFERENCE PERIOD FOR NP 2011-2013: RCM Baltic endorses RCM NS&EA recommendation of MS to use the average landing figures over the years 2007-2008 as the basis for ranking métiers within the NP 2011-2013.	The metier ranking in this NP proposal was based on the reference years 2007-2008.
RCM Baltic 2009	ON REGIONAL DATABASE:	FishFrame 5.0 is being used

	In order to make analyses of the data collected within DCF and to optimize the coordination work, the developed regional database FishFrame 5.0 should be used within the RCM Baltic.	by Germany, see section III.C.4.
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III C 6 DEROGATIONS AND NON CONFORMITIES

In the Baltic, Germany applies for derogation to sample the following metiers:

GNS_FWS_0_0_0

Based on the metier ranking for the German NP2009-2010, the sampling of freshwater fish within the Baltic started in 2009 with sampling of 100 perch per year. However, perch did not fall into the obligatory stocks for sampling within the current NP proposal, as the total share of EU landings was less than 10%. Instead, pike-perch became a relevant species for sampling between 2011-2013 due to a share of EU landings >10% within the relevant ranking period. However, the fluctuation of landings around the 10% EU share both for pike-perch and perch will result in discontinuous data sets with low statistical relevance, because the sampled numbers will usually not be higher than 100. Furthermore, no management plan for these very local stocks is in existence, and it is not known how the collected data will be used in the future. Finally, most of the catches of this species obtained within the three-mile zone of the German Federal States of Mecklenburg-Vorpommern and Schleswig-Holstein and thus data collection and management of these freshwater stocks should fall under the respective province jurisdiction.

III C BIOLOGICAL METIER-RELATED VARIABLES –NORTH SEA AND EASTERN ARCTIC

III C 1 DATA ACQUISITION

III C 1 (a) Codification and naming convention

The coding of metiers followed the rules and definitions in Commission Decision 2010/93/EU and as agreed during the RCM North Sea & Eastern Arctic 2009 (Anon. 2009a).

III C 1 (b) Selection of metiers to sample

Data on landings, effort and value of fishing activities under German flag are gathered under the Regulations 2807/83, 2847/93 and 104/2000 and 1224/2009 more recently. All vessels under German flag have to report landings declarations and, depending on the vessel length, logbook data and/or trans-shipment declarations. Landings declarations contain inter alia information by species on landed processed products in terms of weight and value, landing site as well as information on the fishing trip. Logbooks contain inter alia information by species on catch (landings) weight, effort, gear, and geographical origin of catches (landings). Information from logbook and landings declaration are merged and stored in a logbook database and a landings database. The merging process starts with the application of conversion factors for each landed processed product by species (Table III.F.2). The resultant live weight is summed up per species. Using the logbook information, the species live weight is raised by sub-area, division (subdivision) and statistical rectangles. Resultant data are stored in the landings database.

For vessels not obliged to record on logbooks, landings declarations are used to calculate live weight using conversion factors. These vessels are small boats normally not changing between divisions, as they fish more or less locally. The gathering of landings data for this part of the fleet is also exhaustive, i.e. by census.

Each fishing trip was allocated to a specific metier by region, fishing ground and gear type. Target species were assigned by ranking the retained catch weight of each species. Most dominant species in the catch were assumed to be targeted and allocated to the target assemblage.

The selection of metiers is based on landings, effort and value data from all German fishing trips undertaken in 2007 and 2008 in accordance with Commission Decision 2010/93/EU and agreements at

the RCM North Sea & Eastern Arctic 2009 (Anon. 2009a). All selected metiers are listed in Table III.C.1.

The following metiers are selected by the ranking system:

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 are planned.

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 is planned.

PTM_SPF_32-69_0_0

Target species: Herring. Peak season: September to November. Area: Skagerrak. Duration of trips: 1 week. Sampling effort: depending on bi/multilateral agreements with Denmark and/or Sweden (see section III.C.5).

SSC_DEF_>= 120_0_0

Target species: Haddock. Peak season: 2nd/3rd quarter. Area: Skagerrak. Duration of trips: 1 week. Sampling effort: depending on bi/multilateral agreements with Denmark and/or Sweden (see section III.C.5).

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: depending on bi/multilateral agreements with Denmark and/or Sweden (see section III.C.5).

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: depending on bi/multilateral agreements with Denmark and/or Sweden (see section III.C.5).

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: depending on bi/multilateral agreements with Denmark and/or Sweden (see section III.C.5).

OTB_DEF_>=120_0_0 (merged with PTB_DEF_>= 120_0_0, OTB_DEF_90-119_0_0 and OTB_DEF_100-119_0_0)

Target species: Saithe. Peak season: All year round. Area: Northern North Sea and Skagerrak. Duration of trips: 1 to 2 weeks. Sampling effort: 4 observer trips are planned.

Rationale behind the merging: This fishery is targeting saithe in the northern North Sea. The fishing area belongs to EU waters as well as to Norwegian waters. In both waters, different mesh size regulations apply. In Norwegian waters, a mesh size larger than 120mm is compulsory, while in European waters, smaller mesh sizes are allowed. Furthermore, the same fishery crosses sometimes the border to ICES Division IIa and is taking place in a few rectangles in that area just across that border.

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 are planned.

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 are planned.

PTM_DEF_<16_0_0

Target species: Sandeel. Restricted fishing season. Area: Northern North Sea. Duration of trips: 6 to 10 days. Sampling effort: See section III.C.6.

SSC_DEF_>=120_0_0

Target species: Cod. Peak season: All year round. Area: Northern North Sea. Duration of trips: 1 to 2 weeks. Sampling effort: 2 observer trips are planned.

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 are planned.

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 are planned.

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.

With regard to eel sampling (Footnote (c) in Appendix IV of Commission Decision 2010/93/EU for gear types 'pots and traps' and 'fyke nets'), see section 'III.E.1 (a) Selection of stocks to sample'.

III C 1 (c) Type of data collection

There is no national legal basis for biological sampling on board of German fishing vessels. In 2005 and 2006, a legal text was prepared for this purpose, but not implemented. The present status of a scientific observer on board of a German fishing vessel is a guest status. Article 11(3) of Council Regulation 199/2008 stipulates that samplers shall be accepted onboard, which did however not improve the situation significantly yet. The possibility for biological sampling depends on the willingness of skippers, ship owners and their Producers Organisations. Based on the present situation, random sampling of the fleet is still difficult and might not improve in the near future (even if a new legal basis for on board sampling is in place), also considering Article 11(4) of Reg. 199/2008 with the possibility to refuse an observer due to "lack of space on the vessel or for safety reasons".

Therefore, the sampling of the fleet is according scheme (C). Biological samples onboard the vessels during the concurrent sampling are gathered according to scheme (B).

III C 1 (d) Target and frame population

The target populations of the given metiers are in accordance with the definitions provided by the DCF (Decision 2010/93/EU). The target and the frame populations of the metiers are not fully congruent, as not all vessels are fully accessible to sampling (see section III.C.1(c)).

III C 1 (e) Sampling stratification and allocation scheme

Tables C.III.3, C.III.4 and C.III.5 are showing the planned sampling intensity and are summarising the sampling effort that is expected by Germany. The sampling frames are equal to the selected (merged) metiers.

III C 2 ESTIMATION PROCEDURES

Scientific observers take sub-samples of all landings and discard components of the catch. Total weights of the landings are taken from the log books; discard samples are weighted by the observers. The methods for estimating discard volumes are depending on the type of fishery sampled:

In some cases, the raising factor is calculated by total running time of the fish sorting conveyor belt during one haul against the time which is used for collecting a certain volume of discards from the belt, in other cases by comparison of landings and discards volumes or by the determination of the landings and discards weights in sub-samples in comparison to the total landings.

All haul-raised data were added up to obtain an estimate on the overall landings and discard proportions of every trip. In case not all hauls on a trip were sampled, only the sampled hauls were taken into consideration.

For assessment purposes, the stock variables are being estimated from length frequencies, age-length keys, individual weights and maturity ogives according to standard procedures of the respective RFMO (ICES, NAFO etc.).

III C 3 DATA QUALITY EVALUATION

The German observer programme aims to have full participation by all German registered vessels. However, for various reasons, such as lack of space onboard and unfavourable weather conditions, this is not always possible. Furthermore, although there is an agreement on co-operation between the German Fisheries Association and Federal Research Institute, the possibilities to place scientific observers onboard are often dependent on a positive attitude of the fishermen or vessel owner towards fisheries research. Based on this situation, random sampling of the fleet is not possible. This leads to a rather opportunistic sampling strategy, taking sampling opportunities when they occur, irrespective if they are planned or not. In fisheries with only a very limited number of vessels (e.g. cod fisheries in areas I-II [OTB_DEF_>= 120_0_0]), a good coverage can usually be reached. Nevertheless, due to the situation described above, there is potential for methodical bias, as some vessels are more often sampled than others, especially in the fisheries with a low coverage.

The number of planned sampling trips is in many cases less than the recommendation of the DCF/Guidelines (monthly fishing trips for metiers with an average length of a trip under two weeks and one fishing trip per quarter otherwise). In the case of short trips, it is not possible to sample monthly because of insufficient staff size. Germany would have to employ several additional onboard observers, while the possible gain in information would be minor or even negligible. Furthermore, it is highly ineffective and unrealistic for high-seas metiers with only a few vessels and long fishing trips (1 month and longer) to sample every quarter.

Nevertheless, the number of planned trips for some metiers cannot be fixed and is depending on staff availability and regional agreements between Member States.

III C 4 DATA PRESENTATION

All assessment input parameters will be available in accordance with submission deadlines and data formats of the relevant ICES assessment working groups.

III C 5 REGIONAL COORDINATION

Germany regularly participates in the RCM North Sea & Eastern Arctic and follows the agreed procedures and recommendations (see below). There are existing bilateral agreements with Denmark, Sweden, The Netherlands and the UK. See Annexes XII.1, XII.2, XII.3 and XII.4 for details.

Source	Recommendation to MS	MS action
RCM North Sea & Eastern Arctic 2009	ON MÉTIER VARIABLES – FISHING ACTIVITIES & SAMPLING COVERAGE: UK and Germany to formalize a bilateral agreement to ensure adequate sampling coverage for the UK landings from the relevant métiers in areas I & II	This agreement has been concluded recently, see Annex XII.4.
RCM North Sea & Eastern Arctic 2009	ON MÉTIER RELATED VARIABLES – REFERENCE PERIOD FOR NP 2011-2013: RCM NS&EA recommends MS to use the average landing figures over the years 2007-2008 as the basis for ranking métiers within the NP 2011-2013	The metier ranking in this NP proposal was based on the reference years 2007-2008.

III C 6 DEROGATIONS AND NON CONFORMITIES

Germany applies for the following derogations with regard to metiers in the North Sea and Eastern Arctic:

PTM_DEF_<16_0_0 (Fishery directed on sandeel in the North Sea)

Reason: In accordance to the quota regulation (Council Regulation 53/2010, Annex IID), an exploratory fishery relating to sandeel abundance has to be established every year in spring. Depending on the sandeel catch in this experimental fishery, the TAC is being allocated. This quota will correspond to a share of fishing effort to nearly 100% to Denmark. Therefore, the share in sampling effort for Germany is negligible and subject of bilateral agreement with Denmark.

III C BIOLOGICAL METIER-RELATED VARIABLES – NORTH ATLANTIC

III C 1 DATA ACQUISITION

III C 1 (a) Codification and naming convention

The coding of metiers followed the rules and definitions in Commission Decision 2010/93/EU and as agreed during the RCM North Atlantic 2009 (Anon. 2009b).

III C 1 (b) Selection of metiers to sample

Data on landings, effort and value of fishing activities under German flag are gathered under the Regulations 2807/83, 2847/93 and 104/2000 and 1224/2009 more recently. All vessels under German flag have to report landings declarations and, depending on the vessel length, logbook data and/or trans-shipment declarations. Landings declarations contain inter alia information by species on landed processed products in terms of weight and value, landing site as well as information on the fishing trip. Logbooks contain inter alia information by species on catch (landings) weight, effort, gear, and geographical origin of catches (landings). Information from logbook and landings declaration are merged and stored in a logbook database and a landings database. The merging process starts with the application of conversion factors for each landed processed product by species (Table III.F.2). The resultant live weight is summed up per species. Using the logbook information, the species live weight is raised by sub-area, division (subdivision) and statistical rectangles. Resultant data are stored in the landings database.

For vessels not obliged to record on logbooks, landings declarations are used to calculate live weight using conversion factors. These vessels are small boats normally not changing between divisions, as they fish more or less locally. The gathering of landings data for this part of the fleet is also exhaustive, i.e. by census.

Each fishing trip was allocated to a specific metier by region, fishing ground and gear type. Target species were assigned by ranking the retained catch weight of each species. Most dominant species in the catch were assumed to be targeted and allocated to the target assemblage.

The selection of metiers is based on landings, effort and value data from all German fishing trips undertaken in 2007 and 2008 in accordance with Commission Decision 2010/93/EU and agreements at the RCM North Atlantic 2009 (Anon. 2009b). All selected metiers are listed in Table III.C.1.

The following metiers are selected by the ranking system:

OTB_DEF_>=120_0_0

Target species: Greenland halibut. Peak season: 3rd/4th quarter. Area: West Greenland. Duration of trips: 6 weeks to 3 months. Sampling effort: 1 observer trip is planned.

OTM_SPF_32-69_0_0 (all fishing grounds within the region North Atlantic merged)

Target species: Mackerel, horse mackerel, blue whiting. Peak season: All year round. Area: West

British waters and Bay of Biscay. Duration of trips: 3 to 4 weeks. Sampling effort: 3 observer trips are planned.

Rationale behind the merging: These codes are summarizing the part of the German pelagic freezer trawler fleet which is operating seasonally in the West British waters and the Bay of Biscay targeting small pelagic fish like mackerel, horse mackerel and blue whiting. One fishing trip often has a duration of more than 3 weeks and usually the vessel changes the fishing area three to four times during the trip. For instance, the trip can start in ICES Sub-area VI targeting mackerel, continue in Div. VIIb and end in Div. VIIh targeting horse mackerel.

GNS_DEF_>=220_0_0 (all fishing grounds within the region North Atlantic merged)

Target species: Anglerfish. Peak season: January to June and October to December. Area: North East Atlantic. Duration of trips: 4 weeks. Sampling effort: depending on bilateral agreement with Spain, see section III.C.6.

Rationale behind the merging: These codes are summarizing four vessels with lengths between 26 and 31 meters targeting anglerfish with set nets.

FPO_CRU_all_0_0 (all fishing grounds within the region North Atlantic merged)

Target species: Deep-sea red crab. Peak season: All year round. Area: North East Atlantic. Duration of trips: 4 weeks. Sampling effort: depending on bilateral agreement with Spain, see section III.C.6.

Rationale behind the merging: These codes are summarizing two vessels seasonally targeting deep water crustaceans with pots.

OTB_DEF_>=130_0_0

Target species: Greenland halibut. Peak season: March to December. Area: East and West Greenland. Duration of trips: 4 weeks to three months. Sampling effort: 2 observer trips are planned.

OTM_DEF_>=120_0_0

Target species: Redfish. Peak season: April to September. Area: Irminger/Labrador Sea. Fishery stopped in 2008. See section III.C.6.

III C 1 (c) Type of data collection

There is no national legal basis for biological sampling on board of German fishing vessels. In 2005 and 2006, a legal text was prepared for this purpose, but not implemented. The present status of a scientific observer on board of a German fishing vessel is a guest status. Article 11(3) of Council Regulation 199/2008 stipulates that samplers shall be accepted onboard, which did however not improve the situation significantly yet. The possibility for biological sampling depends on the willingness of skippers, ship owners and their Producers Organisations. Based on the present situation, random sampling of the fleet is still difficult and might not improve in the near future (even if a new legal basis for on board sampling is in place), also considering Article 11(4) of Reg. 199/2008 with the possibility to refuse an observer due to "lack of space on the vessel or for safety reasons". Therefore, the sampling of the fleet is according scheme (C). Biological samples onboard the vessels during the concurrent sampling are gathered according to scheme (B).

III C 1 (d) Target and frame population

The target populations of the given metiers are in accordance with the definitions provided by the DCF (Decision 2010/93/EU). The target and the frame populations of the metiers are not fully congruent, as not all vessels are fully accessible to sampling (see section III.C.1(c)).

III C 1 (e) Sampling stratification and allocation scheme

Tables C.III.3, C.III.4 and C.III.5 are showing the planned sampling intensity and are summarising the sampling effort that is expected by Germany. The sampling frames are equal to the selected (merged) metiers.

III C 2 ESTIMATION PROCEDURES

Scientific observers take sub-samples of all landings and discard components of the catch. Total weights of the landings are taken from the logbooks; discard samples are weighted by the observers. The discard volumes on fishing trips in the North Atlantic area are calculated by determination of the landings and discards weights in sub-samples in comparison to the total landings (pelagic fishery) or by comparison of landings and discards volumes (other trawl fisheries).

All haul-raised data were added up to obtain an estimate on the overall landings and discard proportions of every trip. In case not all hauls on a trip were sampled, only the sampled hauls were taken into consideration.

For assessment purposes, the stock variables are being estimated from length frequencies, age-length keys, individual weights and maturity ogives according to standard procedures of the respective RFMO (ICES, NAFO etc.).

III C 3 DATA QUALITY EVALUATION

The German observer programme aims to have full participation by all German registered vessels. However, for various reasons, such as lack of space onboard and unfavourable weather conditions, this is not always possible. Furthermore, although there is an agreement on co-operation between the German Fisheries Association and Federal Research Institute, the possibilities to place scientific observers onboard are often dependent on a positive attitude of the fishermen or vessel owner towards fisheries research. Based on this situation, random sampling of the fleet is not possible. This leads to a rather opportunistic sampling strategy, taking sampling opportunities when they occur, irrespective if they are planned or not. In fisheries with only a very limited number of vessels, a good coverage can usually be reached. Nevertheless, due to the situation described above, there is potential for methodical bias because some vessels are more often sampled than others, especially in the fisheries with a low coverage.

The number of planned sampling trips is in many cases less than the recommendation of the DCF/Guidelines (monthly fishing trips for metiers with an average length of a trip under two weeks and one fishing trip per quarter otherwise). In the case of short trips, it is not possible to sample monthly because of insufficient staff size. Germany would have to employ several additional onboard observers, while the possible gain in information would be minor or even negligible. Furthermore, it is highly ineffective and unrealistic for high-seas metiers with only a few vessels and long fishing trips (1 month and longer) to sample every quarter.

Nevertheless, the number of planned trips for some metiers cannot be fixed and is depending on staff availability and regional agreements between Member States.

III C 4 DATA PRESENTATION

All assessment input parameters will be available in accordance with submission deadlines and data formats of the relevant ICES and NAFO assessment working groups.

III C 5 REGIONAL COORDINATION

Germany regularly participates in the RCM North Atlantic and follows the agreed procedures and recommendations. There is an existing bilateral agreement with The Netherlands (see Annex XII.3). During 2010, an agreement between Germany and Spain will be established on market sampling of Spanish-owned German vessels active in the set net fisheries on anglerfish.

III C 6 DEROGATIONS AND NON CONFORMITIES

Germany applies for the following derogations with regard to metiers in the North Atlantic:

FPO_CRU_all_0_0 (Fishery directed on deep-sea red crab)

Reason: This fishery consists of two Spanish-owned but German-flagged vessels which are exclusively operating from Spanish and Irish ports. Fishing by landings and value is negligible. Long soaking times of the pots simulate high effort. The target species, *Chaecon affinis*, is not included in Appendix VII of Commission Decision 2010/93/EU.

GNS_DEF_>=220_0_0 (Fishery directed on anglerfish)

Reason: This fishery consists of four Spanish-owned but German-flagged vessels which are exclusively operating from Spanish and Irish ports. Fishing by landings and value is negligible. Long soaking times of the set nets simulate high effort. Germany will establish a bilateral agreement with Spain during 2010 to ensure the sampling of this metier.

OTM_DEF_>=120_0_0 (Fishery directed on pelagic redfish)

Reason: This fishery has not been conducted under German flag since 2008. Germany will sample this metier if it occurs again.

III C BIOLOGICAL METIER-RELATED VARIABLES –OTHER REGIONS (LONG DISTANCE FISHERIES)

III C 1 DATA ACQUISITION

III C 1 (a) Codification and naming convention

The coding of metiers followed the rules and definitions in Commission Decision 2010/93/EU and as agreed during the RCM Long Distance Fisheries 2010 (Anon. 2010a).

III C 1 (b) Selection of metiers to sample

Data on landings, effort and value of fishing activities under German flag are gathered under the Regulations 2807/83, 2847/93 and 104/2000 and 1224/2009 more recently. All vessels under German flag have to report landings declarations and, depending on the vessel length, logbook data and/or trans-shipment declarations. Landings declarations contain inter alia information by species on landed processed products in terms of weight and value, landing site as well as information on the fishing trip. Logbooks contain inter alia information by species on catch (landings) weight, effort, gear, and geographical origin of catches (landings). Information from logbook and landings declaration are merged and stored in a logbook database and a landings database. The merging process starts with the application of conversion factors for each landed processed product by species (Table III.F.2). The resultant live weight is summed up per species. Using the logbook information, the species live weight is raised by sub-area, division (subdivision) and statistical rectangles. Resultant data are stored in the landings database.

For vessels not obliged to record on logbooks, landings declarations are used to calculate live weight using conversion factors. These vessels are small boats normally not changing between divisions, as they fish more or less locally. The gathering of landings data for this part of the fleet is also exhaustive, i.e. by census.

Each fishing trip was allocated to a specific metier by region, fishing ground and gear type. Target species were assigned by ranking the retained catch weight of each species. Most dominant species in the catch were assumed to be targeted and allocated to the target assemblage.

The selection of metiers is based on landings, effort and value data from all German fishing trips undertaken in 2007 and 2008 in accordance with Commission Decision 2010/93/EU and agreements at the Long Distance Fisheries 2010 (Anon. 2010a). All selected metiers are listed in Table III.C.1.

The following metiers are selected by the ranking system:

OTM_SPF_32-69_0_0

Target species: *Sardinella*. Peak season: -. Area: CECAF, Mauritanian waters. Duration of trips: 3 to 4 weeks. Sampling effort: depending on multilateral agreement, see section III.C.6.

OTM_SPF_32-69_0_0

Target species: Jack mackerel. Peak season: April to October. Area: Southeast Pacific. Duration of trips: 4 weeks to three months. Sampling effort: depending on multilateral agreement, see section III.C.6.

III C 1 (c) Type of data collection

not applicable

III C 1 (d) Target and frame population

not applicable

III C 1 (e) Sampling stratification and allocation scheme

not applicable

III C 2 ESTIMATION PROCEDURES

not applicable

III C 3 DATA QUALITY EVALUATION

not applicable

III C 4 DATA PRESENTATION

not applicable

III C 5 REGIONAL COORDINATION

The RCM on Long Distance Fisheries was only recently established (March 2010), and Germany participated in its first meeting. No agreements on sampling coordination could be reached until the writing of this programme. However, the outcome of the RCM was to establish a multinational sampling scheme involving all Member States operating in the RCM area.

Germany and The Netherlands met already in August 2009 to identify as a first step national fishing activities of both countries and other Member States in the CECAF area/Mauritanian EEZ and in the Southeast Pacific (see Annex XII.3a).

III C 6 DEROGATIONS AND NON CONFORMITIES

Germany applies for the following derogations with regard to métiers in the long distance fisheries:

OTM_SPF_32-69_0_0 (Fishery on small pelagics in Mauritanian waters)

Sampling in the CECAF area will be subject of multilateral negotiations in the RCM Long Distance Fisheries.

OTM_SPF_32-69_0_0 (Fishery in the Southeast Pacific)

Sampling in this area will be subject of multilateral negotiations in the RCM Long Distance Fisheries. However, the target species (Chilean jack mackerel, chub mackerel) are not included in Appendix VII of the DCF.

III D BIOLOGICAL RECREATIONAL FISHERIES – BALTIC SEA

III D 1 DATA ACQUISITION

In Germany, about 3.3 million anglers (interval 2.6 to 4.1 million) are estimated to be active in inland and coastal waters (Arlinghaus, 2004). The majority of them are organized in two large societies. In addition, there are about 3,000 hobby fishers (recreational fishers, which use commercial fishing gear like gillnets, longlines, pots and fykes) who are allowed to use passive fishing gear on a non-commercial basis.

Annually, more than 100,000 anglers are actively fishing in the coastal waters of the Baltic Sea. The total effort of these anglers ranged from 800,000 to 1.5 million angling days per year as estimated by the Pilot Study “The German recreational fisheries’ cod catch in the Baltic and the North Seas, 2004-2006” (Anon., 2007).

The **cod** catches of the recreational fishery in the German EEZ were estimated between 2,000 and 5,200 t annually, which corresponds to 26 %, respectively 77 %, of the landings of the German commercial fishery in ICES-Subdivision 22 and 24 in the years 2004-2008.

The **salmon** catches of the recreational fishery were estimated to 640 specimens (ca. 3 t) in 2002 (Pilot Study on Catches of Salmon and Bluefin Tuna in the German Recreational and Game Fisheries).

These catches correspond to 2 ‰ of the international catches in the coastal and offshore areas of the Baltic Sea in 2002.

Arlinghaus and Dorow (2008) estimated for the period September 2006 to August 2007 an annual **eel** catch by anglers of 12 t in the coastal waters of Mecklenburg-Vorpommern. In 2007, the commercial fishers of Mecklenburg-Vorpommern landed approx. 75 t in coastal waters. For the coastal waters of Schleswig-Holstein, no catch data are available from the recreational eel fishery.

There is no German recreational fishery for **sharks** in the Baltic Sea.

III D 1 (a) Type of data collection

Cod

B - Probability Sample Survey

Salmon

Derogation requested (see section III.D.6), development of trolling fishery for salmon will be observed (type C, non-probability sample survey).

Eel

B - Probability Sample Survey. A pilot study is planned.

Sharks

Derogation requested (see section III.D.6). There is no recreational fishery for sharks in the German part of the Baltic Sea.

III D 1 (b) Target and frame population

Target population: All recreational fishers, fishing along the German Baltic coast or starting their fishing trips by boats or vessels from German Baltic harbours or beaches.

Frame population: The following groups will be sampled:

- Fishing from vessels with rods;
- Boats angling with rods;
- Trolling;
- Beach fishing with rods;
- Angling whilst wading with rods;

- Hobby fishers (Recreational fishers using commercial gears like longlines, pots, fykes or gillnets).

III D 1 (c) Data sources

CPUE data for the cod catches of angler will be obtained by on-site surveys. **Effort** and partially **CPUE data** (cod landings of hobby fishers, eel catches) will be obtained by a combined phone-diary survey.

III D 1 (d) Sampling stratification and allocation scheme

Cod

A randomised sampling scheme will be used in 2011-13 to estimate the **CPUE** (catch per angling day per angler).

The coastal areas of the Federal countries Mecklenburg-Vorpommern and Schleswig-Holstein are subdivided into five regional strata. The regional strata are divided into different sampling units (defined beaches and harbours). There is one sampler working in each regional stratum. For the interviews of anglers, the sampling day and the sampling unit (beaches, harbours) are selected randomly per month and regional stratum.

The effort of angling activities by methods is unevenly distributed during the week. The highest effort of boat and cutter angling is observed on Saturdays, Sundays and public holidays. Angling from the beach is dominant on Friday and Saturday as well as before public holidays. Therefore, the intensity of sampling is adapted to the different effort of angling.

Generally, the following monthly CPUE data sampling per regional stratum is planned for 2011-13:

Beach fishing and angling whilst wading		Boat und cutter angling, trolling	
Time period	No. of samples	Time period	No. of samples
Fri., Sat., day before holidays	1	Sat., Sun., holidays	2
		Mon., Tue., Wed., Thu., Fri.	2

The length compositions will be identified by different methods:

- The sampler of each regional stratum will measure the lengths of landed cod once per month on a vessel. The vessel will be selected randomly from the number of vessels operating from harbours of the corresponding regional strata.
- Additionally, length compositions of the landings from beach fishing and cutter angling will be collected in cooperation with the angling associations and angling clubs.

The **effort of anglers**, angling days per area, quarter, group (see section 'III.D.1 b Target and frame population') and total effort will be estimated by a combined phone-diary survey in 2011/12:

- In Mecklenburg-Vorpommern, the survey is based on the fishing permissions, which anglers, resident or not in Mecklenburg-Vorpommern, have to buy for fishing in the coastal waters of the Baltic Sea. Anglers will be randomly selected and asked for participation in the survey.
- In Schleswig-Holstein, the survey is based on the fishery licences, anglers will be randomly selected and asked for participation in the survey (including only the anglers resident in Schleswig-Holstein). The effort of anglers, which are fishing in the coastal waters of Schleswig-Holstein and which are not resident in this state, will be estimated using the survey-results of Mecklenburg-Vorpommern.

Based on the address files of the licensed **hobby fishers** in Mecklenburg-Vorpommern and Schleswig-Holstein and stratification by area, fishers will be randomly selected and asked to participate in a

combined phone-diary survey in 2011/12. The objective is to collect effort and CPUE data to estimate the cod landings of this group and to evaluate if there are changes in the importance of this sector for the cod landings of the recreational fishery since 2005.

Additional effort data, like the duration of the total angling day and the effective angling hours, are sampled by on-site surveys of anglers at the beaches and in the harbours.

Salmon

The development of the trolling fishery for salmon will be observed (non-probability sample survey). This will be done by interviewing angling guides and by observing trolling events.

Eel

The CPUE and effort data (angling days per year) for eel from **anglers** will be collected by a combined phone-diary survey in 2011/12:

- In Mecklenburg-Vorpommern, the survey will be based on the fishing permissions, which anglers, resident or not in Mecklenburg-Vorpommern, have to buy for fishing in the coastal waters of the Baltic Sea. Anglers will be randomly selected and asked to participate in the survey.
- In Schleswig-Holstein, the survey will be based on the fishery licences, anglers will be randomly selected and asked to participate in the survey (include only the anglers resident in Schleswig-Holstein). The effort of anglers, who are fishing in the coastal waters of Schleswig-Holstein and not resident in this state, will be estimated using the survey results of Mecklenburg-Vorpommern.

Based on the address files of the licensed **hobby fishers** in Mecklenburg-Vorpommern and Schleswig-Holstein and stratification by area, fishers will be randomly selected and asked to participate in a combined phone-diary survey in 2011/12. The objective is to collect effort and CPUE data to estimate the eel landings of this group. The survey design will follow that for cod. It will be tried to measure lengths and weights of eel caught.

Depending on the results obtained from the surveys in 2011/12, the programme will be adopted accordingly in 2013.

Sharks

Derogation requested (see section III.D.6), as there is no recreational fishery for sharks.

III D 2 ESTIMATION PROCEDURES

Cod

Based on the estimated **effort** by quarter, area and anglers group by the combined phone-diary survey and the **CPUE data** from the on-site surveys, the number of cod caught by **anglers** will be estimated.

The mean weight of cod caught by anglers from the beach or on the open sea will be estimated using:

1. The **length composition** of the angler landings from the beach (beach angling and angling whilst wading) and the open sea (boat and vessel angling, trolling) and
2. The **length-weight-key from the periodic sampling of** the German commercial fishery in the same time period and area.

Using the mean weight and the number of cod caught by anglers, the **cod biomass caught by anglers** will be estimated.

Based on the estimated **effort** (fishing days) and CPUE by gear, quarter and area by the combined phone-diary survey, the number of cod caught by **hobby fishers** will be estimated. Finally, the **cod biomass caught by hobby fishers** will be estimated using the mean weight of cod caught by German commercial fishers with passive gears in the same area and period.

Salmon

Derogation requested (see section III.D.6). The data collected will not allow any catch estimation. Information on the trend of the salmon trolling fishery will be possible.

Eel

Based on the estimated **effort** (angling or fishing days) and CPUE by angling group or gear, quarter and area by the combined phone-diary survey, the number of eel caught by **recreational fishers**, separated by anglers and hobby fishers, will be estimated.

The **eel biomass caught by recreational fishers** will be estimated using the mean weight of own measurements, if available, mean weights of the German commercial fishery for eel or mean weights from the literature.

Sharks

Derogation requested (see section III.D.6), there is no recreational fishery for sharks.

III D 3 DATA QUALITY EVALUATION

Cod

The **stratified random sampling system** covers all angler groups to collect CPUE data for the cod catches. The bias is very low and no further activities are necessary to eliminate bias.

The **phone-diary-surveys** for effort will have a non-response bias. Therefore an additional survey to quantify the bias will be developed. While in Mecklenburg-Vorpommern, the use of an address file from the fishing licences for the coastal waters of the federal state ensure a good coverage of the angler population, the address file from the fishing licences in Schleswig-Holstein covers only the anglers resident in the state. The effort of anglers, which are fishing in the coastal waters of Schleswig-Holstein and which are not resident in this state, will be estimated using the survey-results of Mecklenburg-Vorpommern. To extend the survey outside of Schleswig-Holstein will cause excessively high costs.

The target **precision** of level 1 will be reached.

Salmon

Derogation requested (see section III.D.6). The data that will be collected are not representative to estimate the number of anglers fishing for salmon. They will give an overview on the development of this kind of fishery.

Eel

The **phone-diary-surveys** for effort and CPUE data will have a non-response bias. Therefore, an additional survey to quantify the bias will be developed. While in Mecklenburg-Vorpommern, the use of an address file from the fishing licences for the coastal waters of the federal state ensure a good coverage of the angler population, the address file from the fishing licences in Schleswig-Holstein covers only the anglers resident in the state. The effort of anglers, which are fishing in the coastal waters of Schleswig-Holstein and which are not resident in this state, will be estimated using the survey results of Mecklenburg-Vorpommern. To extend the survey outside of Schleswig-Holstein will cause excessively high costs.

The data collection for eel is a **Pilot Study**. It is unclear if the target precision level 1 will be reached.

Sharks

Derogation requested (see section III.D.6), as there is no recreational fishery for sharks.

III D 4 DATA PRESENTATION

Cod

The annual data, including the estimation of the cod catches, will be available by the end of March of the following year.

Salmon

An estimate of the trend of the recreational salmon fishery will be available in January/February of the following year.

Eel

The result of the pilot study to estimate the catch of the German recreational fishery in the marine waters will be available in 2012/13.

Sharks

Derogation requested (see section III.D.6), as there is no recreational fishery for sharks.

III D 5 REGIONAL COORDINATION

Presently, coordination does not exist. Possible and future coordination within the Data Collection Framework will be discussed and initiated at upcoming Regional Co-ordination Meetings (RCMs). A review of sampling strategies for developing standards and best practice for sampling recreational fisheries will be conducted through participation in the ICES **Planning Group on Recreational Fisheries Surveys** (PGRFS).

The coordination of surveys to estimate recreational cod landings in the western Baltic Sea will be initiated through bilateral agreements with Denmark and Sweden.

III D 6 DEROGATIONS AND NON CONFORMITIES

Salmon

Derogation approved:

Commission Staff Working Paper. Scientific, Technical and Economic Committee for Fisheries. Evaluation of pilot surveys undertaken under the Commission Regulation (EC) No 1639/2001. Brussels, 23.08.2004. SEC(2004) 1066. Appendix 1, p. 16:

- “In view of the low level of the **salmon** recreational fishery, SGRN has no suggestions on follow-up studies.”

In the pilot study, salmon catches from German anglers were estimated at 2 ‰ of the international salmon catches in the coastal and offshore areas of the Baltic Sea in 2002.

General observations will be carried out as part of the current sampling of the recreational fishery in the Baltic Sea.

Sharks

Derogation requested (see section III.D.6), as there is no German recreational fishery for sharks in the Baltic Sea.

III D BIOLOGICAL RECREATIONAL FISHERIES – NORTH SEA AND EASTERN ARCTIC

III D 1 DATA ACQUISITION

In Germany, about 3.3 million anglers (interval 2.6 – 4.1 million) are estimated to be active in inland and coastal waters (Arlinghaus, 2004). The majority of them are organised in two large societies. In addition, there are about 3,000 hobby fishers (recreational fishers, which use commercial fishing gear like gillnets, longlines, pots, dip nets, beam trawls and fykes) who are allowed to use passive fishing gear on a non-commercial basis.

It is not known how many **anglers** are fishing in the North Sea. Along the North Sea coast of Schleswig-Holstein, approximately 1,000 **hobby fishers** fish with commercial fishing gear like fykes, dip nets and beam trawls, which are limited in size and/or number.

The **cod** catches of the recreational fishery were estimated at approx. 30 t annually in 2005, which corresponds to ca. 1 % of the landings of the German commercial fishery in the same area and period.

Detailed **eel** data are not available, however there is a recreational fishery for eel in the North Sea.

Limited information is available on the recreational **shark** fishery in the North Sea. Around the isle of Helgoland, it is possible to catch tope sharks (*Galeorhinus galeus* Linnaeus, 1758) in the summer months. Favourable conditions also exist between the isles Amrum and Sylt and in front of the isle of Borkum.

III D 1 (a) Type of data collection

Cod

Type C - Non-Probability Sample Survey for anglers.

Type B - Probability Sample Survey for hobby fishers of Schleswig-Holstein.

Eel

Type B - Probability Sample Survey for anglers and hobby fishers of Schleswig-Holstein.

It will be a Pilot Study.

Sharks

Type C - Non-Probability Sample Survey

It will be a Pilot Study.

III D 1 (b) Target and frame population

Target population: all recreational fishers, fishing from the German North Sea coast or starting their fishing trips by boats or vessels from German North Sea harbours or beaches.

Frame population: the following groups will be sampled:

- Fishing from vessels with rods;
- Boats angling with rods;
- Trolling;
- Beach fishing with rods;
- Angling whilst wading with rods;
- Hobby fishers (Recreational fishermen using commercial gears like fykes, dip nets and beam trawls).

III D 1 (c) Data sources

Effort and **CPUE** data to estimate the **cod** and **eel** landings of **recreational fishers** of Schleswig-Holstein will be obtained by combined phone-diary surveys based on the licences for anglers and hobby fishers. **Effort** and **CPUE** data to estimate the **cod** landings will be augmented through on-site surveys of **recreational fishers** in Niedersachsen and Bremen. To evaluate the **shark catches** of anglers, **on-site surveys** and/or **phone surveys** will be conducted in selected coastal regions and islands. Anglers, captains/ship owners of angling vessels and representatives of the tourism sector will be interviewed.

III D 1 (d) Sampling stratification and allocation scheme

Cod

Based on the existing address files of licensed **hobby fishers and anglers** in Schleswig-Holstein and stratification by area, fishers will be randomly selected and asked to participate in a combined phone-diary survey in 2011/12. The objective is to collect effort and CPUE data to estimate the cod landings of this group.

Vessels owners/captain will be interviewed during on-site surveys or by phone to identify the cod catches from anglers.

The aim is to evaluate the **development of the recreational cod fishery** since the last survey in 2005.

Eel

The CPUE and effort data (angling days for eel per year) for eel from **anglers**, resident in Schleswig-Holstein, will be collected by a combined phone-diary survey in 2011/12. The survey will be based on the fishery licences, anglers will be randomly selected and asked to participate in the survey.

Based on the address files of the licensed **hobby fishers** in Schleswig-Holstein and stratification by area, fishers will be randomly selected and asked to participate in a combined phone-diary survey in 2011/12. The objective is to collect effort and CPUE data to estimate the eel landings of this group.

The survey design will follow that for cod.

Depending on the results obtained from the surveys in 2011/12 the programme will be adopted accordingly in 2013.

Sharks

Field trips to the possible shark angling regions will be carried out in the summer months in 2011. Interviews will be conducted with anglers, captains of charter vessels for angling and commercial fishers to collect information on the shark fishery.

III D 2 ESTIMATION PROCEDURES

Cod

Based on the estimated **effort** (fishing days) and CPUE by gear, quarter and area by the combined phone-diary survey, the number of cod caught by **hobby fishers** will be estimated. The **cod biomass caught by hobby fishers** will be estimated using the mean weight of cod caught by commercial fishermen in the same area and period.

Based on the findings from the interviews, the **development of the recreational cod fishery** will be estimated and compared with the results of the 2005 survey.

Eel

Based on the estimated **effort** (fishing days) and CPUE by gear, quarter and area by the combined phone-diary survey, the number of eel caught by **recreational fishers** will be estimated for Schleswig-Holstein.

The **eel biomass caught by recreational fishers** will be estimated using the mean weight of eel caught by German commercial fishers in the same area and period or by data from literature.

The estimated catches of North Sea eel by the recreational fishers of Schleswig-Holstein will be raised to the entire German North Sea coast to estimate the **eel catches of all recreational fishermen**.

Sharks

Based on the interviews, the dimension and importance of the recreational shark fishery will be evaluated.

III D 3 DATA QUALITY EVALUATION

Cod

The **phone-diary-surveys** with hobby fishers and anglers of Schleswig-Holstein for effort and CPUE data will have a non-response bias. Therefore, an additional survey to quantify the bias will be developed.

The Non-Probability Sample Survey for anglers has different sources of uncertainty and bias, which cannot be eliminated.

The target **precision** of level 1 will be reached for the number of cod caught by **hobby fishers and anglers** of Schleswig-Holstein.

Eel

The **phone-diary-surveys** for effort and CPUE data of recreational fishermen of Schleswig-Holstein will have a non-response bias. Therefore, an additional survey to quantify the bias will be developed. To extend the survey beyond the resident licence holders registered in Schleswig-Holstein will cause excessively high costs.

The data collection for eel is a **Pilot Study**. It is unclear if the target precision level 1 will be reached.

Sharks

The Non-Probability Sample Survey for recreational fishers has different sources of uncertainty and bias, which cannot be eliminated.

No precision level will be reached. The data collection for sharks is a **Pilot Study**.

III D 4 DATA PRESENTATION

Cod

The annual data, including the estimation of the cod catches, will be available by the end of March of the following year.

Eel

Results of the pilot study to estimate the catch of the German recreational fishery in the marine waters of the North Sea will be available in 2012/13.

Sharks

Results of the pilot study to estimate the dimension and importance of the German recreational shark fishery in the marine waters of the North Sea will be available in 2012.

III D 5 REGIONAL COORDINATION

Presently regional coordination within the North Sea does not exist. A review of sampling strategies for developing standards and best practice for sampling recreational fisheries will be conducted through participation in the **Planning Group on Recreational Fisheries Surveys** (PGRFS).

III D 6 DEROGATIONS AND NON CONFORMITIES

Cod

There is no sampling of the **recreational fishers** of Niedersachsen and Bremen, as no licensing system exists for recreational fishers in the North Sea. A survey would cause very high costs. Therefore and in consideration of the estimate of the recreational cod catches in 2005 (very low, without importance for the cod stock), it is not necessary to extend the survey to Niedersachsen and Bremen.

Eel

There is no sampling of the **recreational fishers** of Niedersachsen and Bremen. To extend the survey would cause very high costs. A necessary extension of the survey to Niedersachsen and Bremen will be evaluated according to results from the Pilot Study.

Sharks

The data collection for the recreational fishery has the character of a Pilot Study.

III D BIOLOGICAL RECREATIONAL FISHERIES – NORTH ATLANTIC

Not relevant (no German recreational fisheries in this region).

III D BIOLOGICAL RECREATIONAL FISHERIES – OTHER REGIONS

Not relevant (no German recreational fisheries in this region).

III E BIOLOGICAL STOCK-RELATED VARIABLES – GENERAL REMARKS

Several reasons imply that the collection of métier-related variables (section III.C) as well as the collection of stock-related variables (section III.E) are 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.
- monitor discarding. It would be highly ineffective not to sample the landings and other biological data at the same time.
- provide 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.
- the majority of the landings from stocks that have to be sampled (Table III.E.3) occurred in foreign countries.

Due to the reasons mentioned above, Germany prefers in most cases to sample catches at sea (exceptions exist for the Baltic Sea region).

Several species to be sampled are not listed in logbooks. This is especially true for sharks and rays.

III E BIOLOGICAL STOCK-RELATED VARIABLES – BALTIC SEA

III E 1 DATA ACQUISITION

III E 1 (a) Selection of stocks to sample

Table III.E.1 identifies which stocks are included in the German NP. Germany is obliged to sample 5 stocks after applying the exemption rules for stock-related variables (Commission Decision 2010/93/EU, chapter III.B.B2.5). In the Baltic Sea, *Clupea harengus*, *Gadus morhua*, *Limanda limanda*, *Platichthys flesus* and *Sander lucioperca* have to be sampled.

With regard to sampling European eel (*Anguilla anguilla*), Germany proposes to continue data collection of its commercial catches to further gather biological information. To better address the urgent questions for an eel fisheries management, however, the sampling scheme and especially the collected parameters should be adapted as compared to the first sampling phase (2009-2010). 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 emphasised 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 (ICES, 2009a). In line with the WGEEL report (ICES, 2009a) and the ICES Advice (ICES, 2009b), we strongly recommend that eel quality issues like *Anguillicoloides crassus* infestation as well as pollution with harmful contaminants like PCBs, DDT, dieldrin and heavy metals especially for silver eels should be taken into account under a revised EU Data Collection programme. Considering the increasingly limited availability of glass eel for restocking purposes, a comprehensive data collection of these parameters (contaminants, parasites etc.) under the EU Data Collection Framework would significantly contribute to the identification of suitable habitats for the production of high-quality eel spawners.

III E 1 (b) Type of data collection

The sampling of biological parameters is performed according to type B (Probability sample survey).

III E 1 (c) Target and frame population

Frame and target population are the same. The target population will be targeted either by sampling of commercial fisheries or on surveys. Sampling positions can always be allocated to the target population.

III E 1 (d) Sampling stratification and allocation scheme

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled from 2011 to 2013, and Table III.E.3 provides an overview on required and planned numbers of fish to be sampled for age, weight, maturity and fecundity parameters. For perch (*Perca fluviatilis*) and pike-perch (*Sander lucioperca*), the sampling as such and its intensity will have to be negotiated on the RCM Baltic 2010. Sources used for the collection of stock-related variables are listed in Table III.E.3. In the Baltic, samples will be purchased at harbours at the German Baltic coast. Also, self-sampling (fishermen deliver unsorted parts of their catch) and observers-at-sea sampling will be carried out. Refer to section III.G for a list of surveys undertaken in the Baltic, which are also used as source.

III E 2 ESTIMATION PROCEDURES

For assessment purposes, the stock variables are being estimated from length frequencies, age-length keys, individual weights and maturity ogives according to standard procedures of the respective RFMO (i.e. ICES).

III E 3 DATA QUALITY EVALUATION

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCF will be subject of the RCM Baltic. Our aim is that the coverage and precision levels will be in accordance with those specified in Commission Decision 2010/93/EU, chapter III, B.2.4.

III E 4 REGIONAL COORDINATION

Germany regularly participates in the RCM Baltic and follows the agreed procedures and recommendations. There are existing bilateral agreements with Denmark and Sweden (see Annexes XII.1 and XII.2). Details on sampling intensity will be negotiated at the RCM Baltic 2010.

III E 5 DEROGATIONS AND NON CONFORMITIES

Sprattus sprattus in the Baltic will be sampled by Germany despite the lack of obligation according to the DCF rules for stock related variables. However, sampling data are used for assessment purposes in the ICES WGBFAS. Furthermore, the stock is targeted by fishing metiers which must be sampled by Germany according to the national ranking based on the reference years 2007 and 2008.

III E BIOLOGICAL STOCK-RELATED VARIABLES – NORTH SEA & EASTERN ARCTIC

III E 1 DATA ACQUISITION

III E 1 (a) Selection of stocks to sample

Table III.E.1 identifies which stocks are included in the German NP. Germany is obliged to sample 10 stocks after applying the exemption rules for stock-related variables (Commission Decision 2010/93/EU, chapter III.B.B2.5) in the North Sea and Eastern Arctic region.

Skagerrak and Kattegat: *Pollachius virens* (see section III.E.5);

North Sea and Eastern Channel: *Clupea harengus*, *Crangon crangon*, *Gadus morhua*, *Limanda limanda*, *Pollachius virens*;

ICES areas I and II: *Gadus morhua*, *Melanogrammus aeglefinus*, *Pollachius virens*, *Sebastes* spp. (*mentella*)

With regard to sampling European eel (*Anguilla anguilla*), Germany proposes to continue data collection of its commercial catches to further gather biological information. To better address the urgent questions for an eel fisheries management, however, the sampling scheme and especially the collected parameters should be adapted as compared to the first sampling phase (2009-2010). 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 emphasised 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 (ICES, 2009a). In line with the WGEEL report (ICES, 2009a) and the ICES Advice (ICES, 2009b), we strongly recommend that eel quality issues like *Anguillicoloides crassus* infestation as well as pollution with harmful contaminants like PCBs, DDT, dieldrin and heavy metals especially for silver eels should be taken into account under a revised EU Data Collection programme. Considering the increasingly limited availability of glass eel for restocking purposes, a comprehensive data collection of these parameters (contaminants, parasites etc.) under the EU Data Collection Framework would significantly contribute to the identification of suitable habitats for the production of high-quality eel spawners.

III E 1 (b) Type of data collection

The sampling of biological parameters is performed according to type B (Probability sample survey).

III E 1 (c) Target and frame population

Frame and target population are the same. The target population will be targeted either by sampling of commercial fisheries or on surveys. Sampling positions can always be allocated to the target population.

III E 1 (d) Sampling stratification and allocation scheme

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled from 2011 to 2013, and Table III.E.3 provides an overview on required and planned numbers of fish to be sampled for age, weight, maturity and fecundity parameters. Sources used for collecting stock-related variables are listed. For this region, observers-at-sea sampling will be carried out. Occasionally, self-sampling (fishermen deliver unsorted parts of their catch) is also undertaken. Refer to section III.G for a list of surveys undertaken in the North Sea and Eastern Arctic area, which are also used as sources.

III E 2 ESTIMATION PROCEDURES

For assessment purposes, the stock variables are being estimated from length frequencies, age-length keys, individual weights and maturity ogives according to standard procedures of the respective RFMO (ICES, NAFO etc.).

III E 3 DATA QUALITY EVALUATION

Overall regional coverage and the required numbers to reach the regional precisions levels aimed by the DCF will be subject of the RCM North Sea and Eastern Arctic. Our aim is that the coverage and precision levels will be in accordance with those specified in Commission Decision 2010/93/EU, chapter III, B.2.4.

III E 4 REGIONAL COORDINATION

Germany regularly participates in the RCM North Sea and Eastern Arctic and follows the agreed procedures and recommendations (see below). There are existing bilateral agreements with Denmark, The Netherlands and the UK (see Annexes XII.1, XII.3 and XII.4). Details on sampling intensity will be negotiated at the next RCM(s).

Source	Recommendation to MS	MS action
RCM North Sea & Eastern Arctic 2009	ON STOCK-BASED VARIABLES – MATURITY SAMPLING: The RCM NS&EA recommends MS to refer to the table in Annex 5 of this report for elaborating maturity sampling programs, when drafting their National Program proposals 2011-2013	The maturity sampling in the German NP is taking the RCM sampling table into account.

RCM North Sea & Eastern Arctic 2009	ON BIOLOGICAL VARIABLES – SAMPLING OF RECREATIONAL EEL FISHERY IN FRESH WATER: RCM NS&EA recommends MS to provide an overview of their inland sampling of the recreational fishery on eel.	The inland sampling of the recreational fisheries on eel is not mandatory under Commission Decision 2010/93/EU. The inland sampling of commercial fishing activities on eel, however, is being conducted within a pilot programme (see section III.E.1.a).
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III E 5 DEROGATIONS AND NON CONFORMITIES

Skagerrak and Kattegat: With regard to the exemption rules (Commission Decision 2010/93/EU, chapter III.B.B2.5), *Pollachius virens* in the Skagerrak has to be sampled. Catches in the Skagerrak are belonging to the same saithe stock as in the northern North Sea targeted by the same fishing metier. Fishing activities in the Skagerrak occur only irregularly; therefore the stock will be sampled mainly in the North Sea.

For the North Sea & Eastern Arctic region, several stocks will be sampled by Germany despite there is no obligation by the DCF rules for stock related variables to do so. However, sampling data are used for assessment purposes in the ICES WGWIDE and WGNSSK, respectively. Furthermore, all stocks are targeted by fishing metiers which must be sampled by Germany. These stocks are highlighted in green in Table III.E.1: *Clupea harengus* in **ICES areas I and II**; *Melanogrammus aeglefinus*, *Pleuronectes platessa*, *Solea solea* in the **North Sea and Eastern Channel**.

III E BIOLOGICAL STOCK-RELATED VARIABLES – NORTH ATLANTIC

III E 1 DATA ACQUISITION

III E 1 (a) Selection of stocks to sample

Table III.E.1 identifies which stocks are included in the German NP. Germany is obliged to sample 5 stocks after applying the exemption rules for stock-related variables (Commission Decision 2010/93/EU, chapter III.B.B2.5) in the North Sea and Eastern Arctic region. Blue whiting, mackerel and horse mackerel will be sampled by Germany despite there is no obligation (see III.E.5 of this section).

NAFO areas: *Reinhardtius hippoglossoides*, *Gadus morhua*

ICES areas XII and XIV: *Gadus morhua*, *Reinhardtius hippoglossoides*, *Sebastes spp. (mentella)*

III E 1 (b) Type of data collection

The sampling of biological parameters is performed according to type B (Probability sample survey).

III E 1 (c) Target and frame population

Frame and target population are the same. The target population will be targeted either by sampling of commercial fisheries or on surveys. Sampling positions can always be allocated to the target population.

III E 1 (d) Sampling stratification and allocation scheme

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled from 2011-2013, and Table III.E.3 provides an overview on required and planned numbers of fish to be sampled for age, weight and maturity. Fecundity is only sampled on the mackerel and horse mackerel egg survey in the North Atlantic. Stocks off Greenland and Norway will be sampled at sea, as the fleet fishing there consists entirely of freezer trawlers. Pelagic stocks will also be sampled on board, as these species are also landed only as frozen product. Refer to section III.G for a list of surveys undertaken in the North Atlantic which are also used as sources.

III E 2 ESTIMATION PROCEDURES

For assessment purposes, the stock variables are being estimated from length frequencies, age-length keys, individual weights and maturity ogives according to standard procedures of the respective RFMO (ICES, NAFO etc.).

III E 3 DATA QUALITY EVALUATION

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCF will be subject of the RCM North Atlantic. Our aim is that the coverage and precision levels will be in accordance with those specified in Commission Decision 2010/93/EU, chapter III, B.2.4.

III E 4 REGIONAL COORDINATION

Germany regularly participates in the RCM North Atlantic and follows the agreed procedures and recommendations. There is an existing bilateral agreement with The Netherlands (see Annex XII.3). Details on sampling intensity will be negotiated at the next RCM.

III E 5 DEROGATIONS AND NON CONFORMITIES

Three stocks will be sampled by Germany despite there is no obligation by the DCF rules for stock related variables to do so. However, sampling data are used for assessment purposes in the ICES working groups WGwide, WGBFAS, WGNSSK, NWWG, respectively. Furthermore, all stocks are targeted by fishing metiers which must be sampled by Germany. These stocks are highlighted in green in Table III.E.1: *Micromesistius poutassou*, *Scomber scombrus*, *Trachurus trachurus*.

NAFO areas: The government of Greenland closed all offshore cod fishing by 13th November 2009; therefore this stock cannot be sampled.

Sebastes spp. in I, II and XII, XIV: In the logbooks it is not differentiated between the two *Sebastes* species. The fishery directed on redfish stopped basically in 2007. Sampling in I,II is only possible if the fishery occurs again, sampling in XII, XIV will also be carried out on the Greenland groundfish and International redfish survey.

III E BIOLOGICAL STOCK-RELATED VARIABLES – OTHER REGIONS (LONG DISTANCE FISHERIES)

III E 1 DATA ACQUISITION

III E 1 (a) Selection of stocks to sample

Table III.E.1 identifies which stocks are included in the German NP. Germany is obliged to sample 1 stock after applying the exemption rules for stock-related variables (Commission Decision 2010/93/EU, chapter III.B.2.5), *Sardinella* in the CECAF area.

III E 1 (b) Type of data collection

not established

III E 1 (c) Target and frame population

not applicable

III E 1 (d) Sampling stratification and allocation scheme

not established

III E 2 ESTIMATION PROCEDURES

For assessment purposes, the stock variables are being estimated from length frequencies, age-length keys, individual weights and maturity ogives according to standard procedures of the respective RFMO (CECAF, SPRFMO).

III E 3 DATA QUALITY EVALUATION

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCR will be subject of the next RCM “Long distance fisheries”.

III E 4 REGIONAL COORDINATION

The RCM on Long Distance Fisheries was only recently established (March 2010), and Germany participated in its first meeting. No agreements on sampling coordination could be reached until the writing of this programme. However, the outcome of the RCM was to establish a multinational sampling scheme involving all Member States operating in the RCM area.

In August 2009, Germany and the Netherlands had a meeting on the cooperation of sampling of data within the DCF (see Annex XII.3a). As a first step, national fishing activities of both countries and other member states in the CECAF area/Mauritanian EEZ, and in the Southeast Pacific were identified. NL and GER recommend discussing the approach to be applied in sampling these fisheries with other involved Member States in the next ‘RCM for long distance fisheries’.

III E 5 DEROGATIONS AND NON CONFORMITIES

CECAF: Sampling of *Sardinella* will be subject to bi- or multilateral negotiations within the next RCM ‘Long distance fisheries’.

Southeast Pacific: Chilean jack mackerel and chub mackerel are not included in Appendix VII of Commission Decision 2010/93/EU.

III F TRANSVERSAL VARIABLES

III F 1 CAPACITY

III F 1 1 DATA ACQUISITION

Capacity data are taken from the national fleet register with reference to Jan. 1. In order to assign a vessel to a fleet segment, logbook data are evaluated to determine the predominant fishing gear for active vessels > 8m. For vessels < 8m and vessels with no fishing activity, information on the main gear in the fleet register is used.

III F 1 2 DATA QUALITY EVALUATION

Fleet register and logbooks are the only sources used for capacity information. These are official documents and therefore regarded as reliable sources.

III F 2 EFFORT

III F 2 1 DATA ACQUISITION

Effort data are calculated from logbook entries. There is no logbook obligation for vessels <8 m length (LOA). The vast majority of these vessels is assigned to the passive gear segment. The effort of the vessels < 8m will be estimated from results of the survey. Details on the sampling procedure are provided in Table III.B.3.

III F 2 2 DATA QUALITY EVALUATION

Logbooks are official documents and therefore regarded as reliable sources for effort information. For vessels < 8m using passive gear, effort data have to be estimated based upon survey data. These data will be compared with catch per unit effort data from vessels with logbook obligation. In case of evident deviation, data will be checked with the submitting person, if possible: If not, data will be adjusted to a value close to the average.

As a quality indicator, CV will be calculated. A target precision level as requested in the guidelines cannot be provided- see also the SGECA 09-02 report, page 17: “*The group considered that at this stage it is not possible to define target precision levels to be achieved.*”.

III F 2 3 DATA PRESENTATION

Data will be available about 15 months after the end of the reference period.

III F 2 4 REGIONAL COORDINATION

Effort data are derived from national databases and surveys. There is no option or any need of coordination with other Member States.

No recommendations on the determination of fleet capacity data have been provided by RCMs so far.

III F 2 5 DEROGATIONS AND NON CONFORMITIES

No derogations and non-conformities.

III F 3 LANDINGS

III F 3 1 DATA ACQUISITION

Landings values are derived from landings declarations (sales notes). All landings have to be declared; therefore the landings declarations reflect the entire amount of landings. Vessels <8m have to declare only once a month. This frequency is still sufficient for the requested resolution. Therefore, no additional survey on landings is necessary.

Annual average prices are calculated as weighted averages.

III F 3 2 DATA QUALITY EVALUATION

Landings values are derived from landings declarations (sales notes), these are the only sources used for landings information. These are official documents and therefore regarded as reliable sources. When hardcopies of the landings declarations are computerised, the values for landed weight and catch weight are cross-checked with the logbooks, which are available at the same moment. Landings declarations are checked by inspectors during the discharge procedure. About 20% of the annual landings in Germany are inspected.

III F 3 3 DATA PRESENTATION

Data will be available about 15 months after the end of the reference period.

III F 3 4 REGIONAL COORDINATION

Landings data are derived from national databases. There is no option or any need of coordination with other Member States.

No recommendations on the determination of fleet capacity data have been provided by RCMs so far.

III F 3 5 DEROGATIONS AND NON CONFORMITIES

No derogations and non-conformities.

III G RESEARCH SURVEYS AT SEA

III G 1 PLANNED SURVEYS

General comment

For most of the surveys listed below, the final planning for 2011 to 2013 with regard to haul positions and hydroacoustic tracks has not been concluded by submission of this NP proposal. Thus, the given details and survey maps are only preliminary or show examples based on surveys conducted during the last years.

Germany will continue to conduct the listed surveys as in previous years (Table III.G.1) and will contribute financially (and with staff, if possible) in the Atlanto-Scandian Herring Acoustic Survey conducted by Denmark and Blue Whiting Survey conducted by The Netherlands and Ireland. These surveys are all coordinated within the ICES. There will be no changes in strategy or design except when co-ordinated with the relevant ICES working/planning group. Of course, the number of hauls and length of tracks that can be achieved depend on weather conditions as well as on the performance of the equipment and/or of the vessel. The number of hauls and length of tracks (Table III.G.1) will in all surveys be within the range of records for the former survey years. Most of the surveys are coordinated by ICES planning groups on surveys. The most recent reports with manuals can be found under <http://www.ices.dk/iceswork/workinggroups.asp>.

The suitability of the surveys for the calculation of ecosystem indicators is indicated in Table III.G.1. In the following, the surveys are described in detail:

Baltic Sea:

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

Target species are the demersal fish species Baltic cod and flat fish species, mainly flounder, plaice, dab and turbot. The main aim is to determine stock parameters and the year-class strength of the target species. Abundance, individual mass and length distribution of all fish species and length-mass-age-sex-maturity-feeding data of commercially important species are collected as well as hydrographic data (temperature, salinity, oxygen). Data are stored in a national Access database and submitted to the ICES database DATRAS. Data are used for assessment purposes in ICES WGBIFS and WGBFAS.

Germany is participating in the survey in the first quarter and in the fourth quarter, and co-ordinates this survey within the ICES WGBIFS. The survey will be conducted yearly on FRV "Solea". Dates are not yet set. Refer to Fig. III.G.1 for an example of the station grid of both survey parts. The final station locations are randomly assigned at the WGBIFS meeting prior to the surveys.

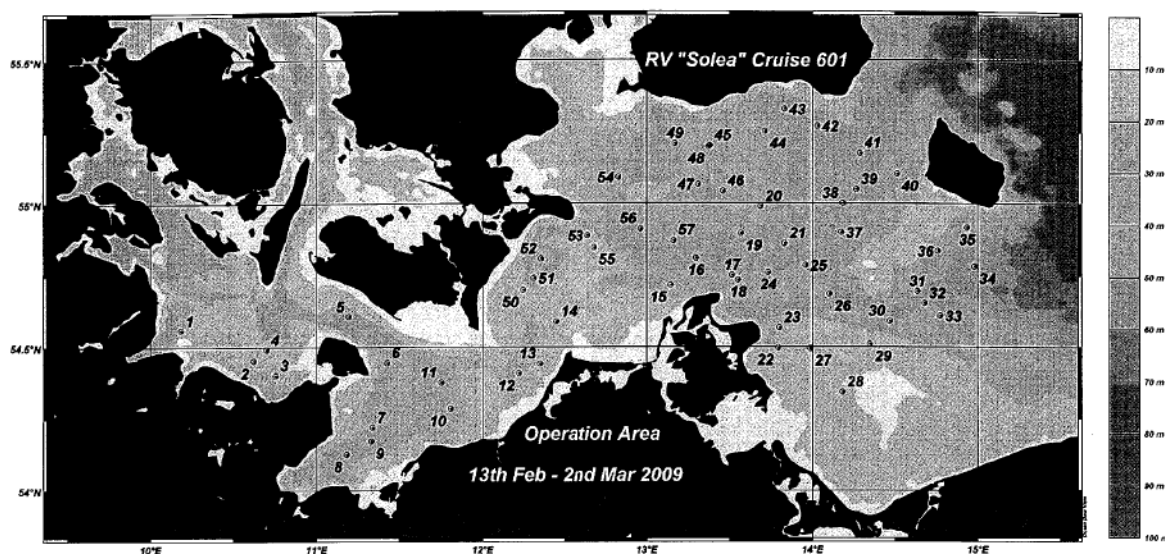


Fig. III.G.1a: Baltic International Trawl Survey (BITS, 1st quarter). Example of station grid from 2009 (final positions will be allocated at the WGBIFS).

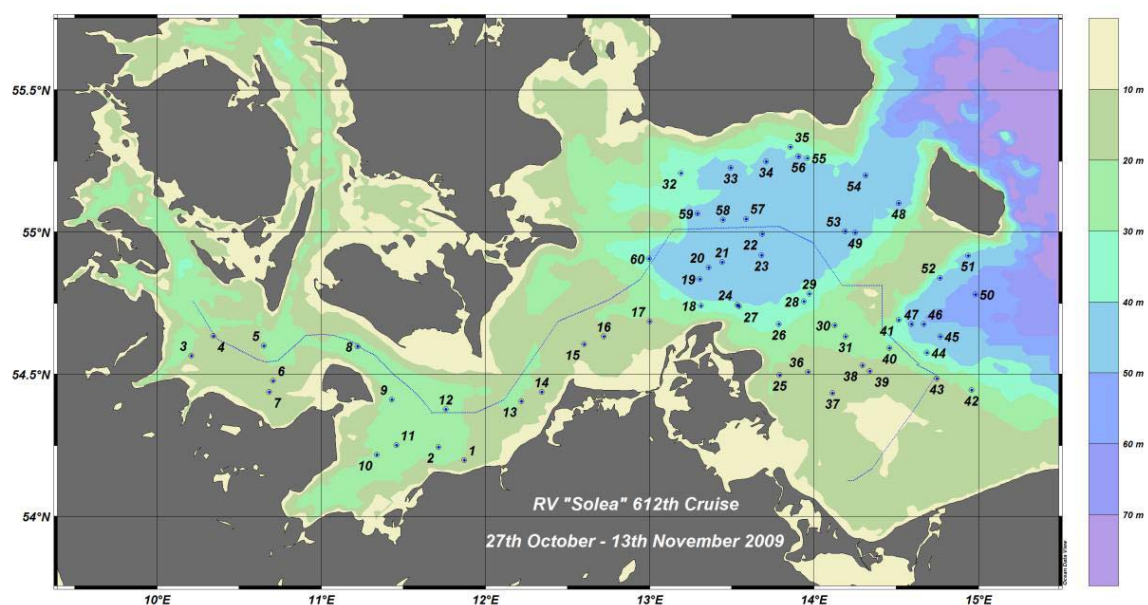


Fig. III.G.1b: Baltic International Trawl Survey (BITS, 4th quarter). Example of station grid from 2009 (final positions will be allocated at the WGBIFS).

2) Baltic International Acoustic Survey

Target species are pelagic fish species, mainly herring and sprat. Nautical area backscattering coefficient (NASC) and species composition of echo-scatters, mass and length distribution of all species and additional length-mass-age-sex-maturity data of commercially important species are collected, as well as hydrographic data (temperature, salinity, oxygen) of the water column at the fishing stations.

The collected data are stored in a national Access data base. Data are also submitted to ICES PGMERS and WGBIFS and BADI data bases. Data are used for assessment purposes in ICES HAWG and WGBFAS. The survey will take place yearly on FRV "Solea". Dates are not yet set. Fig. III.G.2 shows an example plot (from 2009) of the cruise tracks and fishery stations conducted during the German contribution to the Baltic Herring Acoustic Survey (BIAS).

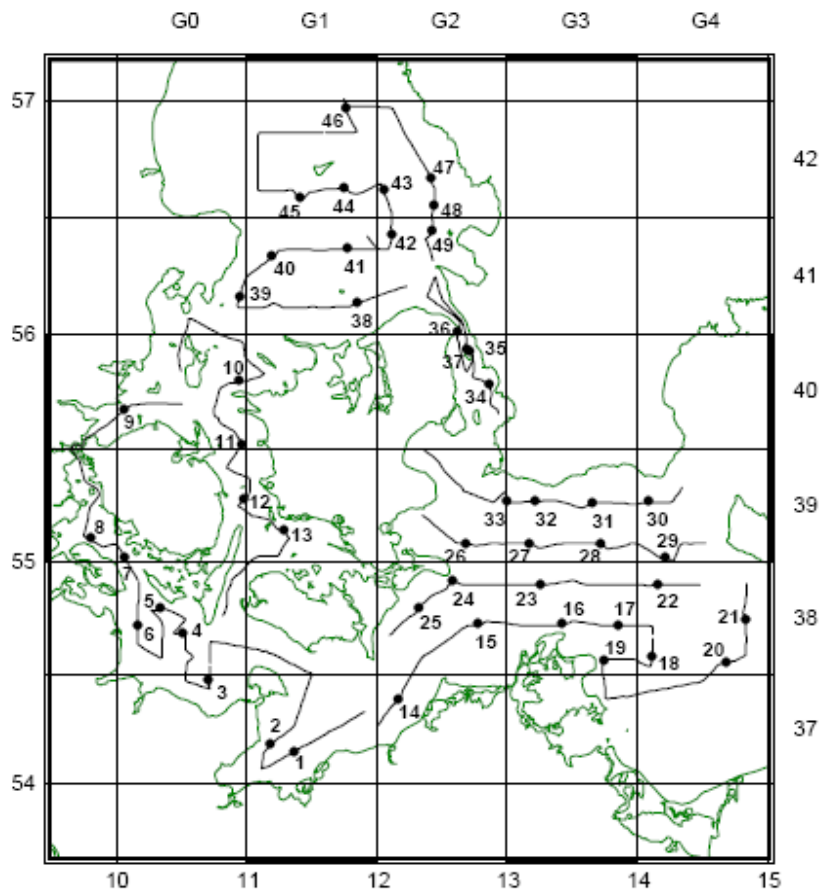


Fig. III.G.2: Baltic Herring Acoustic Survey. Cruise track and fishing stations in 2009.

3) Baltic Sprat Acoustic Survey

Target species is sprat and to a lesser extent herring. Nautical area backscattering coefficient (NASC) and species composition of echo-scatters are collected, as well as mass and length distributions of all species and additional length-mass-age-sex-maturity data of commercially important species.

Hydrographic profiles (temperature, salinity, oxygen) of the water column at stations along the cruise track are regularly recorded.

The collected data are stored in a national Access data base. Data are also submitted to ICES WGBIFS and BASS data bases, and used for assessment purposes in WGBFAS. The survey will take place yearly on FRV "Walter Herwig III". Dates are not yet set. Please refer to Fig. III.G. for an example of the cruise track and fishery stations conducted of the German contribution to the Baltic Sprat Acoustic Survey (SPRAS).

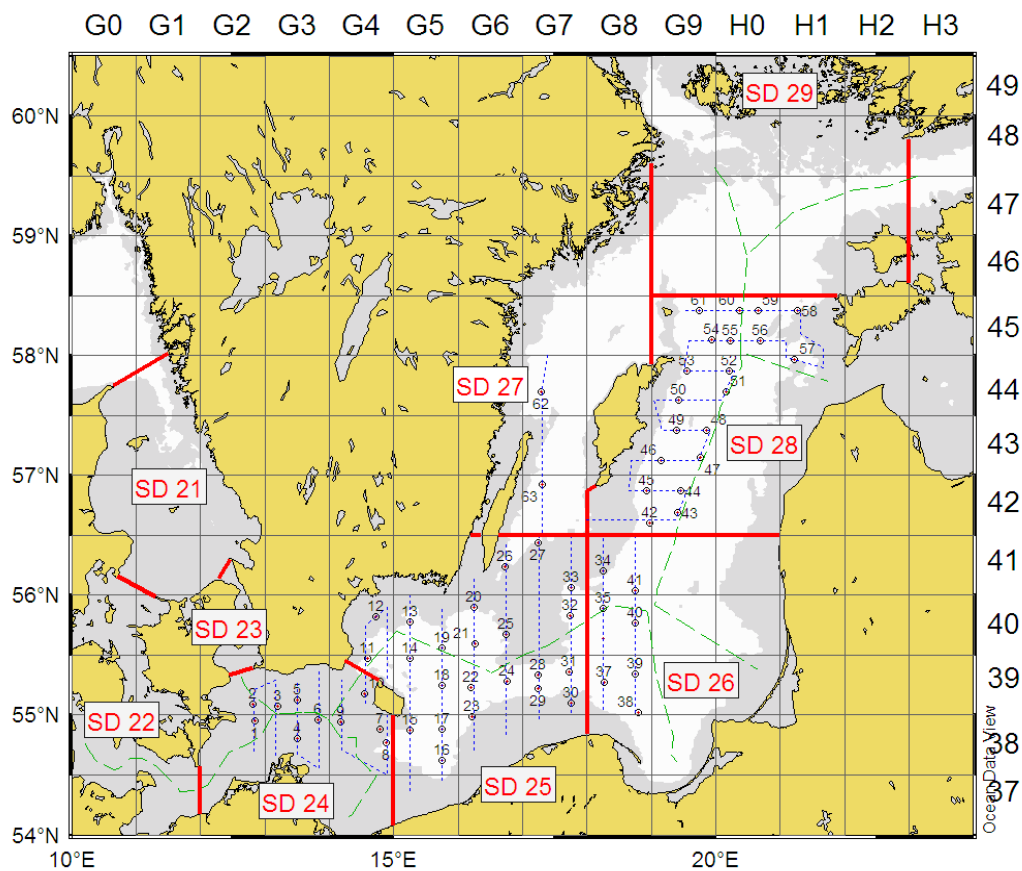


Fig. III G.3: Baltic Sprat Acoustic Survey. Cruise track and trawl positions in 2009. Grey shading indicates areas shallower than 50 m.

4) (Rügen) Herring Larvae Survey

The Rügen Herring Larvae Survey in the western Baltic (ICES area IIId/ 24) is focusing on the major spawning areas of the Western Baltic Spring Spawning herring (Greifswalder Bodden, Strelasund) for the estimation of recruiting year-class strength. Larvae are sampled with a “bongo” (double-bag) plankton net over the entire spawning period yearly (during 1 week in February and 14 weeks in March-June) on FRC “Clupea”. The resulting data on larvae abundance and length distribution are stored in a national database, and are being used in the ICES HAWG. In addition, hydrographic (CTD) data are collected on each station. Figure III.G.4 shows the survey area and standard station grid.

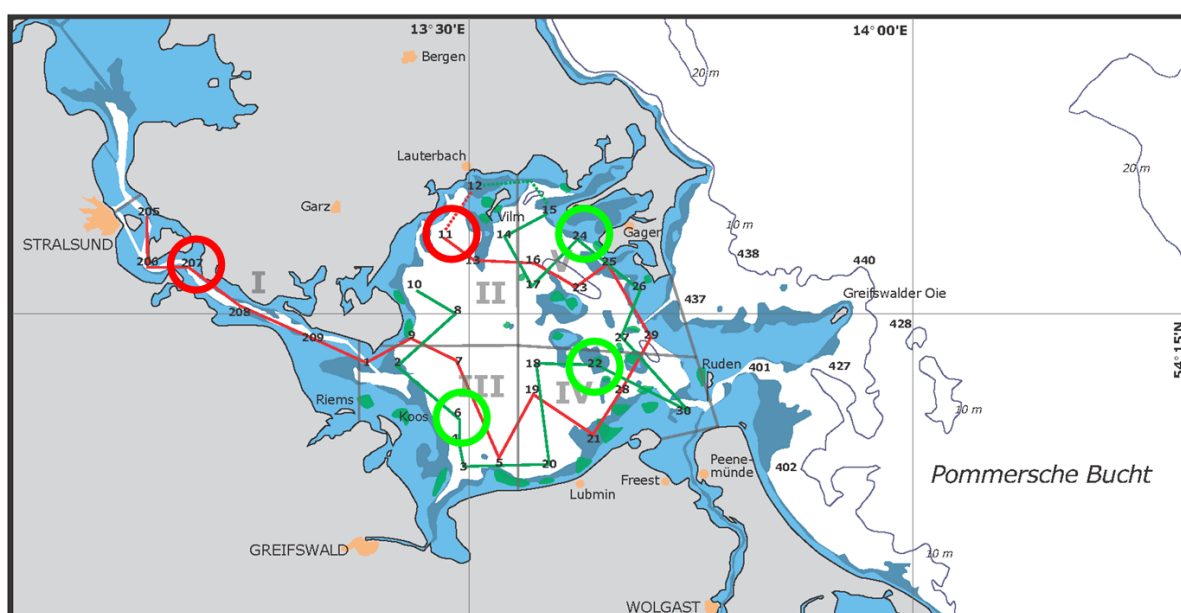


Fig. III G. 4: Rügen Herring Larvae Survey. Stations for ichthyoplankton hauls and CTD-casts. Stations are sampled at least 14 times annually.

North Sea and Eastern Arctic:

5) International Bottom Trawl Survey (IBTS) in Quarter 1

The main aim of the 1st quarter IBTS is to provide abundance indices of the target species haddock, cod, saithe, herring, sprat whiting, mackerel and Norway pout. Types of data collected include biological data, gear, haul procedures, positions, hydrographic data, weather as well as the sea state. The data are stored locally on an Access data base in the national institute. Data are also submitted to ICES. The survey in quarter 1 will be conducted every year during January and February on FRV “Walther Herwig III”. The planning is not fixed yet. Please refer to Fig. III.G.5 for the allocation of the survey area.

6) International Bottom Trawl Survey (IBTS) in Quarter 3

The main aim of the IBTS survey is to provide abundance indices of the target species haddock, cod, saithe, herring, sprat whiting, mackerel and Norway pout. Types of data collected include biological data, gear, haul procedures, positions, hydrographic data, weather as well as the sea state. Additionally, data of epibenthos, nutrients and seabirds are collected. The data are stored locally in Access databases in the national institutes. Data are also submitted to ICES. The IBTS survey in Quarter 3 is conducted yearly in July and August in conjunction with a national survey on FRV “Walther Herwig III”. The planning is not fixed yet. Only eight days within this period are devoted to IBTS. The other days are covering a programme on national expense (German Small Scale Bottom Trawl Survey, GSBTS). Please refer to Fig. III.G.6 for the investigation area of the German part of the International Bottom Trawl Survey in Quarter 3.

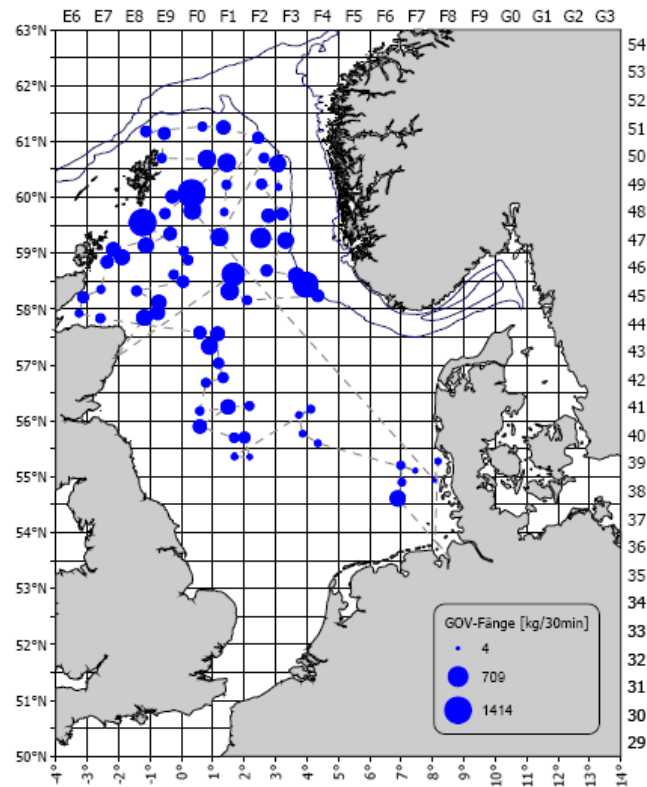


Fig. III G.5: International Bottom Trawl Survey (IBTS) 1st quarter. Trawling stations of the 2009 survey.

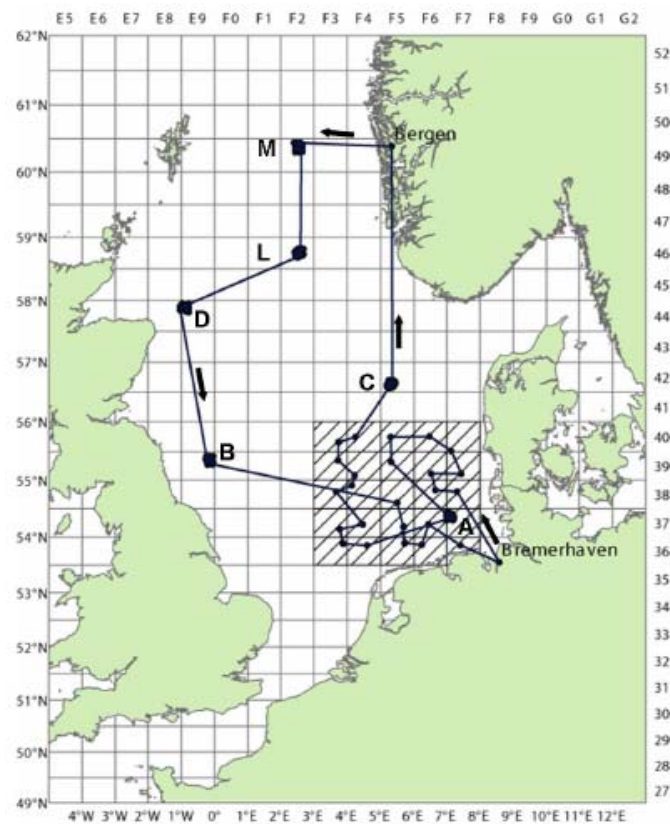


Fig. III.G.6: International Bottom Trawl Survey (IBTS) 3rd quarter. Cruise track with the investigation area allocated to Germany (shaded) and small areas (black boxes) of the national survey (GSBTS) in conjunction with the IBTS.

7) North Sea Beam Trawl Survey (BTS)

Target species of this survey are mainly sole and plaice but also associated species. The survey provides densities (abundance and biomass) indices for the target species as well as hydrographic data. Data are stored locally in an Access data base and a database held by the chairman of ICES WGBEAM at CEFAS in Lowestoft. The survey will take place yearly in August on FRV "Solea". The planning is not fixed yet. Please refer to Fig. III.G.7 for an example of the trawl positions of the German part of the North Sea Beam Trawl Survey.

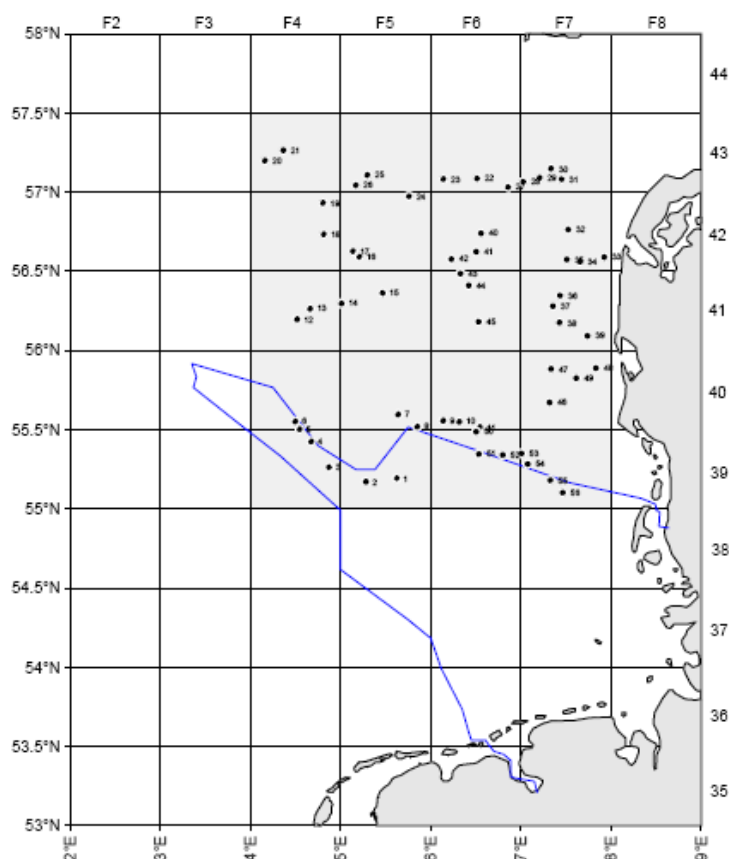


Fig. III.G.7: North Sea Beam Trawl Survey (BTS). Example of trawl positions from 2009.

8) Demersal Young Fish Survey

The aim of the survey is to provide abundance indices of sole, plaice, whiting and cod as well as of brown shrimp in German coastal waters. The indices are part of a time series which started in the early 1970's. The collected data are stored locally in a national Access data base. Data are also submitted to ICES WGNSSK, WGBEAM and WGCAN and will be relevant to the trilateral Wadden Sea Monitoring Programme (TMAP) of DK, D and NL. Comparable investigations are conducted in NL, B and the UK. The German part of the survey consists of five components (short trips on chartered fishing cutters) which will take place in five different areas (Fig. III.G.8) yearly in September/October.

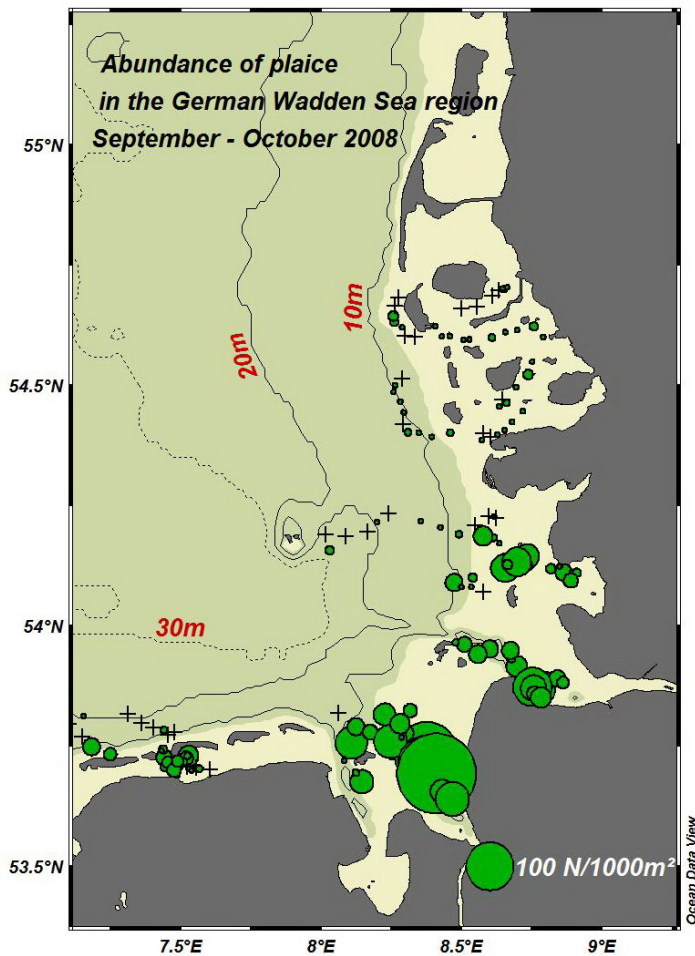


Fig. III.G.8: Demersal Young Fish Survey (DYFS). Example of station map of the German part, with abundances (10 individuals per 1000 m²) of young plaice in 2008.

9) International Ecosystem Survey in the Nordic Seas

Germany will participate in this survey with staff and will continue to contribute to its financing in order to support Denmark to conduct the survey. The survey will take place yearly in April/May.

10) International Redfish Survey (Norwegian Sea)

For this newly established survey, a Member State providing a vessel has still to be determined, and Germany will most probably provide staff. The survey will be carried out in August 2011, and most probably every two years thereafter. The relevant planning group (WGRS) was established in 2009.

11) Herring Larvae Survey (North Sea)

The main objective of the survey is to assess the herring stock in the North Sea. The results of the herring larvae surveys are used to calculate a biomass index of the SSB of North Sea autumn spawning herring. The main achievements of the surveys are to obtain data on the distribution and abundance of herring larvae from the main spawning locations, the length-frequency of herring larvae, and CTD-data. Data about larvae abundance and length-frequencies are stored together with basic hydrographic information in the IHLS database (International Herring Larvae Surveys). The IHLS database is located at the Federal Research Centre for Fisheries in Hamburg, Germany. The CTD-profiles for each station are available from the individual institutes involved in the surveys. The surveys take place yearly in January and in September on RV “Walther Herwig III” or RV “Solea”. Fig. III.G.11 shows the station grids.

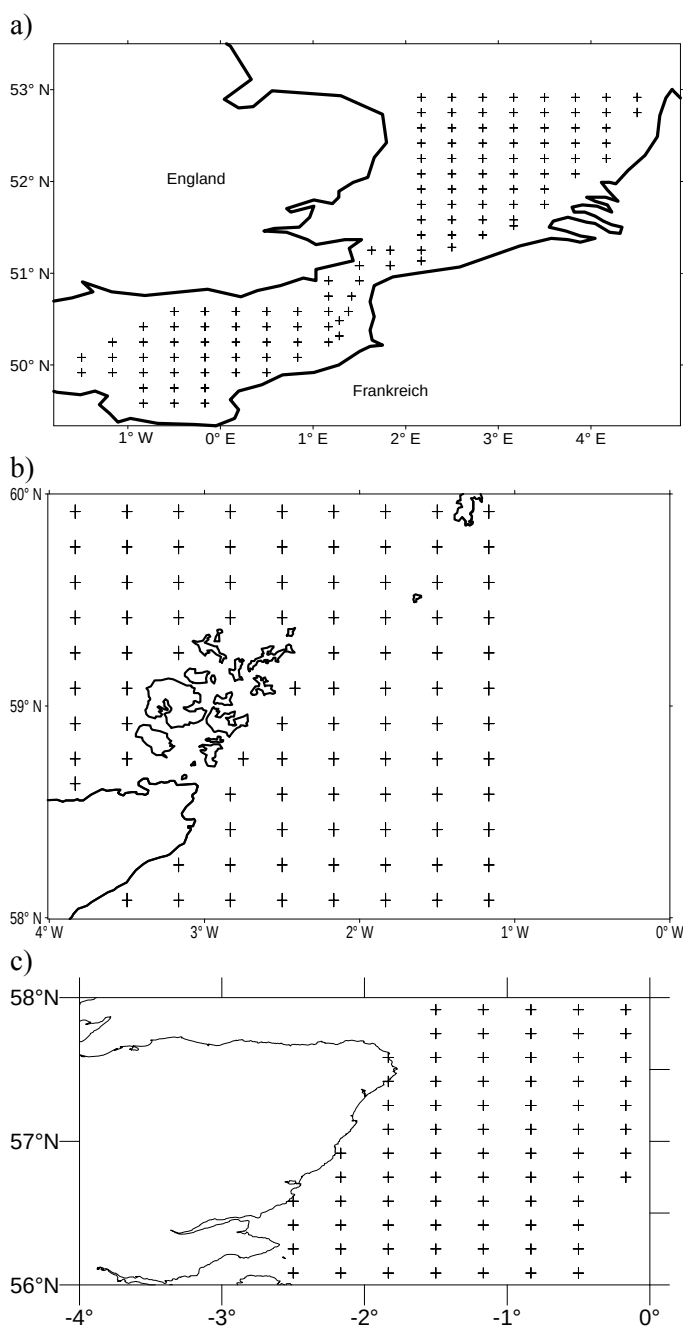


Fig. III.G.11: Herring Larvae Survey in the North Sea and eastern Channel. Station grids in a) the southern North Sea and eastern Channel, b) the Orkney/ Shetland area, and c) the Buchan area.

12) North Sea Herring Acoustic Survey

Target species are herring and sprat. The main aim of the survey is to provide an estimate of the abundance and biomass of the target species in the North Sea. Types of data collected include 1nm NASCs for clupeid fish (acoustic data), age and length distribution for all clupeids in the investigation area, maturity at age and parasite infestation. The data is stored locally in the national institute's database and centrally on the HERSUR database (raw and derived data). The survey will take place yearly in June/July on FRV "Solea". The planning is not fixed yet. Please refer to Fig. III.G.12 for an example (from 2007) of the cruise track of the German part of the North Sea Herring Acoustic Survey.

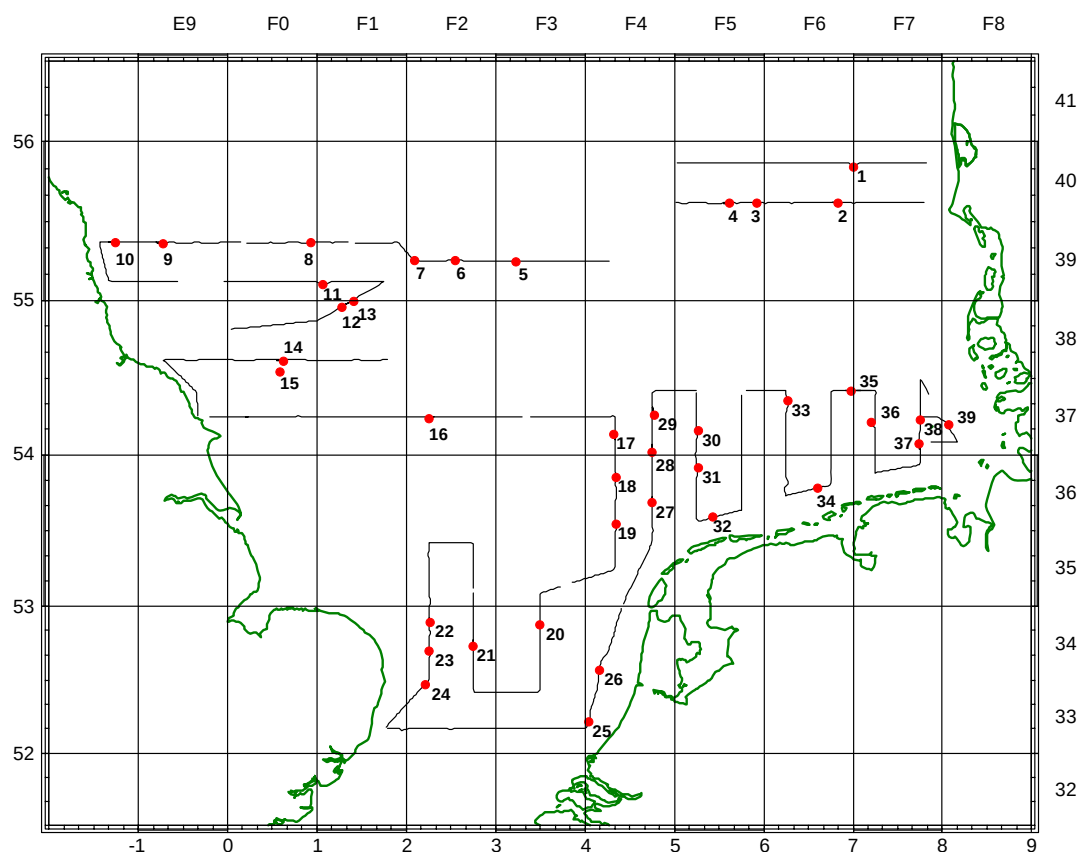


Fig. III.G.12: North Sea Herring Acoustic Survey. Example of cruise track.

North Atlantic:

13) International Redfish Trawl and Acoustic Survey

The main aim of this biennial survey is the investigation of the distribution and estimation of abundance and biomass of pelagic redfish (*Sebastes mentella*) in the Irminger Sea and adjacent areas by means of hydroacoustic measurements and trawl hauls. Besides the hydroacoustic data, biological data from the catches (length distributions, individual weights, sex and maturity and parasitism) are collected and raised to the total surveyed area. In addition, hydrographic (CTD) and weather data are collected. All data are stored in national and international databases and submitted to the ICES PGRS. The report from the survey is provided to the ICES NWWG. The German part of the survey will probably focus on the northern part of the survey area, as in 2005 (see Fig. III.G.13), and will be carried out in June/July 2011 and 2013 on FRV "Walther Herwig III".

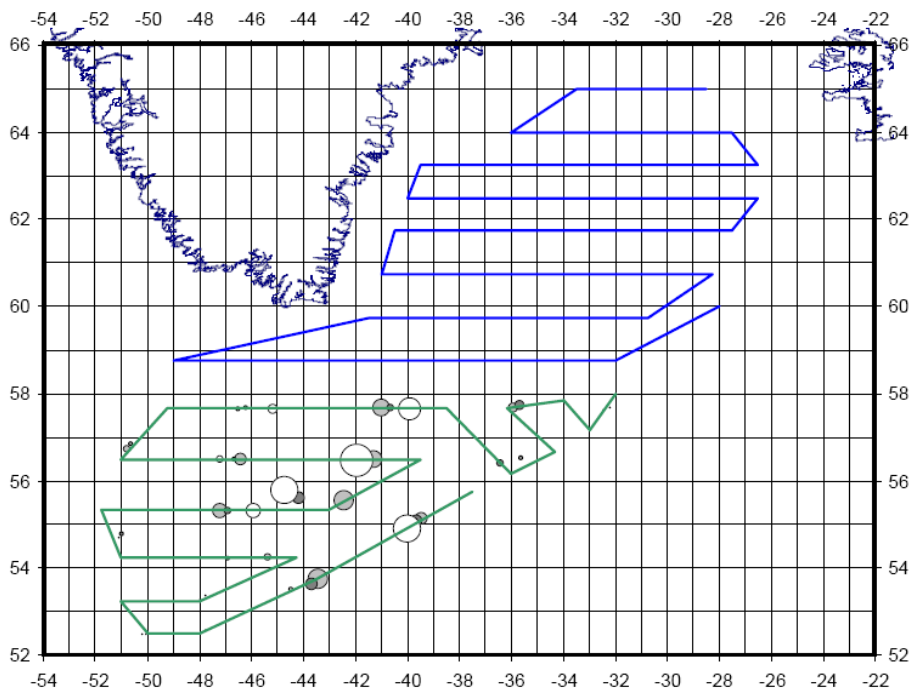


Fig. III.G.13: International Hydro-Acoustic Oceanic Redfish Survey. Hydroacoustic survey tracks (green line) and trawl hauls (circles) of the German part of the survey in 2009. (Blue line is indicating the survey track of the Icelandic vessel)

14) Greenland groundfish survey

The German groundfish survey started in 1982 and was primarily designed for the assessment of cod, but covers the entire groundfish fauna down to 400 m depth. It is carried out annually during the 4th quarter and provides the only fishery-independent information about the abundance & biomass of groundfish off Greenland (ICES Div. XIVb and NAFO Div. 1B-1F). Designed as a stratified random survey, the hauls are allocated to 14 strata (7 geographic areas * 2 depth strata, 0-200m, 201-400m) off West and East Greenland. The fishing gear used is a standardized 140-foot bottom trawl. Biological data from the catches (length distributions for all species, individual weights, sex and maturity for the commercial species) are collected, raised to the total surveyed area and submitted to the ICES NWWG and NAFO SC and used in the respective stock assessments. In addition, hydrographic (CTD) and weather data are collected. The survey will be carried out every October/November on FRV "Walther Herwig III". The planning is not fixed yet. Fig. III.G.14 shows the survey area.

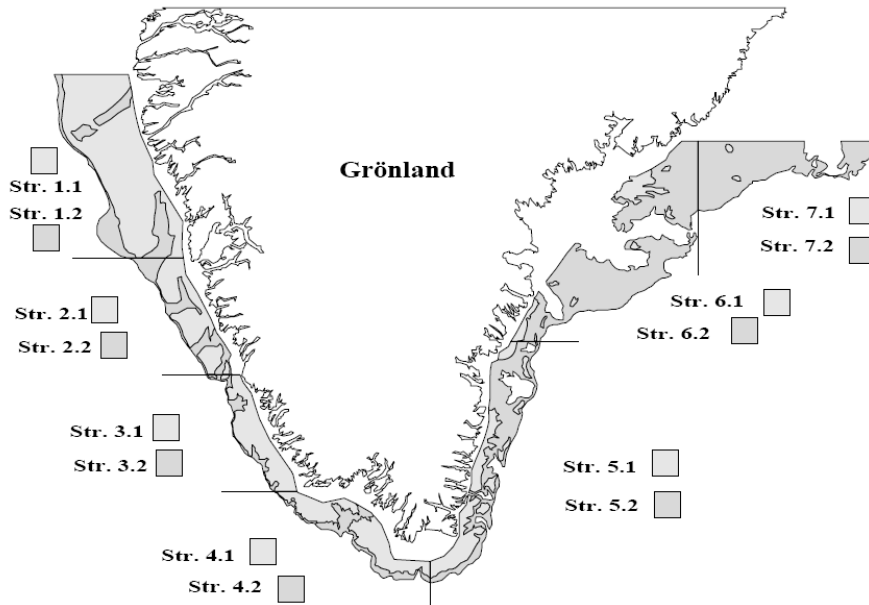


Fig. III.G.14: Greenland groundfish survey. Survey area (strata), with depth strata 0-200m (Str. X.1) and 201-400m (Str. X.2).

15) Blue whiting survey

Germany will contribute to the survey financing in order to support The Netherlands and Ireland to conduct the survey. The survey takes place in March/April. The planning is not fixed yet.

16) Mackerel and Horse Mackerel Egg Survey

The main objective of this triennial survey is to produce both an index and a direct estimate of the biomass of the North East Atlantic mackerel stock and the southern and western horse mackerel stocks. The general method is to quantify the freshly spawned eggs in the water column on the spawning grounds and to determine the fecundity of the females. This is done by sampling sufficient numbers of gonads before during and after the spawning. These are then histologically analysed. In combination, the realised fecundity (potential fecundity minus atresia) of the females and the actual number of freshly spawned eggs in the water render an estimate of the spawning stock biomass. Data collected include plankton data mainly production data of mackerel and horse mackerel eggs in different development stages plus filtered water volumes, temperature and salinity data. For the adult sampling programme data on abundance, weight, length and individual gonad/liver/intestines-weights as well as samples for the determination of fecundity and fat contents are collected. Data are stored locally in the institute's database and a database held by the survey co-ordinator at MSML (Aberdeen, Scotland). Presumably, the German part of the survey takes place at the beginning of the spawning season in March and April 2013 on FRV "Walther Herwig III". Fig. III.G.16 shows an example of the possible survey track (survey area of 2007).

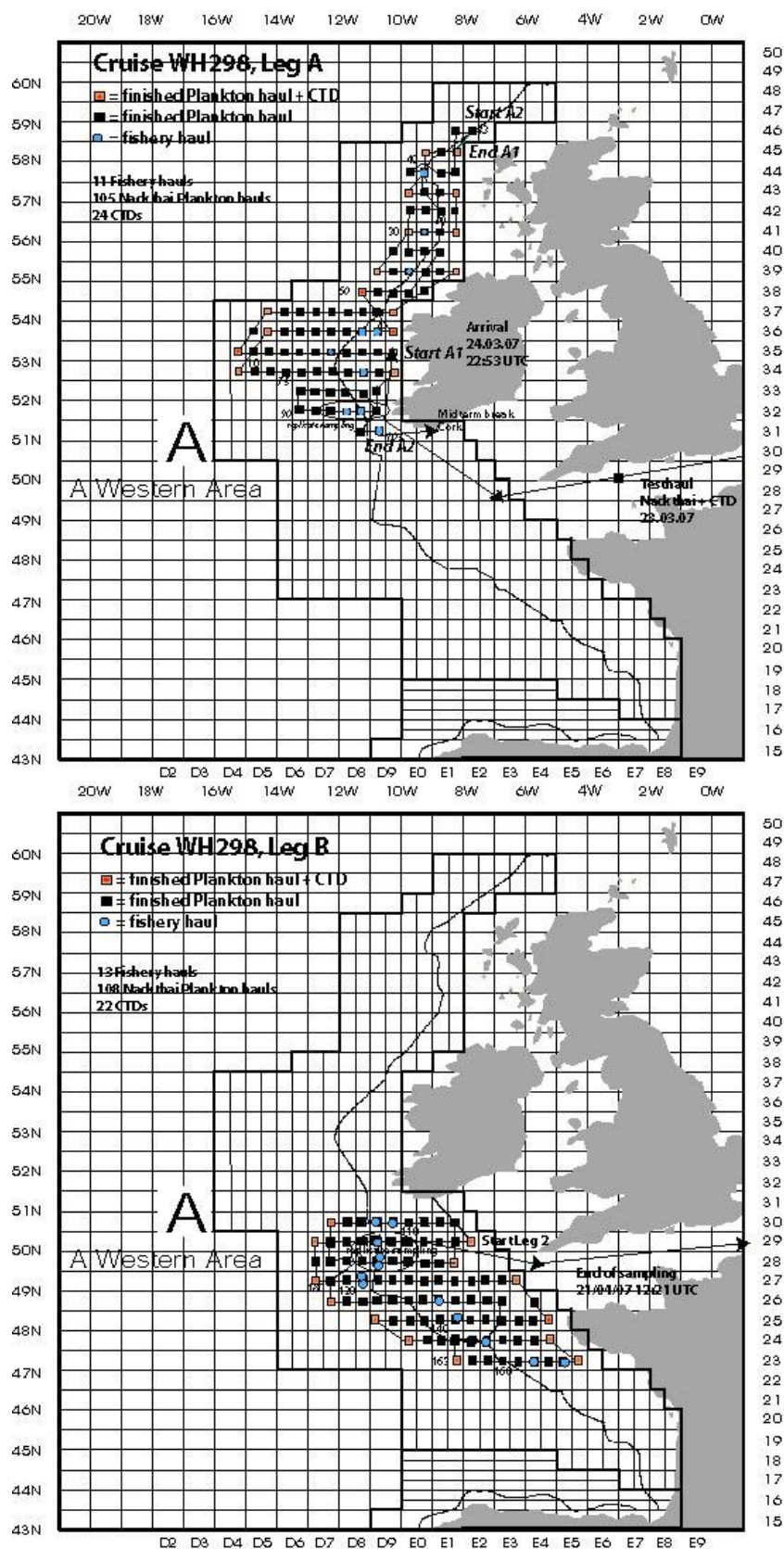


Fig. III.G.16: Mackerel and Horse Mackerel Egg Survey – cruise track and station grid March/April 2007, upper panel: leg A, lower panel: leg B.

III G 2 MODIFICATIONS IN THE SURVEYS

Changes in the design or effort of the described surveys on national level are not anticipated. Modifications will only be made when agreed in the relevant ICES survey planning groups.

III G 3 DATA PRESENTATION

Data will be available for end users shortly after the surveys. Deadlines for data submission are agreed in the relevant ICES survey planning groups.

III G 4 REGIONAL COORDINATION

All surveys are internationally co-ordinated within the relevant ICES survey planning groups.

III G 5 DEROGATIONS AND NON CONFORMITIES

n.a.

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

Council Regulation 199/2008 declares only aquaculture data for marine species and eel and salmon as mandatory to collect. Since there is no salmon farming, only mussels and eel aquaculture is mandatory and so Germany will investigate the mussel and eel production sector.

For the other non-mandatory species, Germany will include the most recent data from other sources (concerning total sales, total production, each by species and number of enterprises) in its annual technical report.

IV A 1 GENERAL DESCRIPTION OF THE AQUACULTURE SECTOR

Aquaculture in Germany is a small industry, practiced only in a few specifically suited areas. Aquaculture production in 2008 reached a total volume of roughly 44,000 tonnes of fresh water species (Brämick, 2009) and 7,400 tonnes of blue mussels (BLE, 2009). As in previous years, trout farming in freshwater flow-through-systems was the most profitable branch of production, both in terms of quantity (27,009 tonnes) and the revenue generated (€136.6 million). The design and construction of production units as well the production densities vary widely. In some areas in the south of Germany in particular, earthen ponds with a low stocking density are still dominant. At the same time, some companies are operating modern farms equipped with tanks or raceways and high production densities. The main production regions are situated in the south of Germany and in the foothills of the mountains.

Traditional aquaculture species in Germany include common carp and rainbow trout which are farmed in earthen ponds, raceways and other modern indoor and outdoor facilities (Rosenthal and Hilge, 2000). The farming of carp in freshwater ponds is the second major type of aquaculture practiced in Germany and has a long tradition. In 2008, 15,433 tonnes were harvested producing total revenue of more than €52.7 million (Brämick, 2009).

Variation in the intensity of carp production depends to a large extent on both the location of production and the year-class. On average, 395 kg/ha were produced in 2008 (Brämick, 2009). Carp pond farms are concentrated in the States of Bavaria, Saxony and Brandenburg. The profitability of many carp farms, however, is increasingly under pressure as a result of high production costs and competition from cheap imports.

With 9 470 tonnes, blue mussel was the dominating species in the marine aquaculture sector. 749 tonnes of eel were produced in recirculation systems, with 302 tonnes used to abandon it to lakes and rivers. About 200 tonnes of other species (e.g. houting) were cultivated in pilot plants mostly for research purposes. For more historical and institutional information on the German aquaculture sector, see German National Programme 2009/10.

IV A 2 DATA ACQUISITION

IV A 2 (a) Definition of variables

The variables to be collected are defined and calculated as follows:

- FTE will be calculated on the basis of a 40-hour week, assuming 2 weeks of legal holidays and 4 weeks of minimum vacancy per employer as legal requirement. This totals to 1840 hours per FTE.

- Unpaid labour in case of blue mussel and oyster farming will be calculated according the fleet sector. In the case of land based farms for eel, an average income in the agricultural sector will be applied.
- The financial costs will be directly asked for.
- A conversion factor from numbers to tonnes is not necessary, as in this context, all relevant aquaculture businesses count by weight and not by number.

Most data will be available in the second half of the following year. Volumes and value of turnover for the mussel sector will be available already in the first quarter of the following year.

IV A 2 (b) Type of data collection

Due to the small number of enterprises, Germany will apply a census for all variables.

IV A 2 (c) target and frame population

Since Germany has got a moratorium to apply Regulation (EC) No 762/2008 of the European Parliament and of the Council until 2012, there is no official source for the total population of aquaculture enterprises in Germany.

For the blue mussel sector, the total population is known from the fleet register and fishery authorities of the coastal Federal States (Mecklenburg-Vorpommern, Schleswig-Holstein, Niedersachsen and Bremen). The only oyster enterprise in Germany is well known.

For the eel enterprises, information from the agricultural chambers were used in combination with the annual report of freshwater fisheries in Germany (Brämick, 2009). Additionally, experts from the sector were interviewed.

IV A 2 (d) Data sources

For the blue mussel sector, data from the fleet register, logbooks and landing declarations will be used. Furthermore, a questionnaire will be send out by the Institute of Sea Fisheries to all aquaculture enterprises. For the other farms, information from the agricultural chambers and the relevant associations will be used.

IV A 2 (e) Sampling stratification and allocation scheme

As a census is planned, this part is dispensable.

IV A 3 ESTIMATION

In case of non-response, the methods planned differ from sector to sector. While in the blue mussel production, regression analysis is planned due to the similarity of enterprises, non-response from the only oyster enterprise could not be covered by estimation methods. This is valid for the few (three) eel enterprises as well.

IV A 4 DATA QUALITY EVALUATION

Item and unit non-response rates will be calculated according ESS Handbook for Quality Reports 2009 (EUROSTAT, 2009), if the problem occurs. As the data are not very numerous, probability of processing errors seems to be so low that it can be neglected. To be sure, as manual data input is used, this will be done independently by two researchers and the data will be cross-checked afterwards for typing errors. Of course, errors during filling in of the questionnaire may arise. The responsible person for data collection in the aquaculture sector will visit each company to assure that the data from the questionnaire are at least plausible.

The problem of under-/overcoverage in the aquaculture sector: As the sector is small and an official veterinary control number is necessary to run the business, only aquaculture production in the shadow economy seems to be an issue. Since the Institute of Sea Fishery as the national executor of the programme for this sector is well linked up to the sector and the Federal States' authorities, new companies in this sector come to its knowledge quite fast. If one is giving up the business, it will be known soon as well.

Additionally, a thorough analysis of the blue mussel business in Germany has been undertaken by one scientist of the Institute. The results - economic and physical data of processing blue mussel farming – will be used to check the data from that business by plausibility.

IV A 5 DATA PRESENTATION

Most data will be available to end users at the end of the following year, so a time lag of almost one year occurs. Volumes and values of turnover for the mussel sector will be available in the first half of the following year already.

IV A 6 REGIONAL COORDINATION

No regional coordination is planned.

IV A 7 DEROGATIONS AND NON CONFORMITIES

None.

IV B COLLECTION OF DATA CONCERNING THE PROCESSING INDUSTRY

IV B 1 DATA ACQUISITION

IV B 1 (a) Definition of variables

The variables to be collected are defined and calculated as follows:

- FTE will be calculated on the basis of a 38-hour week, assuming two weeks of legal holidays and six weeks of vacancy per employer. This totals to 1672 hours per FTE.
- Unpaid labour normally is an issue arising in small enterprises. As Germany collects data for enterprises with ≥ 20 employees, this issue will probably not be of importance. But if so, the average wage according the size segment of the enterprise will be used. As this wage varies from year to year, it can only be calculated ex-post.
- Financial costs and depreciation will be directly asked for.

Final data will be available with a time lag of 18-22 months. Germany tries to collect data on raw material by volume and species as well, extending the required programme and going beyond the regulation.

IV B 1 (b) Type of data collection

Germany will apply a census for all variables as well as the use of official statistics for enterprises with ≥ 20 employees.

IV B 1 (c) Target and frame population

As in previous national programmes, Germany collects data exhaustively from enterprises with ≥ 20 employees according NACE Code 10.20. This has mainly two reasons. Enterprises with ≥ 20 employees account for more than 90% of the turnover as well as more than 90% of the employees. Additionally, comparability over time is given and cross-check with official statistics is possible, as they use this threshold as well.

For the necessary complete survey including enterprises not having fish processing as their main activity, to be done in 2011, all enterprises holding a veterinary control number will be included in the survey.

The segment with < 20 employees will be additionally addressed by a survey each year.

Table IV.B.1 indicates the segmentation of the population by persons employed. Please note that in contrast to the segmentation provided in Appendix XII of Commission Decision 2010/93/EU, the first segment has traditionally been limited by the maximum number of 9 employees (instead of 10), while the second segment starts at 10 employees. This allows historical comparisons for Germany between

periods for which the thresholds for the segmentation were not included in the European regulation. This does not affect the census, as all enterprises with ≥ 20 employees are included.

IV B 1 (d) Data sources

The Federal Statistical Office as well as the Institute of Sea Fisheries uses questionnaires as main data sources. In some cases, data from publicly available annual balance sheets are used for cross-checking.

An example of a questionnaire from the Federal Statistical Office may be found at:

<https://www-ec.destatis.de/csp/shop/sfg/bpm.html.cms.cBroker.cls?cmspath=struktur.vollanzeige.csp&ID=1023970>

An example of a questionnaire of the Institute of Sea Fisheries from the previous year is given in Annex XII.6. An actual version will be attached to the respective Technical Report.

Subsidies will be asked for at the responsible official national authority (BLE).

The questionnaires of the Federal Statistical Office have to be filled in compulsory. The Institute of Sea Fisheries collects the same data by its questionnaire-based survey (sometimes assisted by telephone calls) as the Federal Statistical Office does, plus “capital value”, “debt”, “volume of fish and other raw material”, “depreciation”, “total value of assets”, “extraordinary costs” and “other income”, as these variables are not asked for by the Federal Statistical Office.

Turnover is reported by the Federal Statistical Office, but the data are from the tax authority.

IV B 1 (e) Sampling stratification and allocation scheme

As a census is planned, this part is dispensable for the ≥ 20 employees segment. The segment with < 20 employees will be addressed by a sample survey, where the units are chosen randomly, but as the response to the questionnaire is voluntary, a self-selection bias occurs. As this segment stands for less than 10 % of the sector in terms of turnover and employment, this problem may be neglected, as the reported values are from the segment with ≥ 20 employees.

IV B 2 ESTIMATION

In case of non-response units/items, the method used is as follows:

First, the segment in terms of employment of the non-responding unit will be identified. For this segment, an average value of the respective variable will be calculated by dividing the sum of the known values by the known turnover, so that a variable with a value per Euro turnover is constructed. If the turnover of the non-responding unit is known, its turnover will be simply multiplied with this ratio. This will be used in case of non-respond items as well. If the turnover of the non-responding unit is unknown and employment could not be used instead, the average value of the variable in the respective segment will be applied. For the < 20 employees segment, no estimation is planned to be used, as the experience with the last national programmes showed response rates $< 5\%$. Estimation for this segment does not appear to be sensible due to the different character of the enterprises.

IV B 3 DATA QUALITY EVALUATION

Item and unit non-response rates will be calculated according ESS Handbook for Quality Reports 2009 (EUROSTAT, 2009), if the problem occurs. As the data are not so numerous, the probability of processing errors could be expected to be low. As manual data input is used and to ensure data quality, this will be done independently by two researchers and the data will be cross-checked afterwards for typing errors. Of course, errors during filling in of the questionnaire may arise. Cross-check with the data from previous years as well as comparison with similar enterprises will be used to recognise those mistakes. The data will also be assessed for plausibility by the relevant producer association.

The problem of under-/overcoverage in the processing industry: Germany applies a threshold, and for this reason, the number of relevant enterprises is assessable. An official veterinary control number is necessary to run the business and so only fish processors in the 'shadow economy' may be an issue in terms of undercoverage. Persons in the recreational fishery may process their catch (e.g. cure it) and sell it. Or professional fishers process a proportion of their catch and do not declare it. Or raw fish is purchased and processed without declaration. But the problem of the shadow economy is not restricted to the fish processing sector. The dimension in the sector cannot be realistically assessed. An indicator may be the unwillingness of the small processors to answer the questionnaire of the Institute of Sea Fisheries.

Since the Institute of Sea Fisheries as the national executor of the program for this sector is well linked up to the sector and the states authorities, new companies in this sector come to its knowledge quite fast. If one is giving up the business, it will be known soon as well.

The questionnaires of the Federal Statistical Office have to be filled in compulsory and this is enforced by financial penalty. So non-response is not an issue for them. The Institute of Sea Fisheries' questionnaires are voluntarily. Hence the problem of non-responding arises. But due to the effort the Institute has undertaken to gain the trust of the sector players and as it endeavours to minimize the bureaucratic costs for the enterprises, compliance has increased. To have the possibility to cross-check the data to ensure the quality, the Institute asks for the same variables as the Federal Statistical Office. So a respond rate of 70% for variables the Federal Statistical Office does not ask for is expected, as well as a coverage rate for the entire sector in terms of turnover to be 75%.

IV B 4 DATA PRESENTATION

Data will be available to end users with a lag of 18-22 months.

IV B 5 REGIONAL COORDINATION

No regional coordination is planned.

IV B 6 DEROGATIONS AND NON CONFORMITIES

None.

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

In terms of temporal coverage, the data for the estimation of ecosystem indicators (Commission Decision 2010/93/EU, Appendix XIII) will be collected mostly yearly, apart from those surveys-at-sea that are carried out every two or three years (for indicators 1, 2, 3 and 4; Table III.G.1). On most surveys, indicators 1-4 are being collected, apart from those where no or few fish >40cm in length are expected (leading to exclusion of indicator 2). The spatial coverage of the surveys is given in Table III.G.1 in the column 'Area(s) covered', while the data from commercial fisheries and observer trips, as well as VMS data, are collected where the German fleet operates (see section III).

Access to the raw VMS data is given in the temporal and spatial resolution given by the currently employed recording system and legal requirements. Validation and aggregation methods have been developed for scientific analyses of VMS data.

With regard to indicator 9 (fuel efficiency), the collection of the value of landings and fuel consumption is described in section III.B. Landings data can be provided with quarterly resolution. For fuel consumption, data will only be available on an annual basis, with a delay of about 18 months. These data can be split into quarterly data, using an effort variable for weighting. There is no harmonised approach for the assignment of fuel consumption to métiers, which applies to all vessels that are active in more than one métier, in particular when the métier is changed during a trip. An approach of weighting annual data with effort variables is bearing a high uncertainty and can therefore only be regarded as a vague estimate.

VI MODULE FOR MANAGEMENT AND USE OF THE DATA

VI A MANAGEMENT

A new system architecture for data management has been implemented by the Federal Agency for Agriculture and Food (BLE), Unit 621. The integration of a Business Intelligence (BI) Tool, MicroStrategy, will be further extended according to the needs of the scientists involved in data collection, processing and use. It takes herewith into account the increased requirements on data management and use by Council Reg. 199/2008 (Articles 13-17), Commission Reg. 665/2008 (Article 8) and Commission Decision 2010/93/EU (Annex, Chapter VI.A).

The use of BI allows the users, among many other features, to:

- access (web secure) all data (primary, detailed and aggregated data),
- intuitively perform complex queries and create complex reports,
- download and export data from queries and reports.

Existing parts of the data architecture (e.g. the sftp server, Oracle database and data flow processes) will be updated. Additional data will be implemented in the data architecture and provided in the BI tool.

VI.A.1 SYSTEM ARCHITECTURE

The system architecture for data management is illustrated in Fig. VI.A.1.

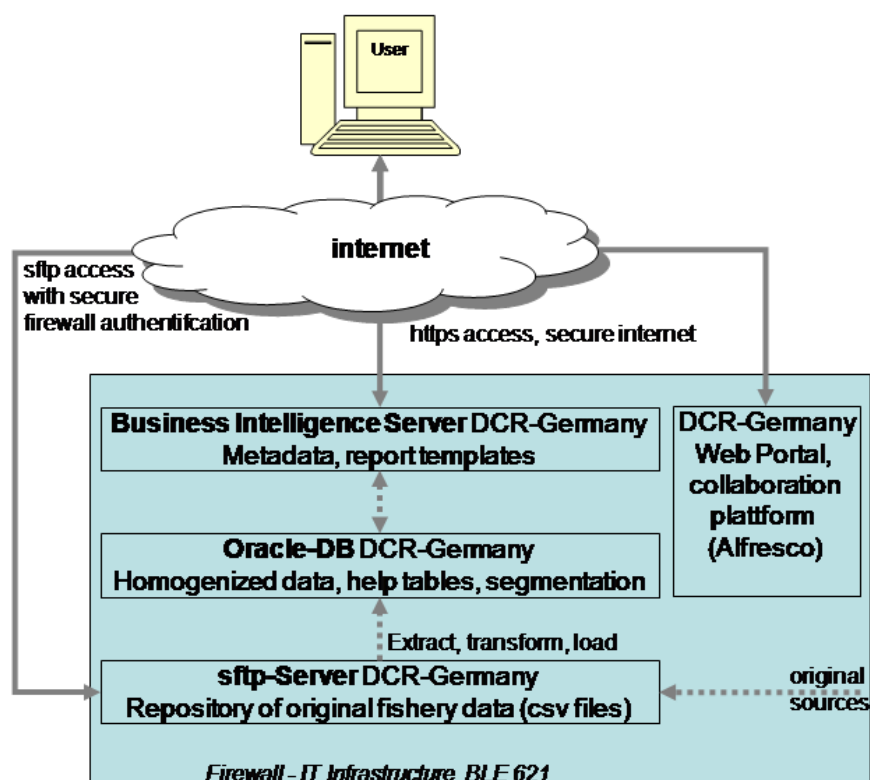


Fig. VI.A.1 System Architecture Data Management DCR-Germany

VI.A.1.1 User

The users are scientists at the vTI in Hamburg and Rostock. Users will have two means of accessing data from the central database:

1. Online via web by accessing the BI server, using a standard browser as client software. This access is restricted to registered users and uses the https secure protocol. The BI web server provides a wealth of functions, from complex querying and reporting to graphical data analysis and data export.
2. Online via sftp, to access the SFTP-repository and thus upload or download files from/to it. This access is restricted to registered users, and the sftp server is only accessible after secure firewall authentication.

VI.A.1.2 Data repository (SFTP-repository)

The SFTP-repository contains a repository of all the original data from 2002 to date. The data originates from different sources:

Data category	Original data source	Data format & transfer
Fishery statistics: • Vessel register • Logbook data • Landing statistics • Discard data • Data from surveys-at-sea	Data is collected by the BLE Unit 522, Hamburg. Data is stored in a central database by the BLE Unit 621, Bonn.	Format: csv-files; yearly transfer. By February, data of the preceding year is being transferred.
Economic data	vTI - Institute of Sea Fisheries (SF)	Format: csv-files

This SFTP-repository is the data source for the Oracle database.

VI.A.1.3 Oracle database

The Oracle database is the heart of the system architecture. Data is imported from the original data via an ETL process (extraction, transformation, loading) including data homogenisation and data type conversions.

The use of the Oracle database is manifold:

- Data basis for calculations (main fishing technique, segmentation, effort)
- Decoding according to codification standards (incl. maintenance of codification tables)
- Definition and maintenance of data dimensions (based on: time and geographic attributes, fish species, vessel length, fishing technique) for data aggregation
- Data basis for BI querying and reporting

VI.A.1.4 MicroStrategy Business Intelligence server

The main motivation for the use of the MicroStrategy BI is to:

- provide a transparent, consistent and homogeneous data basis for all data users no matter where they are (at office, on a business trip),
- enable fishery scientists and economists to perform themselves complex data analysis and reporting,
- provide a range of new functionality on the data, thus increasing its value,
- thoroughly check data quality (e.g. by means of reports prepared for this purpose), thus helping to improve the data quality.

The MicroStrategy BI application server allows users to:

- slice and dice through data in a high performance, intuitive and interactive manner,

- perform data mining, complex data analysis, data visualisation, predictive modelling, statistical analysis, etc.
- perform complex reporting and data exporting to a wide range of formats (xls, csv, pdf and more),
- “drill” (browse up and down aggregation levels up to the raw data) for unlimited analysis,
- create and save dashboards.

MicroStrategy BI runs on the basis of an Oracle database and offers full functionality via web interface. This means that a registered user has access to all data from anywhere, provided a computer with internet connection and a standard browser, as well as the rights to access this service.

Setting up MicroStrategy BI means to:

- prepare the underlying data (the Oracle database): definition and setting up of dimension tables (time [year, quarter, month, dates], geography [area, region], segment [fishing technique, vessel length], metier, species), aggregation of data for performance purposes;
- define and set up the metadata: data source, database objects, attributes, aggregations, etc;
- define and set up a number of basic report templates.

The setup and the maintenance of MicroStrategy BI will be performed by the data management expert of BLE Unit 621. The use and analysis of data will be carried out by the fishery scientists and economists.

VI.A.1.5 Web Collaboration Platform

According to Commission Regulation 665/2008, Article 8(2), a national collaboration platform for DCF purposes has been set up: Alfresco, an open source software providing document management, collaboration, records and knowledge management.

VI.A.1.6 Web Portal

Information about the German implementation of the DCF is presented to the involved institutions, the EU Commission and the public in a Web Portal (www.dcf-germany.de). Additional contents are easy to publish via a Typo 3 Content Management System.

VI B USE OF THE DATA

Germany regularly delivers economic data (sections III.B and IV), biological and transversal data from landings and discards (sections III.C-III.F), and data from surveys-at-sea (section III.G), to stock assessment working groups of ICES, NAFO and other RFMOs. These are mostly detailed or aggregated data in the spatial and temporal resolution required by the corresponding expert group. For VMS data, see section V.

VII FOLLOW-UP OF STECF RECOMMENDATIONS

Source	Recommendation to MS	MS action
SGRN 09-01 (Evaluation of NP proposals 2009-10)	ON DEROGATIONS FOR DISCARDS AND LANDING SAMPLING: SGRN consider that derogations can only be granted if the level of discard is statistically proven and supported by documentation.	Requests for derogations by Germany are considering this aspect, but also take into account bilateral and multilateral agreements on a regional level (RCMs).
SGRN 09-01 (Evaluation of NP proposals 2009-10)	ON SPECIES DEROGATIONS AND NON CONFORMITIES: Species derogations can be granted on the basis of less than 200 tons in total landing, if there is not any different provision from relevant RFMO. (...) MS should provide these data so the derogation can be evaluated. SGRN suggests MS to provide a cost/benefit analysis in detail to determine the excessive cost as mentioned in the NP.	Germany has provided detailed landings data (incl. stocks for which <200t were landed) at the recent RCMs and in the current NP proposal.
SGRN 09-01 (Evaluation of NP proposals 2009-10)	ON THE CONSISTENCY OF DIFFERENT ECONOMIC DATA SOURCES: SGRN asks MS to explain in the national program how the consistency of information derived from different data sources has been checked.	This has been described in section III.B.1(d).
SGRN 09-01 (Evaluation of NP proposals 2009-10)	ON SAMPLING IN DISTANT AREAS: SGRN underlines that all target species concerned and all species for which it is mandatory to collect data according to the provision of the RFMO concerned, must be included in the NP of each MS concerned.	Sampling of long-distance fisheries has been considered by Germany in section III.C (Other regions).

VIII LIST OF DEROGATIONS

The following table summarises the derogations applied for by Germany from 2003 to 2008 and in the last NP proposal 2009-2010:

Short title of derogation	NP Proposal section	Derogation approved or rejected	Year of approval or rejections of past requests for derogations
Request for derogation for excluding vessels under 10m overall length from the calculations	Module D - Fishing effort	r	2003, 2004, 2005
Request for derogation regarding the Atlanto-scandian herring survey	Module G –Scientific evaluation survey	a	2003
Request for derogation on sampling of landings	Module E – Catches and landings	a	2007, 2008
Request for derogation on sampling of discards	Module E – Catches and landings	a	2007, 2008
Request for derogation on data concerning the processing industry	Module K – Data concerning the processing industry	a	2007
Request for derogation on recreational fishery	Module E – Catches and landings	a	2006, 2007, 2008
Request for derogation on biological - metier-related variables	III.C - Biological - metier-related variables	pending	2009/2010
Request for derogation on biological - stock-related variables	III.C - Biological - stock-related variables	pending	2009/2010

IX LIST OF ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Explanation
AFWG	ICES Arctic Fishery Working Group
ANA	Anadromous
BAD	Baltic Acoustic Database (BADI = aggregated data; BADI = raw data)
BASS	Baltic Acoustic Spring Survey
BITS	Baltic International Trawl Survey
BLE	Bundesanstalt für Landwirtschaft und Ernährung (Federal Agency for Agriculture and Food)
BMELV	Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, (Ministry for Food, Agriculture, and Consumer Protection)
BRZ	Bruttoreaumzahl (gross tonnage)
BSRP	Baltic Sea Research Project
CAT	Catadromous
CECAF	Fishery Committee for the Eastern Central Atlantic
CEFAS	Centre for Environment, Fisheries & Aquaculture Science (Lowestoft, England)
CPUE	Catch per unit and effort
CRU	Crustaceans
CTD	Conductivity-Temperature-Depth-Probe
DATRAS	Database trawl survey
DCR	Data Collection Regulation
DEF	Demersal Fish
DIFRES	Danish Institute for Fishery Research
DYFS	Demersal Young Fish Survey
EC	European Community
EEZ	Exclusive economic zone
EU	European Union
EUROSTAT	Statistical Office of the European Communities
FADN	Farm Accountancy Data Network system
FAO	Food and Agricultural Organisation of the United Nations
FOE	Institut für Fischereiökologie, Hamburg (Institute of Fishery Ecology)
FPO	Pots and Traps
FRC	Fishery Research Cutter
FRS	Fisheries Research Services (Marine Lab, Aberdeen, Scotland)
FRV	Fishery Research Vessel
FTE	Full time employment
FWS	Freshwater Species
Funct.	Functional
FYK	Fyke Nets
GG	Grundgesetz (Basic constitutional law)
GNS	Set nets/Gill nets
gt	Gross Tonnage
HAWG	ICES Herring Assessment Working Group
HERSUR	Herring Survey
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
IFREMER	French Institute for Exploitation of the Sea
kW	kilowatt
LLD	Drifting Long Lines
LOA	Length overall
MAGP	Multi-annual Guidance Programme
MCD	Mixed crustaceans and demersal fish
MIK	Midwater-Isaak-Kidd (sampling device for fish plankton)
MIS	Miscellaneous
MS	Member State(s)
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
NEAFC	North East Atlantic Fisheries Commission
No	Number
NP	National Programme
NR	Not relevant
NWWG	ICES North-Western Working Group
OFG	Other fixed gear
OSF	Institut für Ostseefischerei, Rostock (Institute of Baltic Sea Fisheries)
OTB	Otter trawl bottom
OTM	Otter trawl midwater
OTT	Multi-rig Otter Trawl
PGCCDBS	ICES Planning Group on Commercial Catch, Discards and Biological Sampling
PGHERS	ICES Planning Group for Herring Surveys
PRODCOM	The EU-wide harmonised classification of products produced by the industrial sector (PRODUCTION COMMUNAUTAIRE)
PTB	Two ship trawl bottom
PTM	Two ship trawl midwater
RCM	Regional Co-ordinating meeting
REDFISH	EU Project: Population structure, reproductive strategies and demography of redfish (Genus Sebastes) in the Irish Sea and adjacent waters
Reg.	Regulation
RFMO	Regional fisheries management organisations
RIVO	Netherlands Institute for Fishery Research
SC	Scientific Council
SD	Sub-division
SF	Institut für Seefischerei, Hamburg (Institute of Sea Fisheries)
SGRN	STECF Subgroup on Research Needs
PGRS	ICES Planning Group on Redfish Surveys
SPS	Small pelagic fish
SQL	Structured Query Language, standard computer language for accessing & manipulating database systems
SSC	Scottish Seine
StBA	Statistisches Bundesamt (Federal Statistical Office)
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total allowable catch
TBB	Beam trawl

UK	United Kingdom
VL40XX	Vessels larger than 40m LOA
VMS	Vessel monitoring system
vTI	Johann Heinrich von Thünen-Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries
WG	Working Group
WGBEAM	ICES Working Group on Beam Trawl Surveys
WGBFAS	ICES Baltic Fisheries Assessment Working Group
WGFAST	ICES Working Group on Fisheries Acoustic Science & Technology
WGIPS	ICES Working Group for International Pelagic Surveys
WGMEGS	ICES Working Group on Mackerel and Horse Mackerel Egg Surveys
WGNAPES	ICES Working Group on Northeast Atlantic Pelagic Ecosystem Surveys
WGNSSK	ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak
WGWIDE	ICES Working Group on the Assessment of Wide Distributed Stocks

X COMMENTS, SUGGESTIONS AND REFLECTIONS

None.

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XII ANNEXES

Annex XII.1 Bilateral agreement between Germany and Denmark

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.

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Signatures:

For Denmark (DTU-Aqua)


Jørgen Dalskov

Danish National Correspondent

on behalf of Jørgen Dalskov

Date: 18 March 2010

For Germany (vTI)


Dr. Christoph Stransky

German National Correspondent

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.

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Date: 18 March 2010

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)

For Germany (vTI)



Sieto Verver
Dpt. Head Centre for Fisheries Research



Dr. Christoph Stransky
German National Correspondent

Date: 24 March 2010

Minutes of the Bilateral Coordination Meeting between the Netherlands and Germany on the cooperation of sampling of data in the DCF

In preparation of the National Programmes (NP) of Germany and the Netherlands for 2011-2013 and an the update of their NPs for 2010, the National Correspondents (NC) of Germany and the Netherlands and a number of German and Dutch scientists involved in the co-ordination of DCF obligations met in The Hague on 12 August 2009. The meeting was initiated by Germany because of comments on their NP on distant water fisheries by the EC (based on the evaluation of the NP proposal 2009-2010). The DCF includes the collection of data for fisheries in distant waters. Specific comments were given for the CECAF area, asking for setting up a plan for sampling in this area. This applies also to the Netherlands. In addition a number of other subjects of common interest were discussed. The Commission was also invited to this meeting but apologised for not being able to participate. Ad Corten was invited to join the group for the first 2 agenda points (see below) as an expert of the fisheries in Pacific and African waters.

Annexed to these minutes are tables with catches (landings) in CECAF-waters and in SPRFMO-waters.

The following participants attended the Meeting:

- Dirk Jan van der Stelt (NC, NL)
- Christoph Stransky (NC, GER)
- Edwin van Helmond (NL)
- Jens Ulleweit (GER)
- Sieto Verver (NL)
- Kay Panten (GER)
- Frans van Beek (NL)
- Ad Corten (invited independent expert, NL)

The minutes of this meeting will be attached to the Technical Reports (TR) of Germany and the Netherlands for 2009.

The following subjects were discussed:

- 1 sampling of the long distance fleet on small pelagics in the South Pacific
- 2 sampling of the long distance fleet on small pelagics in CECAF/Mauritanian EEZ
- 3 sampling of beam trawlers on brown shrimp (*Crangon*) in the North Sea
- 4 sampling of the pelagic trawler fleet on mackerel, horse mackerel and herring in western waters (from Norway down to Portugal)
- 5 sampling of beam trawlers on sole and plaice and sole in the North Sea
- 6 sampling of recreational fisheries

As a private consultant, Ad Corten has been carrying out a number of research projects in Pacific and African waters on behalf of the Ministry of LNV and the Dutch pelagic industry on a contract basis. These projects are not linked to the DCF. Most information available at this meeting on the research activities in these areas originate from these projects.

1) Pelagic fishery in the South Pacific

The fishery in the South Pacific is directed to jack mackerel (*Trachurus murphi*), and chub mackerel, (*Scomber japonicus*). About 90% of the catch is jack mackerel. The fishery takes place in international waters outside the 200 miles zone. The organisation responsible for management of these resources is the interim South Pacific Regional Fisheries Management Organisation (SPRFMO). Presently, the only regulation in force is a voluntary freeze on fishing effort by a number of nations. There are no

TACs or licences and there is in fact an open access to the fishery by countries that have not agreed to the interim measures. Recent draft regulations by SPRFMO contain a provision for 10% scientific observer coverage of the effort in this fishery. Presently only Chilean assessments exist for jack mackerel, but the SPRFMO intends to carry out a joint assessment before the end of 2009.

Four EU Member States are active in the pelagic fishery in the South Pacific: the Netherlands, Germany, Poland and Lithuania with about 10 vessels all operating in the same métier. Some of the vessels are so-called flag vessels¹ owned by Dutch companies. EU catches range between 3-7% of the total international catches depending on the species. Registration of catches by EU vessels is adequate because they have to use logbooks. Also catch statistics from Chilean fleets are good. The quality of catch reporting of other (non-EU-) participants in the fishery is unknown.

The main fishery is between March and September. The Dutch and German vessels are operating from Chile and occasionally from Peru. The fishery is a direct and relatively clean fishery. Like in most pelagic fisheries discarding is low (about 5-10% in weight, pers. comm. Ad Corten) mostly consisting of damaged fish or other species. In contrast to the fishery in Mauritania, by-catches of large protected and vulnerable species are very small. The catch composition of the EU fleet is supposed to be representative for most fleets of other countries fishing on these target species (same métier).

Sampling of the pelagic fishery is required for all EU MS through the DCF métier selection procedure. This métier qualifies because it is the only métier which is operating in the area. However, none of the species caught in this fishery are listed in the DCF for age-length and biological sampling. Also discarding is less than 10%. Sampling would become required through RFMO² data requirements if the draft provisions will be agreed.

Since all EU vessels (Poland, Lithuania, Germany, and the Netherlands) are operating in the same fishery with the same gear, it would be preferable to set up a common EU sampling strategy. The sampling programme should preferably be an EU observer programme covering 10% of the EU effort. The sampling protocol should adhere to the data requirements specified by SPRFMO. Indication of costs of such a programme would be based on 7 months of observer sea time, coordination of the programme and data management.

NL and GER recommend discussing the approach to be applied in sampling this fishery with Poland and Lithuania in the 'RCM for distant waters'. This RCM is not yet established, but the EU suggested that this RCM will be arranged by the end of 2009.

2) Pelagic fishery in the CECAF/Mauritanian waters

The fishery in Mauritanian waters is regulated through agreements between Mauritania and other parties including the EU. The first agreement with the EU dates from 1996. The recent fishery agreements contain conditions regarding logbooks and (scientific) observers.

Scientific advice is provided through CECAF, which is a regional science organisation like ICES with no management responsibility but supporting assessment WG.

The fishery takes place all year round, within the 200 miles zone of Mauritania. The pelagic fisheries carried out by NL GER and FR target the same species composition and can be considered as one métier. In this fishery, the main activity is from May to October directed to *Sardinella aurita*. During

¹ Flag vessel: A ship owned and registered in different countries. In this case, Dutch companies are owning vessels registered in e.g. Germany. In the scope of the DCF, "flag vessels" don't have a separate legal status. The fact that flag vessels are mentioned here is because of the similarity in fishing behaviour between "true" Dutch vessels and flag vessels.

² According to STECF-SGRN, data requirements defined by Regional Fisheries Management Organisations (RFMO) should be part of the NP.

the rest of the year, there is a limited fishery on other species (sardines and horse mackerels). Part of the catch is landed in the EU in Las Palmas (Spain).

Other EU MS conducting pelagic fisheries in this area are Poland, Lithuania and Estonia. The fisheries of these (former East European) countries is mainly directed to horse mackerel species and can be considered as a different métier.

In the past, the Netherlands has carried out a sampling programme on the Dutch pelagic fleet operating in Mauritanian waters. This programme was not linked to the DCF. The Dutch sampling programme stopped in 2005. Based on the results of these programmes, it was concluded that overall discarding is low (<10% in weight). However, on the species level, there have been observations of discards >10%. Also, there have been observations of by-catches of large animals such as sharks, manta rays, sea turtles, and dolphins. It must be noted that recently, technical adjustments have been made to the fishing gear designed to avoid these by-catches.

Presently, two sampling programmes are carried out.

- Spain (IEO) has included the sampling of the landings of the pelagic EU métiers in the CECAF/Mauritanian EEZ in their NP 2009-2010. The NP also includes the collection of biological parameters. Spain has carried out the sampling in the past, and the results of the monitoring have been presented to the assessment WG.
- After the termination of the RIVO-IMROP observer programme in 2005, a new observer programme is being set up by IMROP³ at present. This programme is financed entirely by the Mauritanian government (following the EU-Agreement). The Netherlands provide technical assistance through a small project (€ 50,000/yr in 2009 and 2010) financed by the Dutch ship owners association PFA and the Dutch Ministry of Agriculture, Nature and Food Quality. Ad Corten is responsible for the Dutch technical cooperation project. The IMROP programme employs about 25-30 Mauritanian scientific observers which are to carry out an extensive sampling programme on board all industrial fishing vessels. This sampling also includes discards and by-catches. The results of the monitoring are to be presented to the assessment WG and used in the assessment.

Sampling of the pelagic fleet off Mauritania is required, as well through DCF selection criteria, the fishing agreement between EU and Mauritania and CECAF data needs. The sampling programme carried out by Spain is complying with EU sampling rules. The DCF has no influence on IMROP sampling, but the sampling carried out by the Mauritanian Institute presently complies with data needs of CECAF working groups. For the case of a data call, there is a need for an agreement with IMROP on data quality and data access. It would be difficult to implement EU sampling rules in third countries. An annual technical report of the sampling activities carried out by Mauritanian observers is required to have a complete overview of the sampling activities. As advisor of the Mauritanian sampling programme, Ad Corten will advise to introduce the production of an annual report as part of the routine programme. NL and GER will provide Ad with information on requested information.

3) Shrimpers (*Crangon*) in North Sea

This métier is operated by NL, Bel, Ger and DK in continental coastal waters with same gear type and target species (level 5) but possibly different mesh size ranges (level 6). Also UK conducts a small shrimp fishery in the Wash. The largest stakeholders in this fishery are NL and GER.

NL has about 180 vessels with a shrimp licence of which 80 are fishing in the North Sea only. Part of the time they also participate in other métiers. The other vessels also operate in the estuaries (the Wadden Sea). Within the NP 2009, NL runs an observer programme of 20 trips. Because of technical issues of handling the catch on board, 2 persons are needed to collect a representative sample. For the same reason, self sampling is not possible. If sampling would be restricted to the fish bycatch only, it could be carried out by only 1 observer. Practical problems encountered are lack of accommodation

for 2 observers and lack of cooperation from the fishermen. The latter problem has improved after a meeting with the PO at Wieringen, one of the important shrimp harbours in the Netherlands.

GER has about 250 vessels mainly operating by day trips. Within the NP for 2009, GER also runs an observer programme of 8 trips (8 sampling periods of one to several days each). For the same reasons as listed for NL, 2 observers are needed on board to take the samples and self-sampling is not possible.

The scientific use of the data has been limited so far. There is no international management of the stock. There are no analytical assessments carried out for brown shrimps. Discard data of fish can potentially be used in fish stock assessments. However, most discarded fish are very young and cannot be used because the data are outside the age range in which the assessments are carried out.

Given the effort needed to collect the data and the limited use of the data, GER and NL consider that the sampling of this métier is relatively expensive. They decided to restrict future sampling to the minimum required. They wish to discuss this subject further in the RCM NS&EA with other MS. GER and NL are aiming for a recommendation through the RCM to request to adjust the terms of reference of WGCAN. The adjustment would be: *“to analyse the spatial, temporal and technical overlap in national fishing activities in order to be able to derive regional sampling strategies”*.

Further GER and NL agree to exchange NL and GER observers on discard trips on shrimpers. This will already be done in 2009.

4) Pelagic trawler fleet in western European waters

The NL, GER and FRA pelagic vessels operate in various fishing grounds in western waters. They fish for the same species composition, use the same gear and belong to the same métier. The vessels from GER and FRA are mainly Dutch-owned flag vessels. NL and GER have both included the monitoring of this métier in their NP. Both NL and GER apply an observer concurrent sampling scheme. It was planned to have a bilateral meeting between NL and FRA on the sampling of the French effort. However such a meeting has not been taken place yet.

The sampling effort of the NL is 12 observer trips per year. The average trip duration is 4 weeks. The sampling also contains activities relating to EU Regulations on monitoring by-catches of cetaceans and conditions for catching deep sea fish. GER carries out 5 trips a year.

The ideal situation would be to merge sampling programmes of the all MS concerned. In fact, this year one of the vessels sampled by NL had a GER flag. However, the complications of introducing such an approach could not be discussed within the scope of this meeting. It was agreed that both NL and GER would keep each other updated on the development in their programmes. Also it was agreed to work together in the planning of the trips in order to achieve a more balanced coverage of the fishing grounds.

Further discussion is needed in the future on share of data and processing the data (raising of samples to métier estimates).

5) Beam trawlers for flatfish in the North Sea

In the North Sea, 3 fleets can be distinguished:

- beam trawlers >300hp fishing with mesh size over 100mm for plaice;
- beam trawlers >300hp fishing with mesh size between 80 and 100mm for a mixture of plaice and sole and
- beam trawlers <300hp fishing with mesh size between 80 and 100mm for a mixture of plaice and sole. These vessels can also operate within the 12 miles zone and the plaice box. Many of these vessels also operate in other métiers (e.g. shrimping).

NL applies for all three fleets separate sampling programmes for landings (in fish markets) and discards (self-sampling and observer programmes). Until 2009, discards were only monitored in the fleet >300hp 80-100 mm by an observer programme. Since 2009, self-sampling programmes have been introduced in all 3 métiers. A limited observer programme is run in parallel to check the representativeness of the new sampling system in order to be able to continue present data series on discards. Sampling of discards is presently biased through vessels from southern ports and vessels operating chain mats are poorly represented in the sampling fleet (lack of cooperation).

The German beam trawler fleet >300hp 80-100mm consists of 5 vessels. These are Dutch owned flag vessels operating in IVb and IVc landing their catch mostly in NL. Germany applies a concurrent sampling system of 1 trip by quarter (4 annually). More than 100 vessels >300hp are operating at least occasionally with mesh sizes between 80 and 100mm directed on flatfish. However, most of the vessels are shrimpers, most of the other are so-called Euro Cutters operating with different gears throughout the year. Germany aims at sampling this fleet with one trip per quarter as well.

In principle, NL and GER agreed to share their data for this metier but further discussion is needed.

6) Recreational Fisheries

This subject was dealt with briefly. The MS informed each other on their (intended) activities.

Germany: Previous pilot studies have indicated that recreational catches of cod in the North Sea are very low. Germany has been granted with derogation for sampling these catches. However, these pilot studies have indicated that the catches in the Baltic are significant (about 50% of the total catch). A continuous sampling programme is included in the NP for this area using about 2 man-years effort each year.

Netherlands: Previous pilot studies gave very uncertain estimates of Dutch recreational cod catches in the North Sea but indicate that the recreational catches could be of the same magnitude as the commercial catches in present years where cod quota are very low. NL has applied for derogation for sampling these catches in 2009, but this was refused. NL is presently setting up a sampling programme for marine recreational fisheries. This programme will probably be based on telephone surveys (effort) and field observations (cpue) and will become operational end of 2009. For eel, estimates of recreational catch have been made in the past on a multiannual basis. This approach will be continued in the future.

Landings and no. of vessels DE/NL in the CECAF area (Mauritania)

						No. of vessels			
	2006	2007	2008	Average	% EU		2006	2007	2008
<i>Sardina pilchardus</i>									
DE landings	338	348	-	343	2,0	DE	2	1	0
NL landings	2585	8521	9075	6718	36,4	NL	5	4	5
EU landings	20190	14769	?	18480		EU			
Int. landings	704634	663147	?	683891	2,7 %EU of Int.	Int.			
<i>Sardinella aurita</i>									
DE landings	14783	12093	-	13438	16,8				
NL landings	45415	62862	67470	58583	73,3				
EU landings	58270	101577	?	79924					
Int. landings	311954	433765	?	372860	21,4 %EU of Int.				
<i>Trachurus trachurus</i>									
DE landings	161	465	-	313	3,8				
NL landings	7327	1041	1560	3310	39,7	<i>Trachurus</i> spp as we can't separate species from logbooks			
EU landings	4409	12257	?	8333					
Int. landings	92391	94049	?	93220	8,9 %EU of Int.				
<i>Trachurus trecae</i>									
DE landings	-	-	-	-	-				
NL landings	-	-	-	-	-				
EU landings	39524	61427	?	50476					
Int. landings	256698	307042	?	281870	17,9 %EU of Int.				
<i>Scomber japonicus</i>									
DE landings	62	201	-	132	1,6				
NL landings	1245	1288	1160	1231	14,8				
EU landings	7345	15202	?	11274					
Int. landings	206266	257543	?	231905	4,9 %EU of Int.				

Trachurus spp as we can't separate species from logbooks

Landings and no. of vessels DE/NL in the South Pacific

						No. of vessels			
	2006	2007	2008	Average	% EU		2006	2007	2008
<i>Trachurus murphi</i>									
DE landings	-	43588	46564	45076	46,3	DE	0	3	3
NL landings	-	37593	36853	37223	38,2	NL	0	2	2
EU landings	62137	123511	106665	97438		EU	?	8	7
Int. landings	1728916	1751085	1157986	1545996	6,3 %EU of Int.	Int.	?	56	53
<i>Scomber japonicus</i>									
DE landings	-	3449	1929	2689	2,8				
NL landings	-	3252	2337	2795	2,9				
EU landings	5989	9067	5879	6978					
Int. landings	356474	315201	139825	270500	2,6 %EU of Int.				

**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:

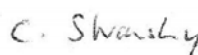
For UK (Cefas)



Carl O'Brien

Fisheries Division Director

For Germany (vTI-SF)



Dr. Christoph Stransky

German National Correspondent

Date: 19th March 2010

19 March 2010

Johann Heinrich von Thünen-Institut
Bundesforschungsinstitut für
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Fragebogen für das Jahr 2007

Frage 1: Unser Betrieb ist in der Herstellung von Fischereierzeugnissen (Fischverarbeitung) tätig

Ja ☐ Nein ☐

Wichtig: Falls Sie „Nein“ angekreuzt haben, ist die weitere Beantwortung des Fragebogens nicht nötig. Wir bitten um Rücksendung des Fragebogens oder um eine kurze Rückmeldung unter

Tel: 040-38905-212 oder

Fax: 040-38905-212 oder

Email: michael.ebeling@vti.bund.de

Frage 2: Unser Umsatz setzte sich 2007 grob geschätzt wie folgt zusammen (auf 5 % gerundet wie bspw. 75 % oder 30 %)

Herstellung von Fischerei- erzeugnissen (Fischverarbeitung)	%
Handel mit nicht selbst hergestellten Fischereierzeugnissen	%
Sonstiges (darunter Umsatz mit Nicht-Fischprodukten)	%
Summe	100 %

Frage 3: Unser Umsatz durch die Herstellung von Fischereierzeugnissen (nur Fischverarbeitung) betrug im Jahr 2007

Tsd. €

Frage 4: In der Fischverarbeitung machten Halbfertigprodukte und verbrauchsfertige Enderzeugnisse in unserem Betrieb folgende Umsatzanteile aus (auf 5% gerundet)

Halbfertigprodukte zur Weiterverarbeitung in anderen fischverarbeitenden Betrieben (z.B. Filetblöcke, Heringshappen, -lappen)	%
Verbrauchsfertige Enderzeugnisse zur direkten Belieferung des Großhandels, Einzelhandels, Gastronomie	%
Umsatz Fischverarbeitung	100 %

Frage 5: Das Gesamtgewicht an eingesetzter Fischrohware im Jahr 2007 betrug etwa

Tonnen

Frage 6: Unser Betrieb vermarktete 2007 verbrauchsfertige Enderzeugnisse aus der eigenen Fischverarbeitung mit folgenden geschätzten Umsatzanteilen (gerundet auf 5%)

Frischfische und Frischfisch- erzeugnisse	%
Tiefgefrorene Fische und Fisch- erzeugnisse	%
Gesalzene Fische und Fisch- erzeugnisse	%
Marinaden	%
Räucherfische, -erzeugnisse	%
Fischsalate	%
Krebs- und Weichtiererzeugnisse	%
Fischdauerkonserven	%
Sonstige	%
Summe verbrauchsfertige Enderzeugnisse	100 %

Frage 7: Im Jahr 2007 war in unserem Betrieb die folgende Anzahl von Personen (in Vollzeitäquivalenten, Erläuterung siehe unten) in der Fischverarbeitung tätig

Beschäftigte

Anmerkung zu Frage 7:

Bitte rechnen Sie Teilzeitbeschäftigte oder Saisonarbeitskräfte nur anteilig an. Als Vergleichsbasis soll die Jahresarbeitszeit von Vollzeitbeschäftigten dienen.

Frage 8: Die Produktionskosten im Bereich Fischverarbeitung betrugen im Jahr 2007

Lohnkosten	Tsd. €
Energiekosten	Tsd. €
Rohwareneinsatz (Fische oder Fischhalbfabrikate)	Tsd. €
Andere Rohwaren	Tsd. €
Verpackung	Tsd. €
Sonstige laufende Kosten	Tsd. €
Steuerliche Abschreibungen	Tsd. €

Frage 9: Bitte geben Sie abschließend folgende betriebswirtschaftliche Kennziffern für 2007 an

Eigenkapitalquote (in etwa)	%
Ausnutzungsgrad der betrieblichen Anlagen (Vollauslastung =100%)	%

Vielen Dank für Ihre Mitarbeit!

National programme for the collection, management and use of data in the fisheries sector for the period N - (N+2)

INDICATIVE COST OF MULTI-ANNUAL NATIONAL PROGRAMME N - (N+2) *

- EURO -

Year	Planned eligible expenditure	Maximum Community contribution
2011	6,615,835.00	
2012	5,938,588.00	
2013	7,192,551.00	
TOTAL	19,746,974.00	-

* - to be inserted into the National Programme