

**GERMAN NATIONAL MULTIANNUAL FISHERIES DATA
SAMPLING PROGRAMME
2009-2010**

Based on

**EU Council Regulation 199/2008, Commission Regulation 665/2008 and Commission
Decision 2008/XXX/EC**

Table of contents

| | | |
|-------|---|----|
| I. | General framework | 3 |
| II. | Organisation of the National Programme | 3 |
| II.A | National organisation and co-ordination | 3 |
| II.B | International co-ordination | 5 |
| II.C | Regional co-ordination | 5 |
| III. | Module of evaluation of the fishing sector | 5 |
| III.A | General description of the fishing sector | 5 |
| III.B | Economic variables | 5 |
| III.C | Biological - metier-related variables | 12 |
| III.D | Biological - Recreational fisheries | 21 |
| III.E | Biological - stock-related variables | 26 |
| III.F | Transversal variables | 29 |
| III.G | Research surveys at sea | 31 |
| IV. | Module of the evaluation of the economic situation of the aquaculture and processing industry | 45 |
| IV.A | Collection of data concerning the aquaculture | 45 |
| IV.B | Collection of data concerning the processing industry | 51 |
| V. | Module of evaluation of the effects of the fishing sector on the marine ecosystem | 52 |
| VI. | Module for management and use of the data | 52 |
| VI.A | Management of the data | 52 |
| VI.B | Use of the data | 56 |
| VII. | Follow-up of STECF recommendations | 56 |
| VIII. | List of derogations | 62 |
| IX. | List of acronyms and abbreviations | 66 |
| X. | Comments, suggestions and reflections | 68 |
| XI. | References | 68 |
| XII. | Annexes | 69 |

I. 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 2008/XXX/EC. 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. 2008).

This NP proposal covers the forthcoming two years, 2009-2010 (= NP-years).

In the transition of the NP planning and execution from the former legal basis (Council Reg. 1543/2000, COM Regs. 1639/2001 and 1581/2004) to the new one 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 co-ordination

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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 422 (part of unit G42) is responsible for the central database of all national fisheries-related data and central IT services (e.g. national DCR website).

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, 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**:

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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).

II.B International co-ordination

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 2008 according to an updated list to be sent by the Commission during December 2008.

II.C Regional co-ordination

Germany will participate in the Regional Co-ordination Meetings (RCMs) for the Baltic, North Sea & Eastern Arctic, North Atlantic and Other regions. Apart from regional (multilateral) agreements to be established at the RCMs, Germany currently holds bilateral agreements with Denmark, Sweden and The Netherlands on sampling foreign-flag vessels (see previous German NPs). Also see regional coordination for the various sampling parameters in the individual sections below.

III. Module of 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 'other areas', 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 2007. 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 one single vessel is assigned to the supra-region "Other regions".

Supra-region: “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”

III.B.1 Data acquisition “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”

General approach and sampling procedure

The basis of the German data collection is the national fleet register. A comparison with the landings declaration allows for separating active from inactive vessels. Inactive vessels will be sampled at a lower coverage rate, since for that group only the parameter “capital value” has to be determined, on which a low scattering is expected.

For active vessels, landings declarations are available exhaustively, and logbooks are available for all vessels > 8m.

The German data collection programme for the collection of economic fleet data in 2009-2010 is based on three sources: (i) an accountancy network which consists of about 155 vessels providing several economic data annually, (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: 0-10 m*and 24-40 m*”; “Vessels using other active gears 24-40 m*”; “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.

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

Trading of quota is currently not permitted in Germany.

Direct subsidies; Other income; Wages and salaries of crew

These variables will be determined according to the rules provided in the Commission Decision (2008/XXX/EC), which are self-explanatory.

Imputed value of unpaid labour

Unpaid labour is assumed only in cases where the vessel is operated as a one-man business (which does not mean that the crew consists of one person only). In that case, the first person onboard is regarded as the self-employed owner without explicit salary. The imputed value of unpaid labour is calculated using the full-time equivalent (see calculation of “FTE national”) for this person, multiplied by the average annual gross income of a full-time employee in the industry or in the service sector. This value (currently ~37 k€) is provided by the German Federal Statistics Office.

Energy costs

Costs (value) are estimated by multiplying the volumetric consumption (see variable “Energy consumption”) by an average fuel price for the reference year.

Repair and maintenance costs; Variable costs; Non-variable costs

These variables will be determined according to the rules provided in the Commission Decision (2008/XXX/EC), which are self-explanatory.

Annual depreciation

The following depreciation periods are used: hull = 25 years; engine = 10 years, electronics and other equipment = 5 years. The annual depreciation is calculated using the linear approach and the equations provided by the Excel spreadsheet which has been developed in the “Study FISH/2005/03 on capital value, investment and capital costs in the fisheries sector”. It is stressed that for the fleet, the variable group “Capital cost” consists only of the variable “annual depreciation” as defined in the Commission Decision (2008/XXX/EC). For the fleet - in contrast to the processing industry and the aquaculture sector - “Capital cost” does explicitly not contain any actual interest on loans paid by the vessel owner. Germany will consequently apply this rule.

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

In order to determine replacement and historical values of the vessels in the German fleet register, an approach is chosen which is entirely consistent with the procedures described in the “Study FISH/2005/03 on capital value, investment and capital costs in the fisheries sector”. As a starting point, the vessels of the German fleet are separated into typical units with regard to size, hull material, engine characteristics, prevalent fishing technique and electronic equipment. Current prices for the construction of these typical units will then be determined on the market. This approach is preferred to “prices per capacity unit” as proposed in the study “FISH/2005/03”, because the price per capacity unit varies between “typical units” as mentioned above. Therefore, these “typical units” are more suitable for the characterisation of the German fleet. Values will be requested from ship builders.

Table III.B.1.1: “typical units” for determination of replacement values.

| | Passive gear 6-12 m | Active gear 6-12 m | Beam trawlers 12-18 m | DTS 18-24 m | DTS 24-40 m | Dredger 24-40 m | DTS >40 m | PTS >40 m |
|------------------------------|------------------------|-----------------------|--------------------------|----------------|----------------|--------------------|--------------|--------------|
| Hull: steel fiber wood | | | | | | | | |
| Engine | | | | | | | | |
| Electronics | | | | | | | | |
| Equipment | | | | | | | | |

It is aimed to get values for the upper and lower length for each unit, the value for vessels with lengths in between will be calculated by linear interpolation. The values in Table III.B.1.1 will be used as benchmarks for further calculations, as described in the Study “FISH/2005/03”. If necessary, the total value of the vessel is split in a ratio of 60:20:10:10 (hull:engine:electronics:other equipment), as this was found to be a good approximation in the study “FISH/2005/03”. The value in the “units” table will equal to the replacement value for the year of reference. In order to calculate replacement values for previous or subsequent years, the benchmark value will be adjusted using the appropriate price indices for machinery, which is provided by German official statistics. This way, also the historical value will be calculated: the construction year is available from the fleet register.

For the determination of the depreciated values, the recommended Excel spreadsheets which are provided with the Study will be used.

In case that the historical value is still available from company accounts and also meaningful (e.g. not a memo value), it will be taken into consideration, in particular for comparison with the calculated values.

Value of quota and other fishing rights

Trading of quota is currently not permitted in Germany. Therefore a value cannot be assigned to quota.

Investments in physical capital; Debt/asset ratio; Engaged crew

These variables will be determined according to the rules provided in the Commission Decision (2008/XXX/EC), which are self-explanatory.

FTE National

The Study “FISH/2005/14” (Calculation of labour including full-time equivalent...) does not provide a calculation approach which addresses the specific employment characteristics on fishing vessels. In the German fleet, there is – with very few exceptions, e.g. the few large pelagic trawlers – no vessel with employees who have a typical full-time engagement with ± 40 hrs/week working time. Working time can easily be 20hrs/day in work peak phases, which are not uncommon.

For the German fleet, the working hours are therefore determined using the days at sea, which are derived from the logbook entries. Every day at sea accounts for 10 hours of work time, which is then applied to the crew number as indicated in the fleet register. 1800 hrs/year correspond to 1 FTE.

For vessels < 8m, no logbook data are available. Therefore, the hrs/year will be determined directly through the scheduled survey.

FTE harmonised

This variable is calculated as the number determined for “FTE national” multiplied by 2000/1800.

Number; Mean LOA; Mean vessel's tonnage; Mean vessel's power; Mean age; Days at sea

These variables will be determined from the fleet register, according to the rules provided in the Commission Decision (2008/XXX/EC), which are self-explanatory.

Energy consumption

The fuel consumption per fleet segment will be computed in three steps. In the first step, the specific fuel consumption per hour at sea and engine power (kW) will be calculated for the sampled vessels. In the second step, the hours at sea for these vessels will be extracted from the logbook information. Finally, both numbers are combined to a segment specific fuel consumption (volume) value. This procedure includes all vessels of the active fleet.

Number of fishing enterprises/units

The number of fishing enterprises/units with segmentation by vessel number as requested is derived from the fleet register.

Value of landings per species; Average price per species

These values are derived from the landings declarations.

Derivation of final estimates from sample data:

Sample data will be weighted by variables which reflect the effort and which are exhaustively available. The most appropriate weighting variable can only be determined when the data are available. It will be the one with the best match - by evidence - between the frequency distribution of the sample and the total population of the referred fleet segment. According to former experience, this can be transversal variables like total landings, days at sea, hours fished, or length over all. In general, a weighting variable should be causally linked to the variable which has to be estimated. For instance, a link between variable costs and effort or landing data should be meaningful, while fixed costs are more likely linked with capacity data.

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 18 months, according to the experience of previous years. This means, data for 2007 will be available by the mid-2009 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.

The reference year 2007 as indicated in Tables III.B.1 and III.B.2 reflects the most recent information available for the German fleet at the due time of the NP. For 2008, the fleet register on Jan. 1st is

available, but since the year has not ended, segmentation with respect to the fishing gear is not yet feasible.

Clustering has to be performed to assure confidentiality of data. This implies that segments which require clustering consist of few vessels only. The first approach for clustering is to merge segments with the same fishing technique and an adjacent length class. The justification is that fishing technique is the factor which has most influence on the cost structure and on catch specifics of a vessel. Merging vessels of the same length class, but different fishing gear, would bias the final data: a VL40XX pelagic trawler cannot be compared with a VL40XX dredger or a VL40XX demersal trawler. Vessels using passive gears had to be merged not only between length classes, but also between different gears. Statistical analysis of this issue is not viable, since the number of vessels involved is by definition always very small, and scattering (variability) is always high.

III.B.2 Data quality “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”

Some segments are sampled through a self-selective procedure. The coverage rates are 25% or higher in almost all cases. An analysis by evidence on the frequency distribution of the variables “catch time” and “total catch” shows a good similarity between the sample and the total population (see Fig. III.B.2). Since the values are not (log-)normally distributed, a significance or error level cannot be provided with standard statistical procedures. As long as no standard procedure has been agreed upon on an international level, this kind of visual analysis is regarded as best approach.

The survey on vessels < 10m using passive gears is aimed at a 20% sampling rate, which is regarded as sufficient. A final statement on data quality can only be given after the received data have been evaluated.

Logbooks, landings declarations and questionnaires are the data sources used. Logbooks and landings declarations are cross-checked during the computerisation. Landings declarations are checked by inspectors during the discharge procedure. About 20% of the annual landings in Germany are inspected. Results of questionnaires will be checked for consistency and comparability of the numbers. Extreme values which are wrong by evidence will be enquired, if possible, or deleted.

III.B.3 Regional coordination “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”

No RCM has taken place by the due time of this NP proposal.

III.B.4 Derogations and non-conformities “Baltic Sea, North Sea and Eastern Arctic, and North Atlantic”

No derogations and non-conformities.

Supra-region “Other regions”

III.B.1 Data acquisition “Other regions”

The population consists of only one vessel. This vessel will be sampled by questionnaire using the same approach as described for the first supra-region.

III.B.2 Data quality “Other regions”

The population consists of only one vessel. Sampling will be exhaustive.

III.B.3 Regional coordination “Other regions”

No RCM has taken place by the due time of this NP proposal. Germany is not expected to participate in the RCM “Other regions”, according to the STECF/SGRN report on the “Review of guidelines for the new DCR (SGRN-08-01)”

III.B.4 Derogations and non-conformities “Other regions”

No derogations and non-conformities.

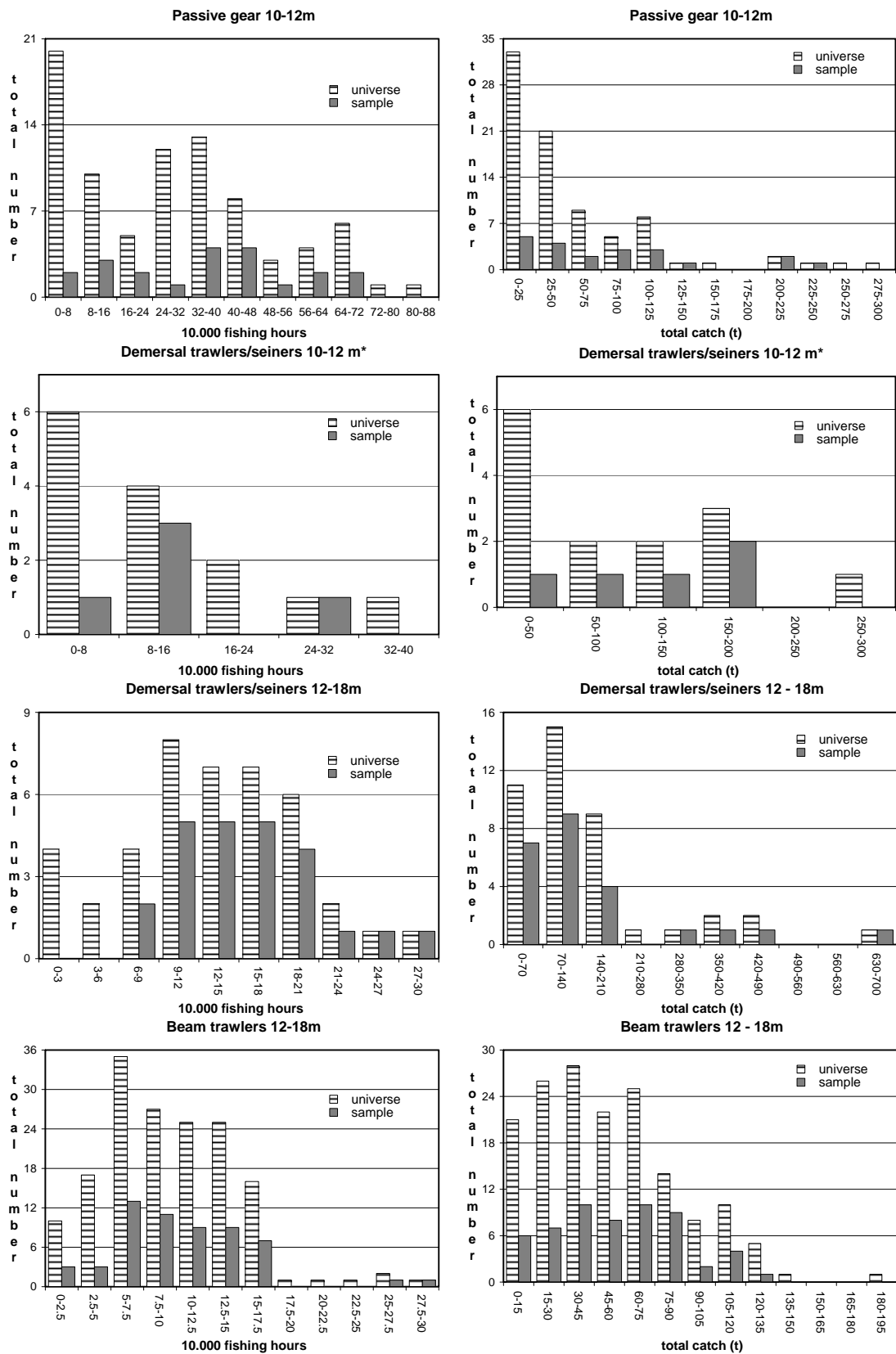


Fig. III.B.2 Frequency distribution of the variables „fishing hours“ and „total catch“: comparison between universe and sample for the fleet segments with self-selective sampling.

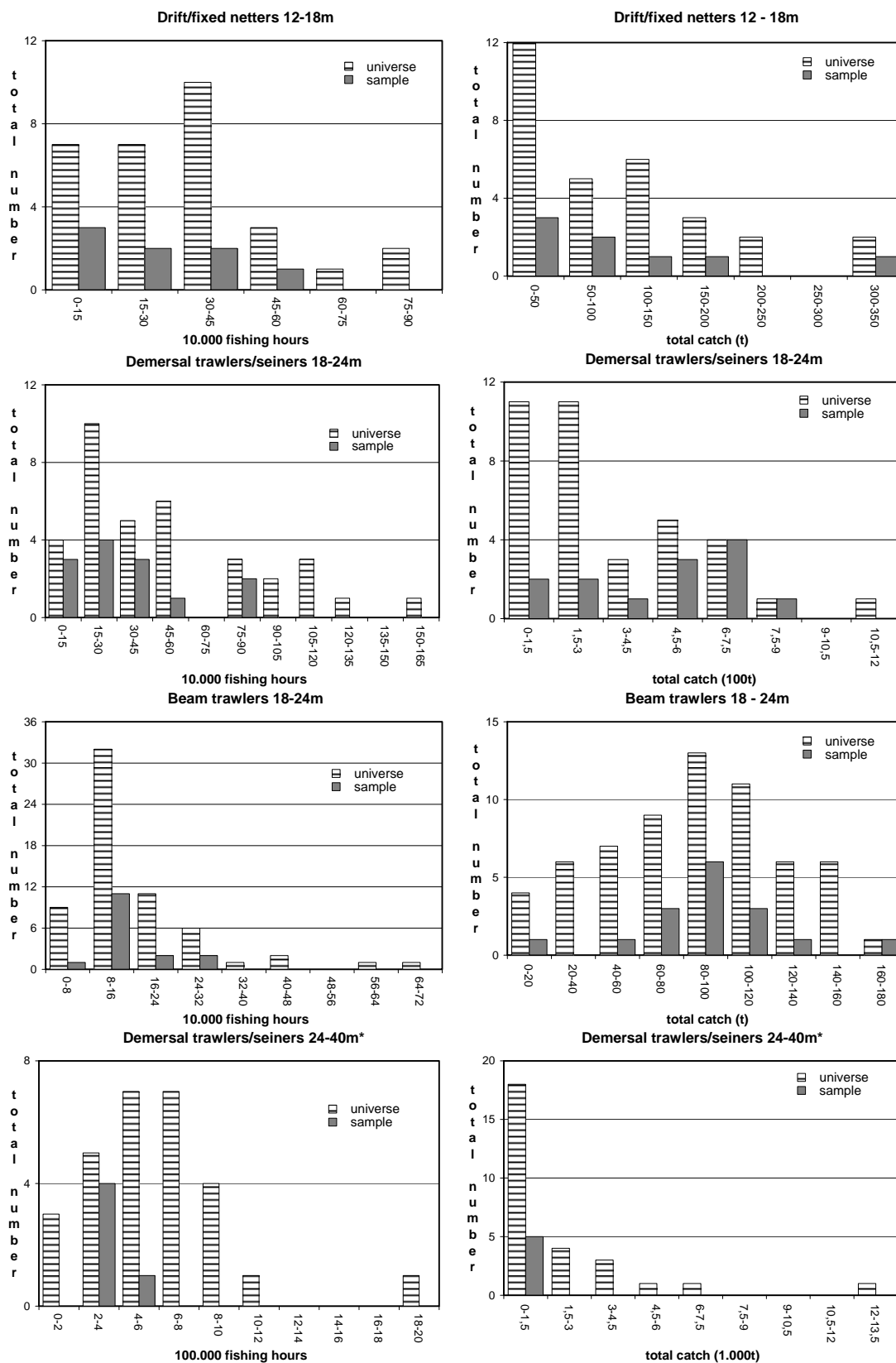


Fig. III.B.2 (cont.) Frequency distribution of the variables „fishing hours“ and „total catch“: comparison between universe and sample for the fleet segments with self-selective sampling.

III.C Biological - metier-related variables

Baltic Sea

Sampling of biological metier-variables **will be carried out simultaneously** with the collection of stock related variables (see general remark in section III.E).

III.C.1 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. 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 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 (Tab. III.F.3). 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.

The logbook data for the German Baltic fishery contain regularly a rather large number of trips with a complex mixture of areas, stocks and metiers. To follow strictly a “one trip-one metier” rule would frequently mean to pool different stocks, mesh regulations and even target assemblages into one metier and could lead to an underestimation of the importance of some metiers.

As an alternative approach, a target species (criterion: highest fraction of landings) was allocated to the area/gear stratum and day active within a trip. For one vessel, each gear active at a specific date produces a day active, resulting in a slightly higher number of effort days (as days active) compared with the vessels days at sea. The number of trips is also higher because each metier active on a vessel's trip is considered a separate “trip”. Thus, e.g. in 2007, the number of trips is increased by roughly 7 percent. Then the aggregation of the metiers was done with these trips.

For boats less than 8m in length having only landing declarations as the data basis, the effort in terms of days at sea 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 the Commission Decision 2008/XXX/EC and the mesh openings as laid down in the Regulation 2187/1998.

The fishing activities of vessels from 8m and above were allocated according to the gear given in the logbook, whereas those of the smaller vessels were pooled into a MIS gear class.

Beyond a cumulative rank of about 95 percent, some fishing activities occur that could not be allocated to one of the defined metiers. The reasons for that are not yet analysed in due detail. Failures in the implementation of the algorithm cannot be fully excluded but are expected to be of minor importance. One of the main reasons is surely that the gear (e.g. TBB - beam trawls, OFG - other fixed gear) or the gear-target assemblage combination (e.g. GNS - crustaceans, FPO - crustaceans) do not appear in the matrix.

Moreover, in the case of some combinations of gear and target assemblage (e.g. GNS demersal fish) the mesh data in the logbook may be given as mesh size while it should have been declared as mesh opening. In some of these cases a translation into legal mesh openings may be justified (multiply by 2) but not in all instances.

In addition, the target assemblage allocation by largest fraction of landed species may cause also failures (e.g. GNS ANA with illegal mesh opening less than 157 mm, e.g. gear set for cod fishing but maximum landing is sea trout).

Next year, the implementation of the algorithm will be refined as to allow an allocation of more of the remaining fishing activities. An attempt will be undertaken to solve apparent logbook data problems e.g. the one of strictly following the mesh opening rule. All metiers with fishing activities of the German fleet are listed in Table III.C.1.

III.C.2 Data acquisition

The sampling strategy, which is defined by “other” depends on the target assemblage of the specific metier:

a) small pelagic fish:

Concurrent sampling will be conducted at a sample, which is taken from the landings in the harbour. This procedure is possible, since these fisheries usually land the entire unsorted catch. Those samples are purchased by the institute and worked up in the laboratory.

b) demersal fish:

Germany frequently uses samples which were taken by fishermen directly at sea (self-sampling). These samples are unsorted parts of the catch (concurrent, including landings and discards) or unsorted catch of a selected species (e.g. cod). Those samples are purchased by the institute and worked up in the laboratory.

c) freshwater fish:

The sampling of metiers directed to freshwater species will be established in the upcoming planning period (NP 2009-2010) for the first time. Therefore, an optimal sampling strategy is not yet available. Possible sampling strategies could be: concurrent sampling at sea, or purchase of unsorted parts of the catch (concurrent or selected species), as described for fisheries targeting demersal fish assemblages (see above).

Table III.C.2 shows the metiers that have been merged for sampling purposes. The rationales behind the decisions are as follows:

PTM_SPF_32-104_0_0 containing:

PTM_SPF_32-104_0_0 / PTB_SPF_32-104_0_0 / PTB_SPF_32-89_0_0 / OTM_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.

GNS_SPF_32-109_0_0 containing:

GNS_SPF_32-109_0_0 / MIS_SPF_all_0_0 / FPO_SPF_all_0_0

Static gears in the herring fishery are sampled weekly by harbour sampling during the fishing season. The gear used by the vessels to be sampled cannot be planned.

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 hardly to separate for sampling planning.

GNS_DEF_110-156_0_0 containing:

GNS_DEF_110-156_0_0 / GNS_DEF_90-156_0_0 / MIS_DEF_all_0_0

The passive-gear fisheries on demersal fish is merged for sampling due to the sampling mode. Mostly, the samples were ordered and purchased from vessels obliged to fill in logbooks (≥ 8 m vessel length), whereby sampling will be expanded to smaller vessels and concurrent sampling at sea.

MIS_FWS_all_0_0 containing:

MIS_FWS_all_0_0 / GNS_FWS_ ≥ 70 _0_0

Sampling the freshwater species is a new feature in the German fishery sampling. It is expected that the majority of gears for the smaller boats are gill nets, too.

PTM_SPF_16-31_0_0 containing:

PTM_SPF_16-31_0_0 / OTM_SPF_16-31_0_0 / PTM_SPF_16-104_0_0

These metiers take part in a sprat fishery in SD 25 and are therefore merged for sampling.

OTB_DEF_ ≥ 105 _1_110 containing:

OTB_DEF_ ≥ 105 _1_110 / OTM_DEF_ ≥ 105 _1_110

In the second quarter, Eastern Baltic cod pre-spawning concentrations are fished in SD 25 using bottom trawls during daytime and pelagic gear during the night.

Sampling effort (Tab. III.C.3): After metier merging, 8 fisheries are left selected either by landings, effort or value. The sampling strategy for all trips is concurrent sampling at sea. Additional samples are gathered in the harbours (herring) and purchased from the fishermen (cod and flounder). See section III.E for a general comment on the preferential use of sampling at sea.

In the following, each metier is listed and 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: Four observer trips (concurrent at sea) and 11 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: 21 trips with “other”-strategy (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: 9 observer trips (concurrent at sea) and 23 with “other”-strategy (self-sampling) 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: three observer trips (concurrent at sea) and three with “other”-strategy (self-sampling) 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: One trip with “other”-strategy (harbour-sampling) is planned.

MIS_FWS_all_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: Two trips with “other”-strategy (self-sampling) are planned.

SD 25-32:

PTM_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: 2 observer trips (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: 2 observer trips (concurrent at sea) and 8 with “other”-strategy (self-sampling) are planned.

III.C.3 Data quality

In general, all metiers are defined by level 6 of the matrix in Appendix IV (1-5) of Commission Decision 2008/XXX/EC. For a detailed description of every selected metier, refer to section III.C.2. No ‘national’ (matrix level 7) metiers have been established.

III.C.4 Regional coordination

There are existing bilateral agreements with Denmark and Sweden. See Germany’s NP proposal 2008 for details. These agreements are all related to the sampling of commercial catches and are still based on the EU Council Regulation 1543/2000 and Commission Regulations 1639/2001 and 1581/2004. Within the next RCM Baltic, Germany aims at updating the agreements, respectively to conclude new agreements.

III.C.5 Derogations and non-conformities

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

MIS_CAT_all_0_0

The eel fishery takes place within 3nm from the coastline and is therefore subject to other (Federal Country directed) activities in Germany.

LLD_ANA_0_0_0

The longline fishery on salmonids in the Eastern Baltic came into the ranking matrix only for its effort numbers, whereby the absolute landings and values are negligible.

North Sea and Eastern Arctic

Sampling of biological metier-variables **will be carried out simultaneously** with the collection of stock related variables (see general remark in section III.E).

III.C.1 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. 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 (Tab.III.F.3). 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 métier 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 is based on landings, effort and value data from all German fishing trips undertaken in 2006 and 2007 in accordance with Commission-Decision 2008/XXX/EC. All selected métiers are listed in Table III.C.1.

III.C.2 Data acquisition

Table III.C.2 shows the métiers that have been merged for sampling purposes. The rationale behind the decision is as follows:

OTB_DEF_>=120_0_0 in IV,VIIId / OTB_DEF_90-119_0_0 in IV,VIIId / OTB_DEF_90-119_0_0 in I,II

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 water, 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 the border.

Sampling effort (Tab. III.C.3): After métier merging, 12 fisheries are left selected either by landings, effort or value. As the majority of the German fleet is landing in foreign countries and thus landings in German harbours are only minor, the sampling strategy for all trips is concurrent sampling at sea. See section III.C.5 for the distribution of sampling effort among the métiers to sample. See the beginning of section III.E for a general comment on the preferential use of sampling at sea.

In the following, each métier is listed and described:

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 three months. Sampling effort: 2 observer trips are planned.

OTM_SPF_32-69_0_0

Target species: Atlantoscandian herring. Peak season: August/September/October. Area: Northern waters (Norwegian Sea). Duration of trips: 3 to 4 weeks. Sampling effort: 1 observer trip is planned.

TBB_CRU_16-34_0_0

Target species: Brown shrimp. Peak season: All year round with peaks in the 2nd and 3rd quarter. Area: German North Sea coastline. Duration of trips: 1 to 3 days. Sampling effort: 8 observer trips are planned.

TBB_DEF_70-89_0_0

Target species: Sole and plaice. Peak season: All year round but currently diminishing because of the high fuel costs. Area: Southern North Sea. Duration of trips: 4 to 6 days. Sampling effort: 4 observer trips are planned.

OTB_MCD_70-89_0_0

Target species: Mixed crustaceans (*Nephrops*) and demersal fish. Peak season: All year round. Area: Southern North Sea. Duration of trips: 4 to 6 days. Sampling effort: 1 observer trip is planned.

OTB_DEF_>=120_0_0

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

OTB_DEF_70-89_0_0

Target species: Flatfish. Peak season: All year round. Area: Central and Southern North Sea. Duration of trips: 5 to 8 days. 2 observer trips are planned.

OTB_DEF_<16_0_0

Target species: Sandeel. Restricted fishing season. Area: Northern North Sea. Duration of trips: 6 to 10 days. See III.C.5.

PTB_DEF_>=120_0_0

Target species: Cod. Peak season: 2nd/3rd quarter. Area: Northern North Sea. Duration of trips: 1 to 2 weeks. 2 observer trips are planned.

SSC_DEF_>=120_0_0

Target species: Cod. Peak season: 2nd/3rd quarter. Area: Northern North Sea. Duration of trips: 1 to 2 weeks. 2 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, 4th quarter; Herring – 3rd quarter/December. Area: North Sea and English Channel. Duration of trips: 3 to 4 weeks. Sampling effort: 3 observer trips are planned.

PTM_SPF_32-69_0_0

Target species: Herring. Peak season: 3rd quarter. Area: North Sea. Duration of trips: 1 to 2 weeks. Sampling effort: 1 observer trip is planned.

III.C.3 Data quality

In general, all metiers are defined by level 6 of the matrix in Appendix IV (1-5) of Commission Decision 2008/XXX/EC. For a detailed description of every selected metier, refer to section III.C.2. No ‘national’ (matrix level 7) metiers have been established.

III.C.4 Regional coordination

There are existing bilateral agreements with The Netherlands, Denmark and Sweden. See Germany’s NP proposal 2008 for details. These agreements are all related to the sampling of commercial catches and are still based on the EU Council Regulation 1543/2000 and Commission Regulations 1639/2001 and 1581/2004. Within the next RCM North Sea & Eastern Arctic, Germany aims at updating the agreements, respectively to conclude new agreements.

III.C.5 Derogations and non-conformities

The number of planned sampling trips is in many cases less than the recommendation of the DCR/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 sea 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 (e.g. brown shrimp fishery) is not fixed yet and depending on staff availability and regional agreements between Member States.

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

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

Reason: In accordance to the quota regulation (Council Regulation 40/2008), 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 of 96% for Sweden and 4% for Germany. Therefore, the share in sampling effort for Germany is negligible and subject of bilateral agreement with Sweden.

North Atlantic

Sampling of biological metier-variables **will be carried out simultaneously** with the collection of stock related variables (see general remark in section III.E).

III.C.1 Selection of metiers to sample

See section III.C.1 of region “North Sea and Eastern Arctic”.

III.C.2 Data acquisition

Table III.C.2 shows the metiers that have been merged for sampling purposes. The rationales behind the decisions are as follows:

OTM_DEF_90-119_0_0 in XII/XIV / OTM_DEF_>=120_0_0 in XII/XIV

This fishery is directed on redfish and takes place in international waters as well as in Greenland waters. In both waters, different mesh size regulations apply. This fishery took place until 2007, but stopped in 2008, thus sampling will only take place if this fishery will take place in 2009-2010.

OTM_SPF_32-69_0_0 in: VI / VIIb,c,k / VIIf,g,h,j / VIII

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. VIII targeting horse mackerel.

FPO_CRU_all_0_0 in: VI / VIII / XII,XIV

These codes are summarizing two vessels seasonally targeting deep water crustaceans with pots.

GNS_DEF_>=220_0_0 in: VI / VIIb,c,k

These codes are summarizing four vessels with lengths between 26 and 31 meters targeting anglerfish with set nets.

Sampling effort (Tab. III.C.3): After metier merging, 7 fisheries are left selected either by landings, effort or value. As the majority of the German fleet is landing in foreign countries and thus landings in German harbours are only minor, the sampling strategy for all trips is concurrent sampling at sea. See section III.C.5 for the distribution of sampling effort among the metiers to sample. See the beginning of section III.E for a general comment on the preferential use of sampling at sea. In the following, each metier is listed and described:

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.

OTB_DEF_>=120_0_0

Target species: Redfish. Peak season: 3rd quarter. Area: Iceland/Faroese. Duration of trips: 2 to 3 weeks. Sampling effort: See III.C.5.

OTM_SPF_32-69_0_0

Target species: Mackerel, horse mackerel, blue whiting. Peak season: March to June/October/November. Area: West British waters and Bay of Biscay. Duration of trips: 3 to 4 weeks. Sampling effort: 2 observer trips are planned.

FPO_CRU_all_0_0

Target species: Deep water crustaceans. Peak season: All year round. Area: North East Atlantic. Duration of trips: 4 weeks. See III.C.5.

GNS_DEF_>=220_0_0

Target species: Anglerfish. Peak season: All year round. Area: North East Atlantic. Duration of trips: 4 weeks. See III.C.5.

OTB_DEF_>=120_0_0

Target species: Greenland halibut. Peak season: 2nd/3rd quarter. Area: East 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: 2nd/3rd quarter. Area: Irminger/Labrador Sea. Duration of trips: 4 weeks to three months. Sampling effort: See III.C.5.

III.C.3 Data quality

In general, all metiers are defined by level 6 of the matrix in Appendix IV (1-5) of Commission Decision 2008/XXX/EC. For a detailed description of every selected metier, refer to section III.C.2. No 'national' (matrix level 7) metiers have been established.

III.C.4 Regional coordination

There is an existing bilateral agreement with The Netherlands, see Germany's NP proposal 2008 for details. This agreement is related to the sampling of commercial catches and is still based on the EU Council Regulation 1543/2000 and Commission Regulations 1639/2001 and 1581/2004. Within the next RCM North Atlantic, Germany aims at updating the agreements, respectively to conclude new agreements.

III.C.5 Derogations and non-conformities

The number of planned sampling trips is in many cases less than the recommendation of the DCR/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 sea metiers with only a few vessels and long fishing trips (3 weeks and longer) to sample every quarter.

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

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

OTB_DEF_>=120_0_0 (Fishery directed on redfish in ICES area V)

Reason: This fishery recently took only place in 2007 and disappeared again in 2008. Therefore, sampling might not be possible. Germany will sample this metier if it occurs again.

FPO_CRU_all_0_0 (Fishery directed on deep water crustaceans)

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.

GNS_DEF_>=220_0_0 (Fishery directed on anglerfish and mixed species)

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.

OTM_DEF_>=120_0_0 (Fishery directed on redfish in ICES area XII, XIV)

This fishery disappeared in 2008. Germany will sample this metier if it occurs again.

Other regions

Sampling of biological metier-variables **will be carried out simultaneously** with the collection of stock related variables (see general remark in III.E).

III.C.1 Selection of metiers to sample

See section III.C.1 of region “North Sea and Eastern Arctic”.

III.C.2 Data acquisition

Table III.C.2 shows the metiers that have been merged for sampling purposes. No metiers with regard to “other regions” have been merged.

Sampling effort (Tab. III.C.3): 2 fisheries are left selected either by landings, effort or value. As the majority of the German fleet is landing in foreign countries and thus landings in German harbours are only minor, the sampling strategy for all trips is concurrent sampling at sea. See section III.C.5 for the distribution of sampling effort among the metiers to sample. See the beginning of section III.E for a general comment on the preferential use of sampling at sea. In the following, the two metiers are listed and described:

OTM_SPF_32-69_0_0

Target species: *Sardinella*. Peak season: -. Area: Mauritanian waters. Duration of trips: 3 to 4 weeks. Sampling effort: See III.C.5.

OTM_SPF_32-69_0_0

Target species: Redfish. Peak season: -. Area: South Pacific. Duration of trips: 4 weeks to three months. Sampling effort: See III.C.5.

III.C.3 Data quality

In general, all metiers are defined by level 6 of the matrix in Appendix IV (1-5) of Commission Decision 2008/XXX/EC. For a detailed description of every selected metier, refer to section III.C.2. No ‘national’ (matrix level 7) metiers have been established.

III.C.4 Regional coordination

Within the RCM “Other regions”, Germany aims at concluding new bilateral or regional agreements.

III.C.5 Derogations and non-conformities

Germany applies for the following derogations with regard to metiers to other areas:

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 relevant RCM.

OTM_SPF_32-69_0_0 (Fishery in the South Pacific)

Sampling in this area will be subject of multilateral negotiations in the relevant RCM. However, target species are not included in Appendix VII of the DCR.

III.D Biological - Recreational fisheries

Baltic Sea

III.D.1 Data acquisition

In Germany, about 3.3 mill. anglers (interval 2.6 – 4.1 mill.) are estimated to be active, either in inland waters or from the coast. A great part of them are organized in two large societies. In addition there are about 3,000 hobby fishers who are allowed to use passive gear non-commercially.

113,000 to 147,000 anglers are active at the coastal waters of the Baltic Sea in 2005-2006, as estimated by the Pilot Study “The German recreational fisheries’ cod catch in the Baltic and the North Seas, 2004 – 2006”. The total effort of these anglers ranged from 800,000 – 1.5 Mill. angling days per year.

Data sources

There are no regulations in place in German coastal federal countries requiring the recording of catch taken by the recreational fishery in the Baltic Sea and in the North Sea. Therefore, it is only possible to collect data related to the effort and the catch of anglers by means of interviews of the recreational fishermen. It is further important to work close together with the different angling associations and the governmental administrations of the federal countries, and to cooperate with angling clubs and the owners of angling cutters.

Methods of the recreational fishery

The recreational fishery can be divided in two groups.

The first group are the anglers. Anglers use fishing rods, and partly small gear for catching fish bait. Fishing with rods can be subdivided into the beach fishing (demersal fishing with natural baits from the beach, and angling whilst wading, using artificial or natural baits) and the boat and cutter angling and trolling (with natural or artificial baits).

The second type of the recreational fishery uses methods which are comparable to the commercial fishery, e.g. traps, eel pots, fykes, long lines and gillnets (in the following referred to as hobby fishery or hobby fishers). Which of the methods mentioned above is permitted is depending on the federal country.

Landings

The landings of anglers ranged from 1.9 Mill. – 5.0 Mill. cod taken annually from the Baltic Sea in 2005 and 2006 (results of the Pilot Study) corresponding to 1,900 t – 5,100 t per year. The angler’s landings in mass correspond to 26 % - 73 % of the cod landings of the German commercial fishery from the same area and year. The landings of the hobby fishers reached about 14 t of cod annually from the Baltic Sea and are of no importance for the cod stock.

The landings of cod of the recreational fishery from the North Sea reached about 30 t per year and are of no importance for the cod stock.

Remark

The data collection of the recreational fishery has a relatively short history in Europe and the sampling systems are under development. Therefore it is possible that there are changes to the proposed sampling scheme in result of the workshop to the recreational fishery planned for April 2009.

Besides of the sampling of the target species corresponding to the DCR, data for all other fish species, e.g. flounder, herring and sea trout, which are caught by the recreational fishery, are additionally collected if possible without additional effort.

Total landings of the recreational fishery will be estimated by effort (angling days) and landings per unit effort (landings per day and angler).

ANGLERS

EFFORT

In 2009 a mail survey will be realised to estimate the annual effort (**number of angling days**) exerted during 2008. This mail survey will be limited on the effort in the coastal waters of the country Mecklenburg-Western Pomerania.

In 2010 a similar survey will be conducted to obtain the angling effort in 2009 in the Baltic coastal waters of the country Schleswig-Holstein.

The effort will be estimated disaggregated by angling methods and by quarters of the year. Further we will ask for information on the target species, their main angling areas, in which federal state they are resident and – in case of the 2009 survey in Mecklenburg- Western Pomerania – which type of angling licence they use.

Additional effort data, like duration of the total angling day and the effective angling hours, are sampled by census of anglers at the beaches and in the harbours (see LANDINGS).

LANDINGS

Cod

A randomized sampling scheme will be used in 2009/10 to estimate the total landings in numbers of cod by anglers.

The coastal areas of the federal countries Mecklenburg-Western Pomerania and Schleswig-Holstein are subdivided into five regional strata. The regional strata are broken down into different sampling units (defined beaches and harbours). For the interviews of anglers, the sampling day together with the regional stratum and the sampling unit are selected randomly.



Fig. III.D.1: Stratification for recreational fisheries sampling.

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.

Compared to previous years the sampling of beach fishing/angling whilst wading will be reduced and the sampling of boat angling/cutter angling/trolling will be increased. The reason for these changes is the high proportion of cod caught on open sea (about 90 %).

Further, analyses presented in the Report of the Pilot Study mentioned above have shown that the high variability of the boat angling data (effort and catch) explained approximately 50 % of the total variability of the estimated total cod landings in numbers. Therefore, during the sampling of the boat angling/cutter angling/trolling, the effort will be more directed to the boat angling.

Generally the following monthly sampling is planned for 2008:

| beach fishing and angling whilst wading¹ | | boat und cutter angling, trolling¹ | |
|--|----------------|--|----------------|
| time period | No. of samples | time period | No. of samples |
| Fri., Sat., day before holiday | 1 | Sat., Sun, holidays | 20 |
| | | Mon., Tue., Wed., Thu., Fri. | 20 |
| ¹ ... reduced sampling in winter time possible, because of bad weather conditions | | | |

The length composition of the angler landings and the length-mass-key of the German commercial fishery in the same year and area will be used to estimate the landings mass. There will be different methods to collect the length compositions:

- Length compositions of the landings from beach fishing and cutter angling will be collected in cooperation with the angling associations and angling clubs.
- Additionally, a technician will measure the lengths of landed cod once per month on an angling cutter. The angling cutter will be selected randomly.
- Ca. 30 boat and/or trolling anglers, distributed over the whole German Baltic coast, will measure their cod landings themselves. They will be trained and receive measuring sheets.

Salmon, Eel

See III.D.4

HOBBY FISHERS

Cod, Salmon, Eel

See III.D.4

III.D.2 Data quality

Cod

It is expected to reach the precision level 1 for the estimation of the landings of cod, corresponding to the requirement of the DCR. The calculation of the precision level will be done using the bootstrap method.

Following methods will be used to collect data:

- Landings per angling day: on-site surveys;
- Effort: mail survey;
- Length composition: on-site sampling, fishing events, self sampling.

For more detailed information, see section III.D.1

III.D.3 Regional coordination

Based on the results of the EU-workshop on the recreational fishery in April 2009 the regional coordination has to be discussed and organised during the RCMs in 2009 and 2010.

III.D.4 Derogations and non-conformities

Cod (only hobby fishers)

In the report of the Pilot Study “The German recreational fisheries’ cod catch in the Baltic and the North Seas, 2004 – 2006”, it was shown that cod catches of hobby fishers are low (ca. 14 t per year) and without importance for the cod stock. It was recommended to re-evaluate the situation in 5-year intervals. A re-evaluation is therefore not planned before 2011. General observations will be made as a part of the current sampling and studies of the recreational fishery in the Baltic Sea.

Salmon

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.”

General observations will be done as a part of the current sampling and studies of the recreational fishery in the Baltic Sea.

Eel

The recreational fishery for eel is highly specialised. Based on the eel report of Germany for the EU, to be submitted at the end of 2008, and on the results of the recreational fishery workshop planned for April 2009, the methods to investigate the eel fishery have to be developed during 2009. Because of the available poor knowledge from the recreational eel fishery this investigation will have the character of a pilot study.

North Sea & Eastern Arctic

III.D.1 Data acquisition

ANGLERS AND HOBBY FISHERS

Cod, Eel

See III.D.4

III.D.2 Data quality

See region “Baltic Sea”.

III.D.3 Regional coordination

See III.D.4

III.D.4 Derogations and non-conformities

Cod

In the Report of the Pilot Study “The German recreational fisheries’ cod catch in the Baltic and the North Seas, 2004 – 2006” was shown that the recreational cod catches are low (ca. 30 t per year) and without importance for the cod stock. Therefore, no sampling of North Sea cod catches are planned for 2009 and 2010. During the proposed pilot study for eel, the development of the recreational fishery in the North Sea will be observed .

Eel

See above for Eel in the Baltic Sea.

North Atlantic

III.D.1 Data acquisition

Cod, Salmon, Sea bass

See III.D.4

III.D.2 Data quality

See III.D.4

III.D.3 Regional coordination

See III.D.4

III.D.4 Derogations and non-conformities

Cod, Salmon, Sea bass

Germany has no coastal waters bordering the North Atlantic. German anglers fish in this area only during holidays and do not land their catch into German harbours. Therefore it seems not necessary to collect data from this fishery.

Other regions

III.D.1 Data acquisition

See III.D.4

III.D.2 Data quality

See III.D.4

III.D.3 Regional coordination

See III.D.4

III.D.4 Derogations and non-conformities

Germany has no coastal waters bordering Other regions. Therefore it seems not necessary to collect data from this fishery.

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) should be handled at the same time in the German NP. Sampling at sea is an optimal strategy to reach this goal, due to

- the necessity to sample on board of freezer trawlers and trawlers with processing units. This is the case in the fishery for pelagic species, as these are landed in frozen packages. The same is true for landings of demersal species from waters off Norway and Greenland which are landed as partly processed products.
- 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 2008/XXX/EC as by-catch in fisheries directed towards other species can only be recorded on board.
- 63%, 54% and 61% of the landings in 2005, 2006, 2007, respectively, from stocks that have to be sampled (Table III.E.1) occurred in foreign countries, which confirms the situation in recent years.

Due to the reasons mentioned above, Germany prefers in most cases to sample catches at sea (especially in the North Sea and North East Atlantic).

The provision of a legal basis for biological sampling on board of German fishing vessels is still in preparation. 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 might improve the situation. The possibility for biological sampling depends on the hospitality of ship owners and companies. Based on the present situation, random sampling of the fleet is still difficult and might be not optimal in the future (even if a new legal basis for on board sampling is in place), since there will be some excuses to refuse an observer.

Baltic Sea

III.E.1 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 2008/XXX/EC, chapter III.B.B2.5).

In the Baltic Sea, *Clupea harengus*, *Gadus morhua*, *Limanda limanda*, *Perca fluviatilis*, and *Platichthys flesus* have to be sampled.

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled in 2009 and 2010, and Table III.E.3 provides an overview on required and planned numbers of fish to be sampled for age, weight and maturity.

III.E.2 Data acquisition

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.

III.E.3 Data quality

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCR will be subject of the RCM Baltic.

III.E.4 Regional coordination

There are existing bilateral agreements with Denmark and Sweden. See Germany's NP proposal 2008 for details. These agreements are all related to the sampling of commercial catches and are still based on the EU Council Regulation 1543/2000 and Commission Regulations 1639/2001 and 1581/2004.

Within the next RCM Baltic, Germany aims at updating the agreements, respectively to conclude new agreements (see also next paragraph).

III.E.5 Derogations and non-conformities

Sprattus sprattus in the Baltic will be sampled by Germany despite there is no obligation by the DCR rules for stock related variables to do so. 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.

North Sea and Eastern Arctic

III.E.1 Selection of stocks to sample

Table III.E.1 identifies which stocks are included in the German NP. Germany is obliged to sample 11 stocks after applying the exemption rules for stock-related variables (Commission Decision 2008/XXX/EC, chapter III.B.B2.5).

In the North Sea and Eastern Arctic region, there are 11 stocks to sample:

Skagerrak and Kattegat: *Pollachius virens* (see 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 marinus*, *Sebastes mentella*;

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled in 2009 and 2010, and Table III.E.3 provides an overview on required and planned numbers of fish to be sampled for age, weight and maturity.

III.E.2 Data acquisition

Refer for a general remark to the beginning of section III.E.1.

For **Skagerrak and Kattegat** see III.E.5.

North Sea and Eastern Channel: Stocks in the North Sea will be sampled by observers at sea (see general remark).

III.E.3 Data quality

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCR will be subject of the RCM North Sea and Eastern Arctic.

III.E.4 Regional coordination

There are existing bilateral agreements with The Netherlands, Denmark and Sweden. See Germany's NP proposal 2008 for details. These agreements are all related to the sampling of commercial catches and are still based on the EU Council Regulation 1543/2000 and Commission Regulations 1639/2001 and 1581/2004. Within the next RCM North Sea and Eastern Arctic, Germany aims at updating the agreements, respectively to conclude new agreements (see also next paragraph).

III.E.5 Derogations and non-conformities

Skagerrak and Kattegat: With regard to the exemption rules (Commission Decision 2008/XXX/EC, chapter III.B.B2.5), *Pollachius virens* in the Skagerrak has to be sampled. Catches in the Skagerrak are belonging to the same 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 and Eastern Arctic region, several stocks will be sampled by Germany despite there is no obligation by the DCR rules for stock related variables to do so. However, sampling data are used for assessment purposes in the ICES WGWIDE, WGNSSK and 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: *Clupea harengus* in **ICES areas I and II**; *Melanogrammus aeglefinus*, *Pleuronectes platessa*, *Solea solea* in the **North Sea and Eastern Channel**.

North Atlantic

III.E.1 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 2008/XXX/EC, chapter III.B.B2.5).

In the North Atlantic, the following stocks have to be sampled:

North East Atlantic and Western Channel: *Gadus morhua* (see III.E.5), *Reinhardtius hippoglossoides*, *Sebastes marinus*, *Sebastes mentella*

NAFO areas: *Reinhardtius hippoglossoides*

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled in 2009 and 2010, 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.

III.E.2 Data acquisition

Refer for a general remark to the beginning of section III.E.1.

North East Atlantic and Western Channel/ ICES areas I and II/ NAFO area: 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.

III.E.3 Data quality

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCR will be subject of the RCM North Atlantic.

III.E.4 Regional coordination

There is an existing bilateral agreement with The Netherlands, see Germany's NP proposal 2008 for details. This agreement is related to the sampling of commercial catches and is still based on the EU Council Regulation 1543/2000 and Commission Regulations 1639/2001 and 1581/2004. Within the next RCM North Atlantic, Germany aims at updating the agreements, respectively to conclude new agreements (see also next paragraph).

III.E.5 Derogations and non-conformities

North East Atlantic and Western Channel: For cod in the North East Atlantic and Western Channel, different quotas are assigned for following areas: 1) Vb(EU), VI, XII, XIV, 2) V, XIV (GL waters), NAFO 0&1 (GL waters), 3) VIIb-k, VIII, IX, X, CECAF34.1.1 (EU), 4) VIIa, 5) Vb (FAR).

Germany has a share on the quotas in areas 1, 2 and 5. Only in area 2 (V, XIV (GL waters), NAFO 0&1 (GL waters)), the German share exceeds 10%. This fishery was re-established in 2007 and takes mainly place in ICES Sub-area XIV. Therefore, Germany will sample cod in this area.

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

Other regions

III.E.1 Selection of stocks to sample

Table III.E.1 identifies which stocks are included in the German NP. Germany is obliged to sample 3 stocks after applying the exemption rules for stock-related variables (Commission Decision 2008/XXX/EC, chapter III.B.B2.5).

For other regions, Germany is obliged to sample the following stocks:

Sardina pilchardus, *Sardinella aurita*, *Trachurus* spp. (see III.E.5).

Table III.E.2 gives an overview on the long-term sampling strategy of the stocks that will be sampled in 2009 and 2010, and Table III.E.3 provides an overview on required and planned numbers of fish to be sampled for age, weight and maturity.

III.E.2 Data acquisition

See III.E.5.

III.E.3 Data quality

Overall regional coverage and the required numbers to reach the precisions levels aimed by the DCR will be subject of the RCM “Other regions”.

III.E.4 Regional coordination

Within the RCM “Other regions”, Germany aims at concluding new bilateral or regional agreements (see also next paragraph).

III.E.5 Derogations and non-conformities

Sampling in the CECAF area will be subject of bi- or multilateral negotiations within the RCM ‘Other regions’. During the last years, the main catches were taken by Lithuania, Spain and The Netherlands and were landed into Spain. Furthermore, the vessels are obliged to take Mauritanian observers onboard.

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

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

III.F.1.3 Regional co-ordination

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

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

III.F.1.4 Derogations and non-conformities

No derogations and non-conformities.

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. Only six beam trawlers of this length class had reported landings in 2007, of which two were negligible. The effort of these vessels will be approximated by twice the average effort spent by vessels in the 8-10m length class. The effort of the vessels < 8m using passive gears 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

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.

A target precision level cannot be provided, since the effort data are usually not normally distributed, and yet no common procedure has been provided for the economic data to calculate precision levels.

III.F.2.3 Regional co-ordination

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.2.4 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

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 Regional co-ordination

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.3.4 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 2009 and 2010 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. 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>.

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. In 2009, the survey will be conducted from 13 February to 3 March and from 27 October to 13 November 2009 on FRV "Solea". Dates for 2010 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.

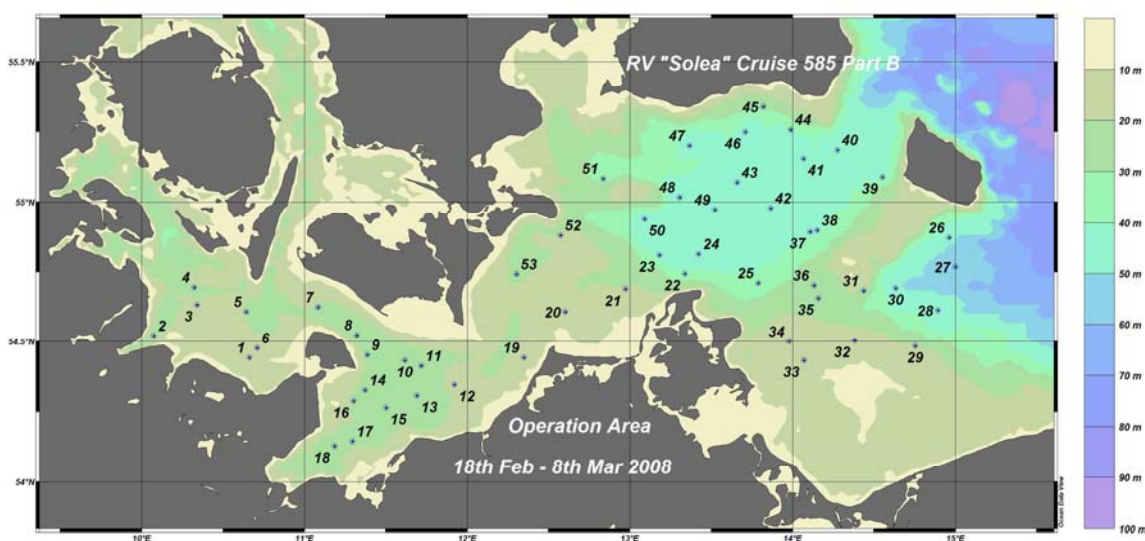


Fig. III.G.1a: Baltic International Trawl Survey (BITS, 1st quarter). Example of station grid (final positions will be allocated at the WGBIFS).

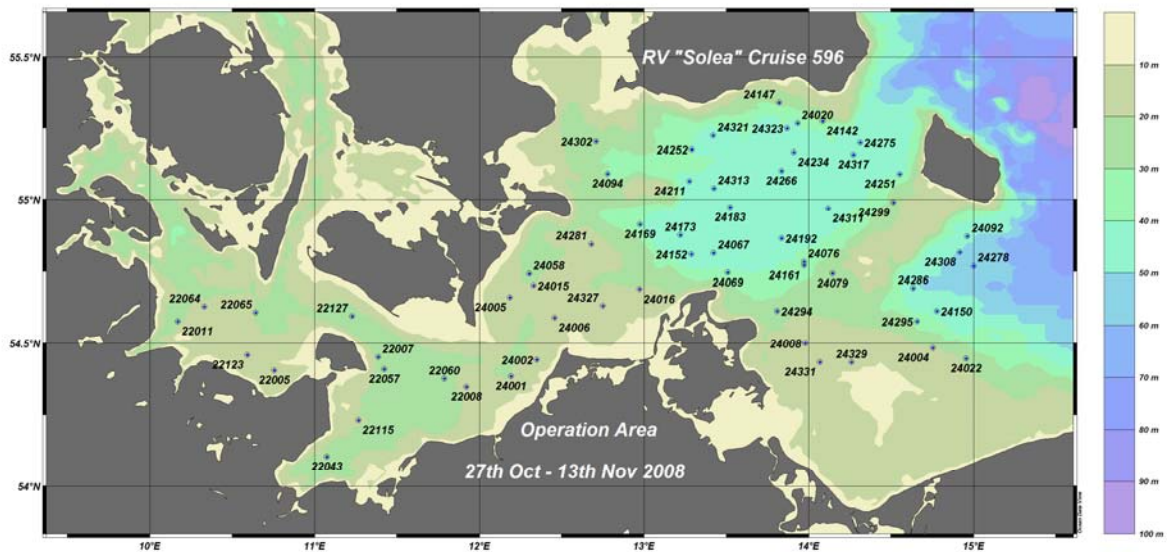


Fig. III.G.1b: Baltic International Trawl Survey (BITS, 4th quarter). Example of station grid (final positions will be allocated at the WGBIFS).

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 PGHERS and WGBIFS and BADII data bases. Data are used for assessment purposes in ICES HAWG and WGBFAS. In 2009, the survey will take place during 2-21 October on FRV "Solea". Dates in 2010 are not yet set. Fig. III.G.2 shows an example plot (from 2007) of the cruise tracks and fishery stations conducted during the German contribution to the Baltic Herring Acoustic Survey (BIAS).

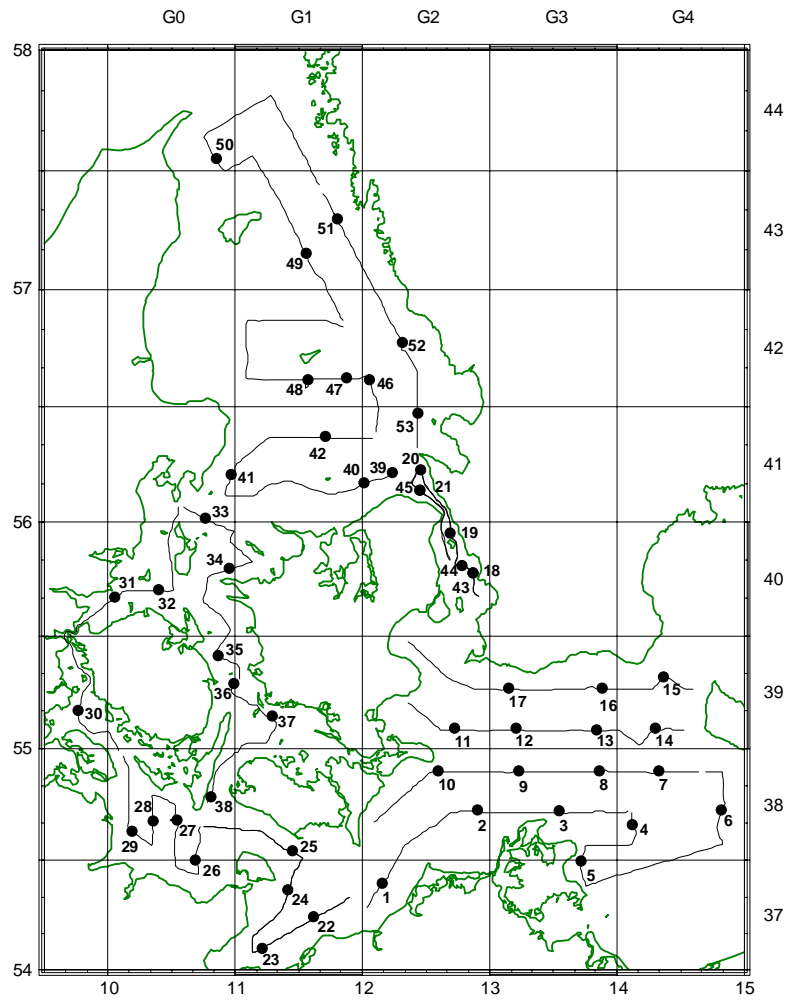


Fig. III.G.2: Baltic Herring Acoustic Survey. Example of cruise track and fishery stations.

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. In 2009, the survey will take place during 2-25 May 2009 on FRV “Walter Herwig III”. Dates in 2010 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).

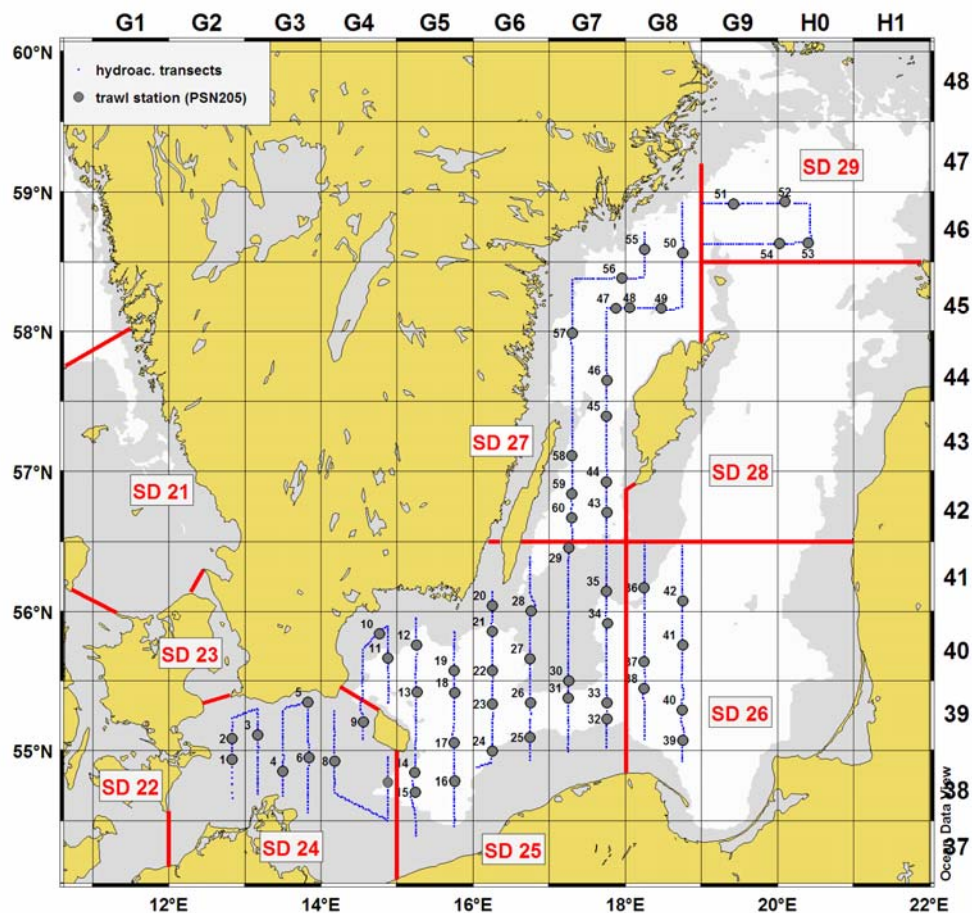


Fig. III G.3: Baltic Sprat Acoustic Survey 2008. Example of cruise track and trawl positions. Grey shading indicates areas shallower than 50 m..

4. (Rügen) Herring Larvae Survey

The Rügen Herring Larvae Survey in the western Baltic (ICES area IIIId/ 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 (during 1 week in February and 14 weeks in March-June) in 2009 and 2010 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.

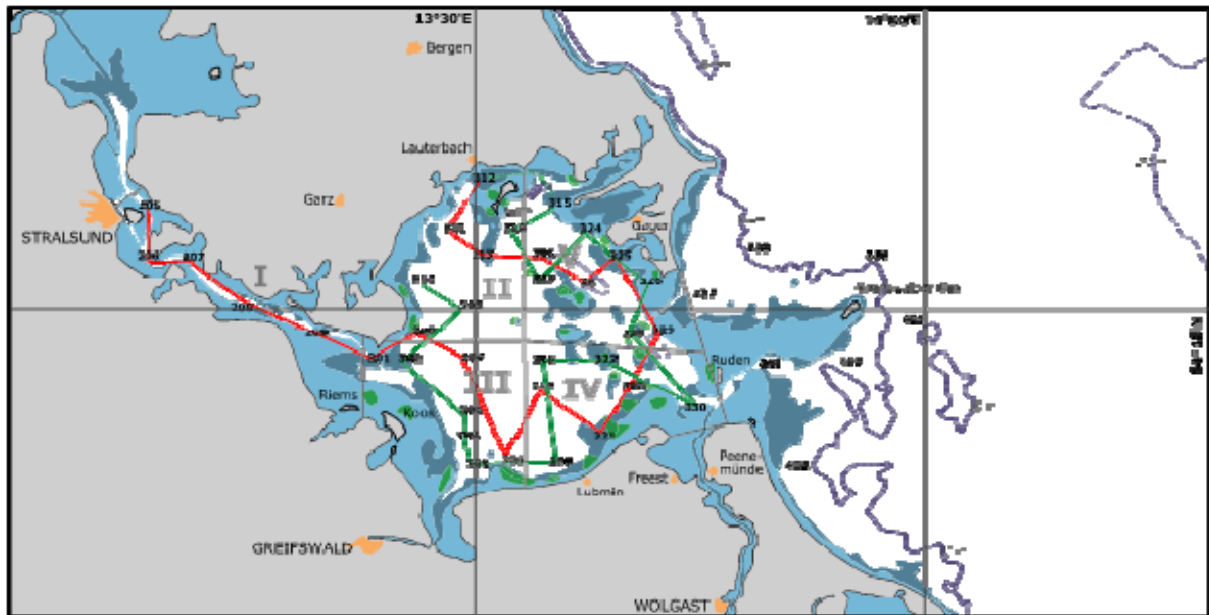


Fig. III G. 4: Rügen Herring Larvae Survey. Stations for ichthyoplankton hauls and CTD-casts. Stations are sampled at least 14 times annually.

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. In 2009, the survey in quarter 1 will be conducted from 23 Jan to 21 Feb on FRV “Walther Herwig III”. The planning for 2010 is not fixed yet. Please refer to Fig. III.G.5 for the allocation of the survey area.

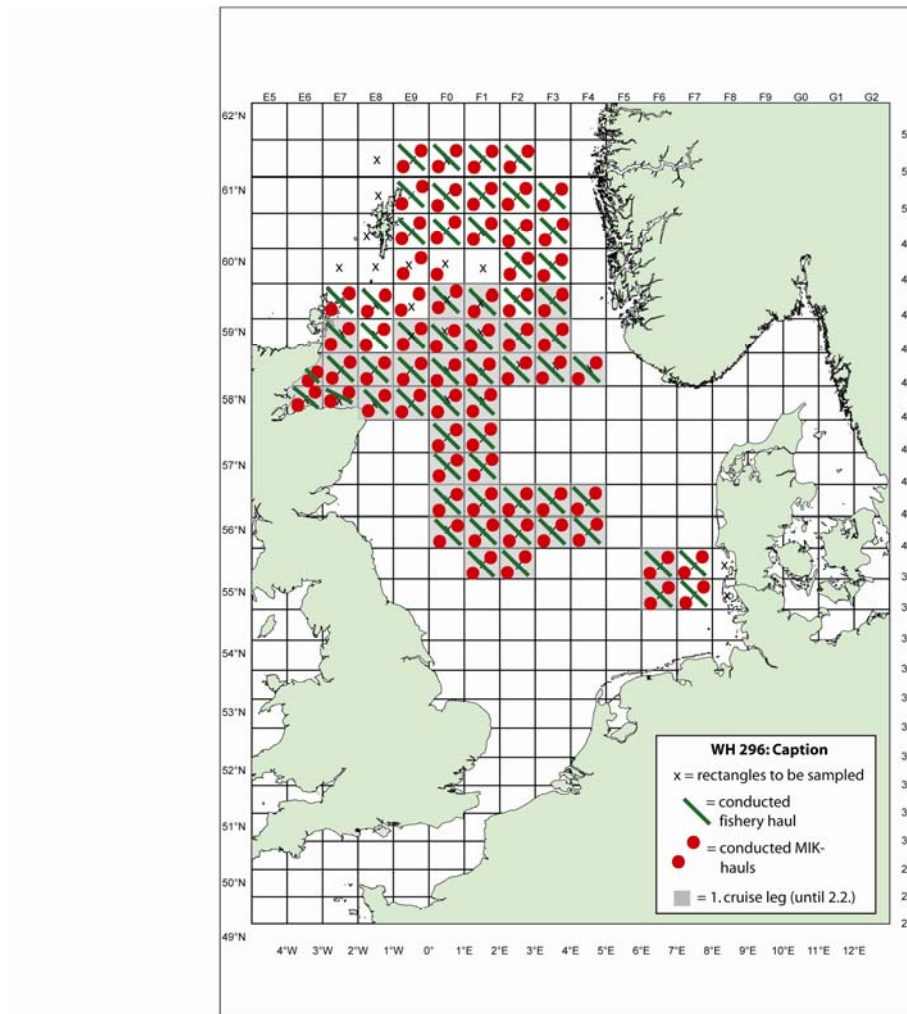


Fig. III G.5: International Bottom Trawl Survey (IBTS) 1st quarter. MUK and fishery stations of the 2007 survey as an example for the study area.

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 in conjunction with a national survey from 20 Jul to 8 Aug 2009 on FRV “Walther Herwig III”. The planning for 2010 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.

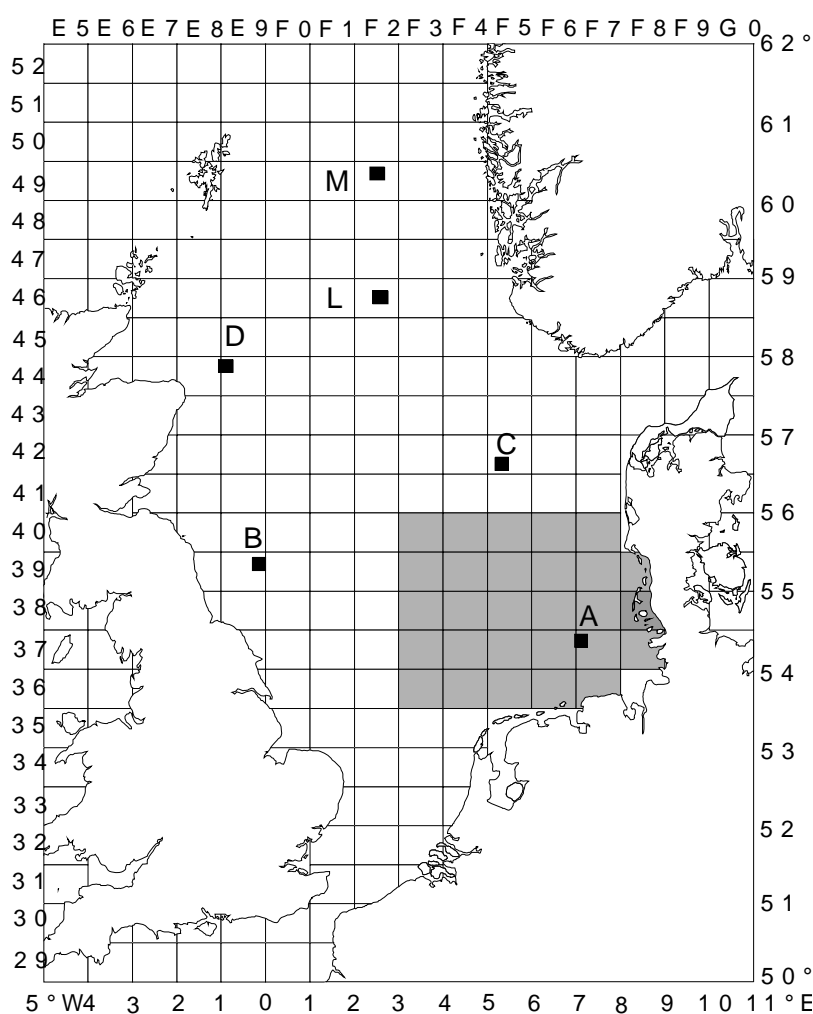


Fig. III.G.6: International Bottom Trawl Survey (IBTS) 3rd quarter. Preliminary investigation area allocated to Germany (grey) and small areas (black boxes) of the national survey (GSBTS) in conjunction with the IBTS.

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. In 2009, the survey will take place from 14-28 Aug on FRV “Solea”. The planning for 2010 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.

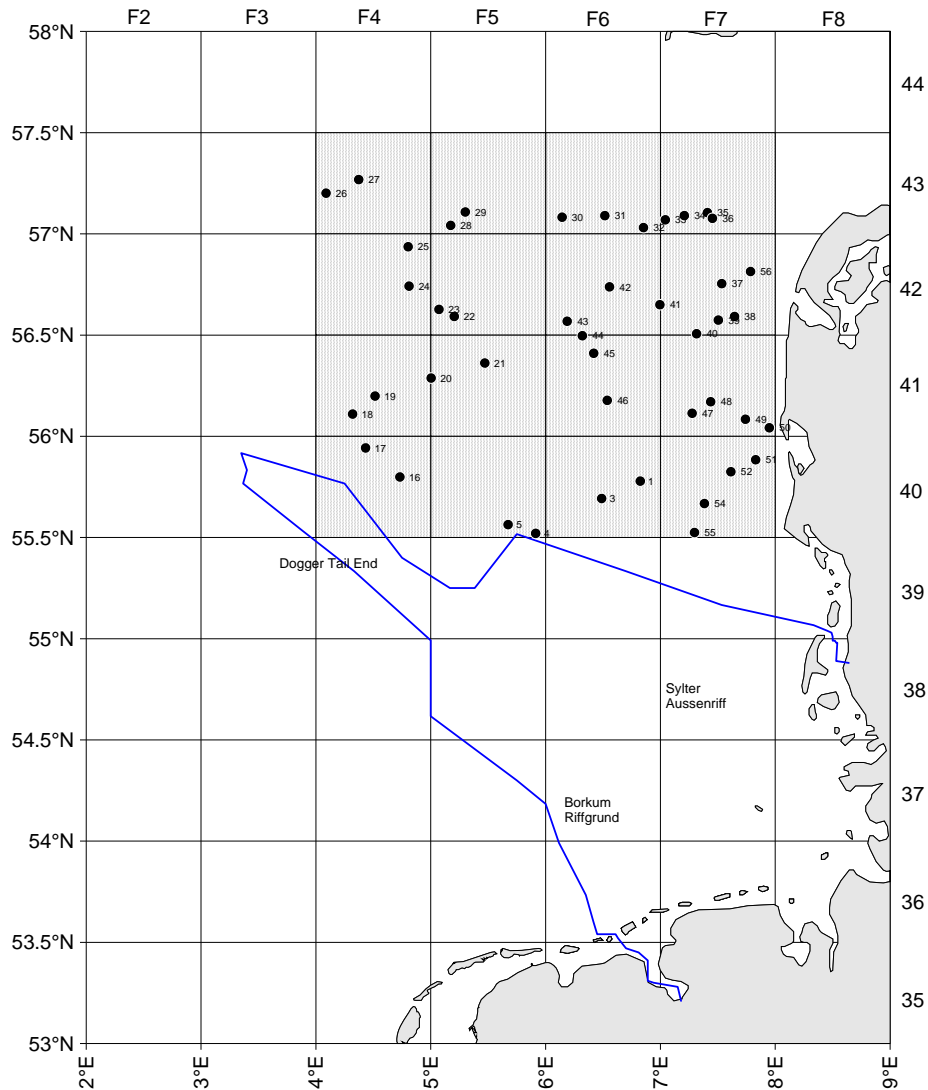


Fig. III.G.7: North Sea Beam Trawl Survey (BTS). Example of trawl positions from 2008.

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) in Sep-Oct 2009.

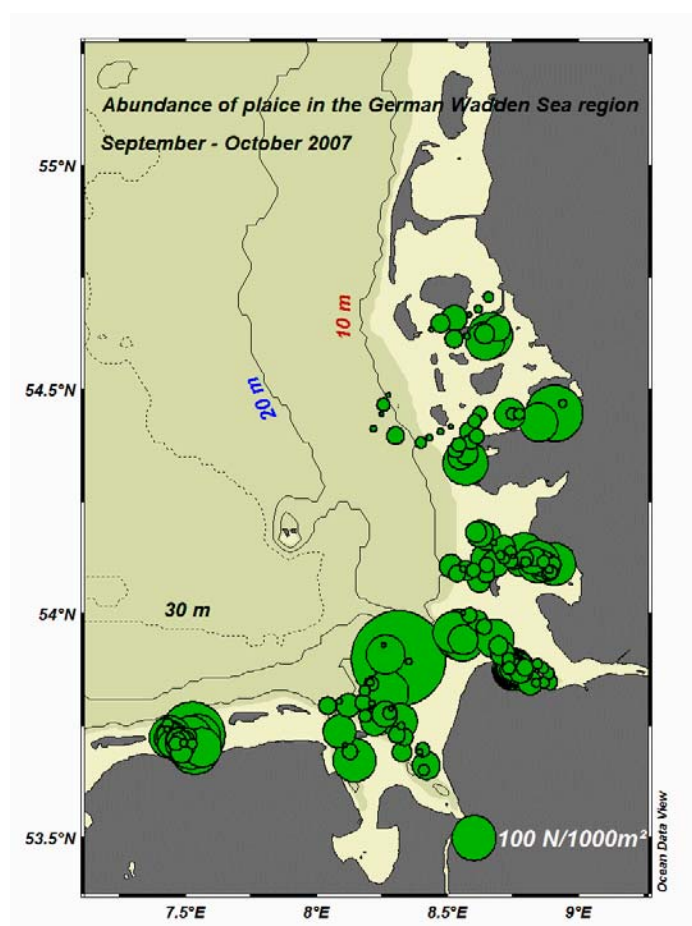


Fig. III.G.8: Demersal Young Fish Survey (DYFS). Example of station map of the German part, with abundances (10 individuals per 1000 m²) of young plaice in 2007.

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 in Apr-May 2008.

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 2009 and 2010, and every two years thereafter. The relevant planning group (PGRS) has to be established.

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 next surveys will take place in January and September 2009 and 2010 on RV “Walther Herwig III” or RV “Solea”. Fig. III.G.11 shows the station grids.

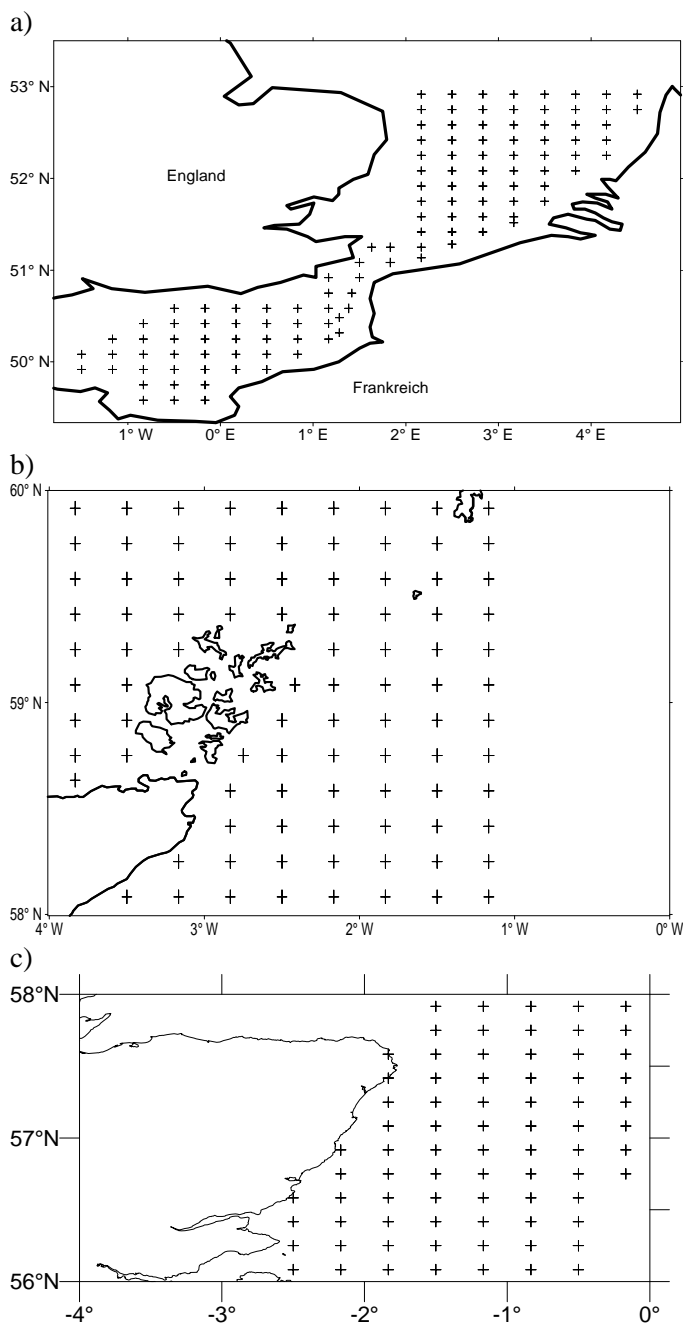


Fig. III.G.11: Herring Larvae Survey in the North Sea and eastern Channel. Station grids in a) the southern North Sea and eastern Channel (January 2008), b) the Orkney/ Shetland area (September 2008), and c) the Buchan area (September 2008).

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 from 26 Jun to 15 Jul 2009 on FRV "Solea". The planning for 2010 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.

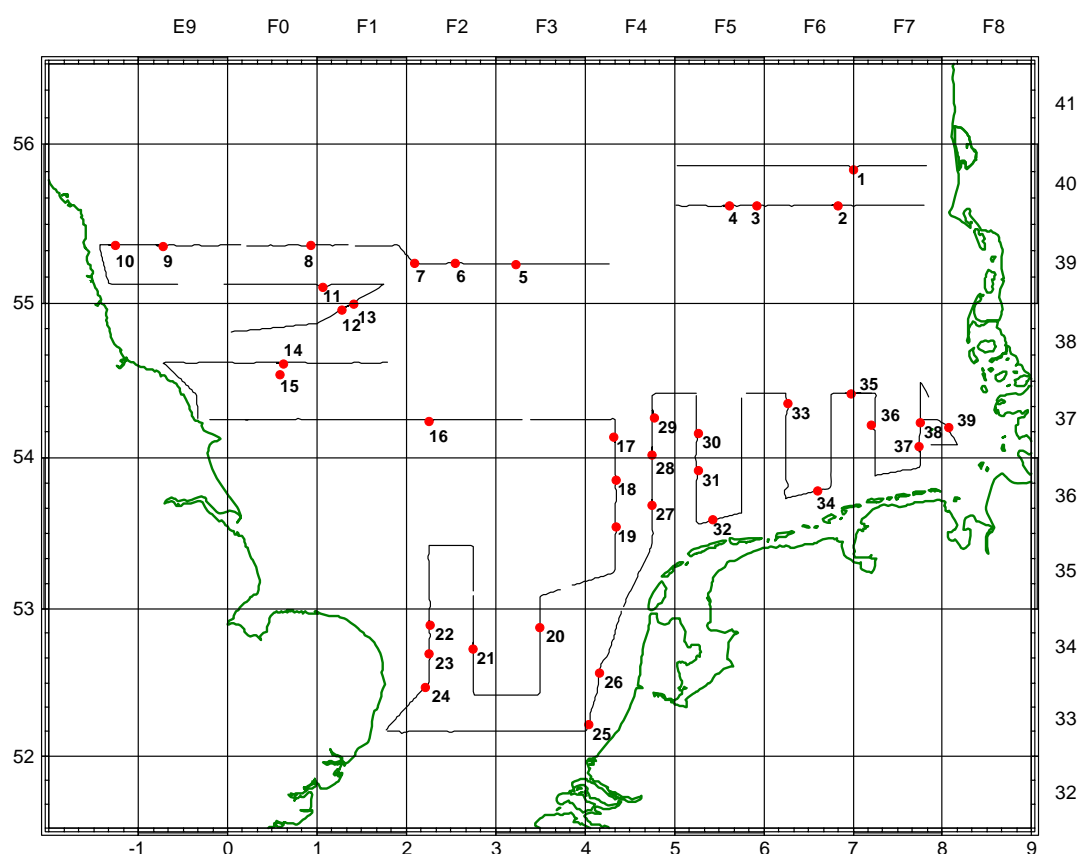


Fig. III.G.12: North Sea Herring Acoustic Survey. Example of cruise track.

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 SGRS. 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 from 04 Jun to 06 Jul 2009 on FRV “Walther Herwig III”.

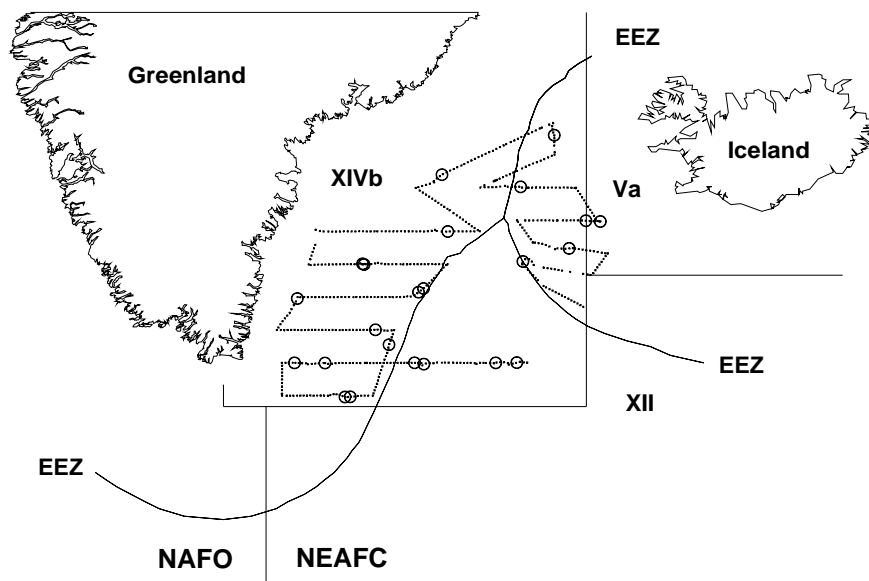


Fig. III.G.13: International Hydro-Acoustic Oceanic Redfish Survey. Hydroacoustic survey tracks (dotted line) and trawl hauls (open circles) of the German part of the survey in 2005.

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. In 2009 the survey will be carried out 8 Oct to 24 Nov on FRV “Walther Herwig III”. The planning for 2010 is not fixed yet. Fig. III.G.14 shows the survey area.

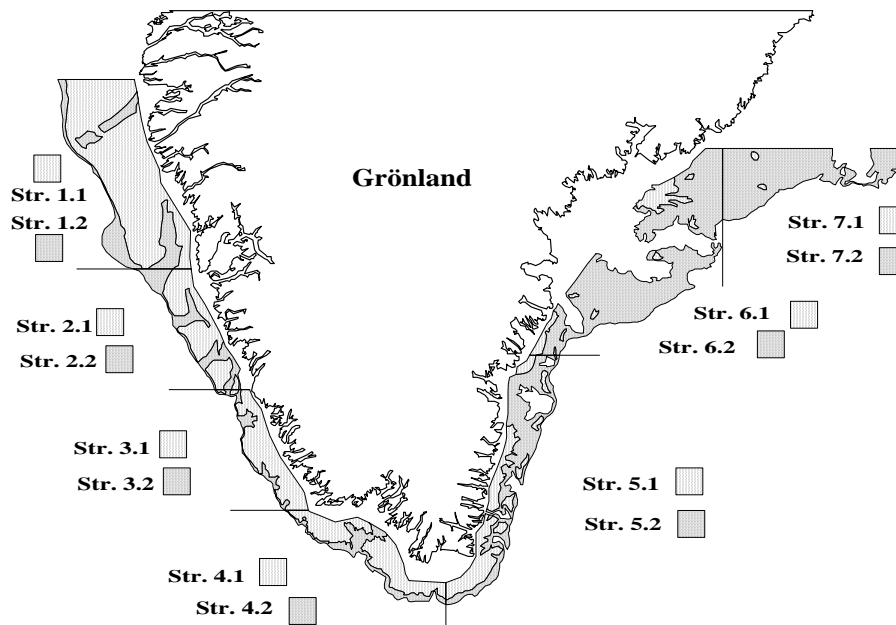


Fig. III.G.14: Greenland groundfish survey. Survey area (strata), with depth strata 0-200m (Str. X.1) and 201-400m (Str. X.2).

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 will take place in Mar-Apr 2009. The planning for 2010 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 co-ordinator of the north-western part of the survey at FRS Marine Lab (Aberdeen, Scotland). The German part of the survey will take place at the beginning of the spawning season in March and April 2010 on FRV "Walther Herwig III". Fig. III.G.16 shows an example of the possible survey track (survey area of 2007).

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.

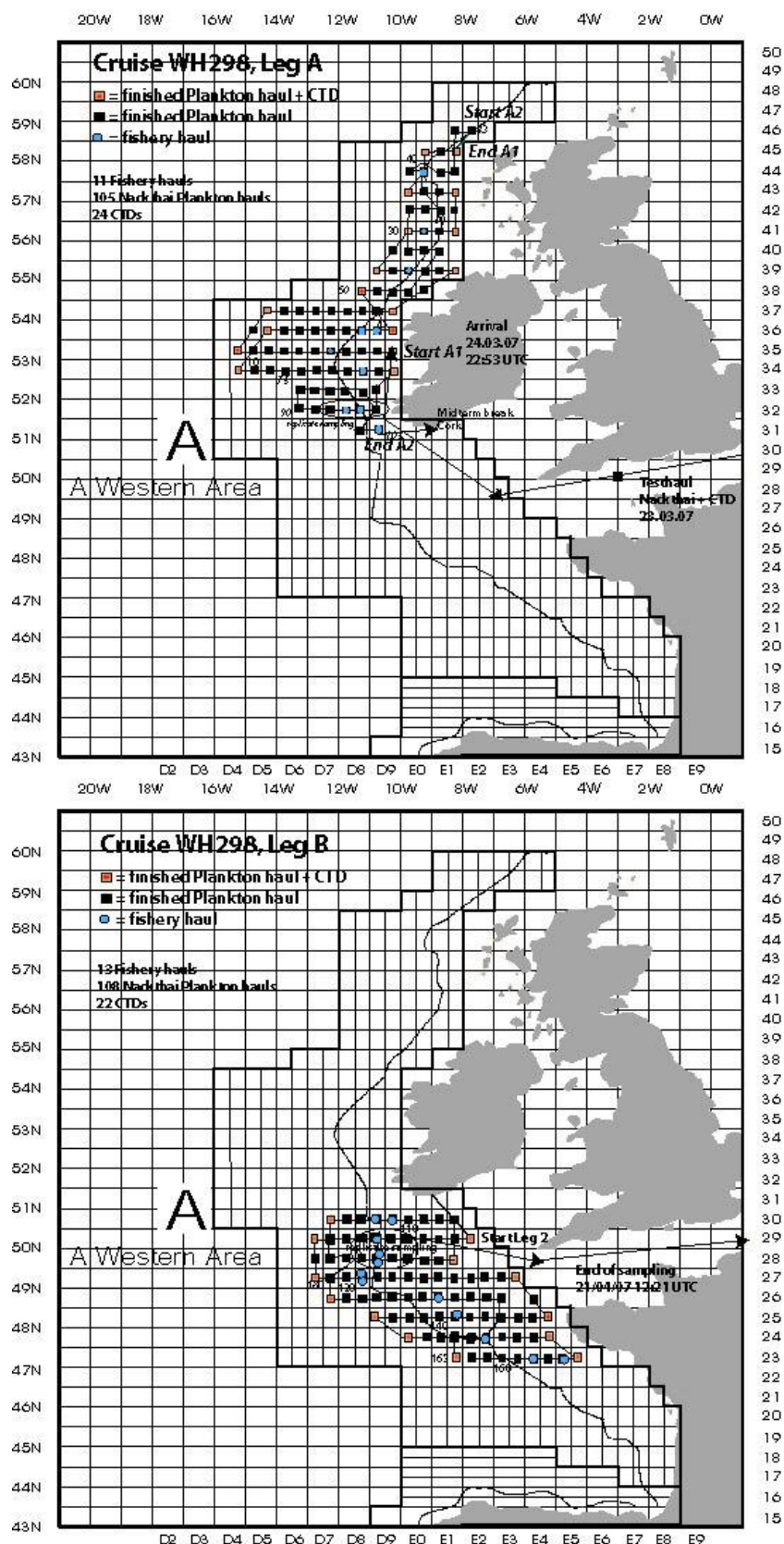


Fig. III.G.16: Mackerel and Horse Mackerel Egg Survey – cruise track and station grid March/April 2007, upper panel: leg A, lower panel: leg B.

IV. Module of the evaluation of the economic situation of the aquaculture and processing industry

IV.A Collection of data concerning the aquaculture

Appendix XI of the Commission Decision (2008/XXX/EC) gives a list of the relevant species for data collection in the aquaculture sector. Council Regulation 199/2008 declares only marine species aquaculture data and eel and salmon as mandatory to collect (Note: eel is not included in Appendix XI). There is no primary data source for most of the variables to collect. Only total revenue and production volume is collected already.

Germany therefore has to start a pilot study. Since there is no salmon farming, only mussels aquaculture is mandatory and so Germany will investigate the mussel production sector by questionnaires starting in 2009 and finish it 2010. Additionally, Germany will send out a questionnaire to eel-aquaculture producers in 2009, even if it is unclear if it is mandatory.

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

[The following text is based on a FAO description with updated numbers from Dr. Uwe Brämick, Institut für Binnenfischerei e.V. Potsdam-Sacrow, Germany.]

Characteristics, structure and resources of the sector

Summary

Aquaculture in Germany is a small industry, practiced only in a few specifically suited areas. Aquaculture production in 2006 reached a total volume of roughly 44 685 tonnes. As in previous years, trout farming in freshwater flow-through-systems was the most profitable branch of production, both in terms of quantity (23 889 tonnes) and the revenue generated (€123.5 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 others modern indoor and outdoor facilities (Rosenthal et al., 2000). The farming of carp in freshwater ponds is the second major type of aquaculture practiced in Germany and has a long tradition. In 2006, 15206 tonnes were harvested producing a total revenue of more than €49.2 million.

Variation in the intensity of carp production depends to a large extent on both the location of production and the year class. On average, 390 kg/ha were produced in 2006. Carp pond farms are concentrated in the States of Bavaria, Saxony and Brandenburg, however the profitability of many carp farms are increasingly under pressure as a result of high production costs and competition from cheap imports.

Aquaculture of marine species yielded 9 700 tonnes in 2005. With 9 470 tonnes, blue mussel was the dominating species in this sector. Over the last 10 years, total aquaculture production has remained constant in terms of production volume.

History and general overview

Pond culture of fish and carp in particular has a long tradition in Germany, the first records of common carp (*Cyprinus carpio*) culture in Bavarian ponds date back to the eleventh century (Geldhauser and Gerstner, 2003) and reached an initial peak during Medieval times. Between the seventeenth to nineteenth centuries, the importance of carp pond culture decreased, at that time the fast growing human population led to an alternative usage of former pond areas for the production of cereals. Following a second peak between 1880 and 1980 carp pond culture has been under consistent

pressure over the last two decades mainly as a result of unfavourable economic conditions e.g. the high costs for energy, manpower, nature conservation constraints, low priced imports and a decreasing demand by consumers. Current production has reached 15206 tonnes in 2006, of this 993 tonnes come from species other than carp such as pike (*Esox lucius*), zander (*Sander lucioperca*) and tench (*Tinca tinca*).

Today, the most important cultured species in Germany is the rainbow trout (*Oncorhynchus mykiss*), which was introduced to Germany from North America in 1880. Over the last 30–40 years production figures for this species have increased annually reaching almost 24 000 tonnes in 2006. Milestones in trout aquaculture in Germany have been the development of artificial feed (1970–1980), the construction of flow-through-systems, artificial oxygen enrichment of production water and effective disease control. As a result of these developments, production systems have evolved from earthen ponds to flow through units of different shapes made of concrete or plastic. At present, some small-scale producers still operate earthen ponds but the vast majority of trout are reared in flow through units at a much higher density level. In addition to rainbow trout other salmonids such as sea trout (*Salmo trutta trutta*) and brook trout (*Salvelinus fontinalis*) are also cultured in these units. With approximately 2 300 tonnes produced in 2006 production of these species remains comparably low.

Aquaculture in brackish and marine waters mainly focus on blue mussel (*Mytilus edulis*). From this species, 9 300 tonnes were harvested in 2006 mainly from special aquaculture sites in the North Sea. The production volume of this species varies to a large degree between years due to the dependence from the year class strength of seed mussels in nature. Some other finfish species like turbot (*Psetta maxima*) (60 tonnes in 2006), European seabass (*Dicentrarchus labrax*) (12 tonnes) and Macroalgae like *Laminaria saccharina* (1 tonne) are nowadays cultured in recirculation systems near the shore, but mainly still on an experimental scale.

Human resources

The corporate structure of the aquaculture sector in Germany is dominated by small enterprises which produce fish alongside other agricultural and/or third party activities. In total the number of these 'part-time' fish producing companies numbered more than 20 000 in 2006 with in addition more than 630 companies exclusively farming fish.

Initial and ongoing training of staff are important elements in the aquaculture sector and are the responsibility of the various German States, in addition, to operate as a fish farmer requires an apprenticeship and every year between 70 and 80 apprentices pass their examinations.

Precise information on the distribution of employees by gender is not available by now but in practice males dominate.

Farming systems distribution and characteristics

Carp pond culture is concentrated in the States of Bavaria, Saxony and Brandenburg, the most important areas being the regions around the city of Nürnberg (Aischgrund), between Hof and Regensburg (Oberpfalz) and the region formed by the cities of Cottbus, Bautzen, Dresden and Leipzig (Lausitz). Most pond farms in Bavaria are family owned, small in size and operate at low levels of production. In contrast, pond farms in the States of Saxony and Brandenburg are mainly operated by companies, on average ponds are larger and run at higher production levels.

In general, the liming and fertilization of carp ponds is very common, mainly using inorganic fertilizers. On most farms artificial feed is provided to young carp during their first growing season, while during the second and third growing out years some complementary feed in the form of wheat or corn is administered. In an increasing number of pond farms, second and third year production is now carried out without additional feeding but instead just relying on the natural feed available in the ponds.

The total pond surface area utilised for carp production amounts to roughly 39 000 hectares in 2006, half of which is located in the State of Bavaria. In Saxony, total pond surface area reaches 8 382 ha and in Brandenburg 4 330 ha.

In 2006 60 per cent of all flow-through-systems used for trout production are situated in the southern part of Germany in the States of Baden-Württemberg and Bavaria, other important regions using these systems can be found in the States of Lower Saxony, Hessen, Nordrhein-Westfalen and Thüringen. Construction of these production units, the technical equipment used and the intensity of production varies widely across the regions.

Indoor recirculation production systems, of which there are 31 in total, are not concentrated in any particular region but spread throughout Germany. In general, trout farmers use pre formulated artificial feed as part of their production operations.

Cultured species

Finfish aquaculture. The production value of trout farming (€123.5 million in 2006) refers mainly to the production of rainbow trout (*Oncorhynchus mykiss*). In the case of the common carp (*Cyprinus carpio*) production value amounts to €49.2 million. In addition there are small amounts produced from other species such as pike, tench and zander which are reared in polyculture systems alongside carp (estimated at around 7 percent of the total value produced from carp ponds). Earnings from the culture of marine species reached more than €13.3 million in 2005.

In former times some effort was made to improve the performance of carp in ponds through selection, in this way a number of regional strains were developed, which differed in body shape, color and growth (e.g. 'Lausitzer Karpfen' and 'Aischgründer Karpfen'). In today's carp pond culture these strains have lost their relevance and in most regions these former strains have been 'lost'. Nevertheless, an increased effort is made to analyse and document the current status of regional strains and their perspective not only for carp but for a number of key species in German aquaculture.

Rainbow trout used in German aquaculture have also undergone a selection process in some regions. However, today a growing number of trout farmers are importing eggs or fry from abroad with an unknown level of selection status. In more intensive farms, most of the imported eggs are triploid and all female.

A few other fish are cultured at a low level, including pike perch (*Stizostedion lucius*), perch (*Perca fluviatilis*), tench (*Tinca tinca*), European eel (*Anguilla anguilla*), sturgeon (mainly the Siberian sturgeon, *Acipenser baerii*) or the bester (a hybrid between *Huso huso* and *Acipenser ruthenus*). Several endangered or heavily fished species are produced for stocking purposes. These include anadromous migratory fish such as sea trout (*Salmo trutta trutta*) which are stocked in both North Sea and Baltic drainage systems in Schleswig-Holstein and Mecklenburg-Vorpommern.

With regard to coastal aquaculture, finfish culture is almost nonexistent in Germany. The harsh conditions along the very shallow North Sea coast of the German Bight do not allow for the safe operation of cage farms (Rosenthal et al., 2000).

A small cage farm is located in the Kiel Bight, near the heated effluent of a coastal power plant and an onshore hatchery for turbot (*Scophthalmus maximus*), operates north of Kiel and is now also producing some other species such as European seabass (*Dicentrarchus labrax*). Several fish species are cultured for stocking purposes, mainly in lakes, reservoirs and rivers. However, a few anadromous species are also cultured for release in coastal drainage systems such as sea trout (*Salmo trutta trutta*) and houting (*Coregonus oxyrhynchus*).

Mussel farming. The most important marine species cultured in Germany is represented by blue mussel (*Mytilus edulis*). Although fishing on natural mussel beds in the German Wadden Sea along the Schleswig-Holstein coast has taken place for centuries, an extensive, combined fishery-culture system has developed since the end of World War II. Production of blue mussel is characterized by high

fluctuations, from 28 549 tonnes in 2003 to 9 300 tonnes in 2006. They are mainly caused by changes in seed availability.

Socio-economic importance

The German market for aquaculture products is dominated by imports. In 2005, a total of 172 264 tonnes were imported, with salmon accounting for more than 116 000 tonnes. Compared to this, exports reached only 43 324 tonnes and about 180 000 tonnes were consumed in Germany. From this, 85 000 tonnes came from species reared in freshwater.

Some imports were re-exported following processing; as a result exact estimates on the amount of exports produced from German aquaculture facilities are difficult.

The main importing countries for carp produced in Germany are Belgium, Austria and France. In terms of trout, 70 percent of exports went to countries outside of the EU.

Average per-capita consumption of fish raised in aquaculture facilities has reached in total 2.1 kg in 2005, of which 0.6 kg per capita were produced by German aquaculture facilities. Compared with freshwater fish, per capita consumption of meat totalled 87 kg in 2003.

From these figures the conclusion can be drawn that aquaculture production does not contribute to a large extent to German national food security or economic development. As a result of the fact that the retail price for fish is on about the same level as pork and beef and more expensive than chicken, fish in Germany is not included within the typical diet for households with a low income.

Nevertheless, fish culture and fisheries have a long tradition in Germany; as a result, the cultural and social impact on the society exceeds its economic value.

Promotion and management of the sector

The institutional framework

Administrative control of aquaculture is the responsibility of and under authority of the various German States, which are the legislative bodies for aquaculture. As a result, each State has specific laws and regulations for fisheries and aquaculture which may differ across the different States.

Nevertheless, some frame work regulations relating to aquaculture are set in the responsibility of the Federal Ministry for Agriculture and the Federal Ministry for Environment, for example, areas relating to marketing, animal health and the prevention of epidemics, environmental issues and animal protection. Private stakeholders are included in legislative initiatives and procedures.

Freshwater fisheries associations are organised both within the individual States and the Federal Republic. Each State has its own Federal fisheries association representing the interests of stakeholders within that State. On behalf of these State associations, a federal association for inland fisheries acts nationwide.

The governing regulations

The Federal Ministry of Food, Agriculture and Consumer Protection (Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz - BMELV) is the competent authority on fisheries and aquaculture at the federal level. It drafts policies, guidelines and promotes actions especially at the EU level in this area, for example on the subject matter of the introduction of an environmental label for fishery products. The BMELV ensures that the production of freshwater and seawater fish strictly respects environmental sustainability and the priority of consumer protection.

The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit – BMU) deals with the following tasks relevant to aquaculture: protection of inland waters and the maritime zones, groundwater protection, wastewater treatment, pollutant in food and landscape planning. Germany is a federal state with a three-tiered system of government: the federation (national level), the Länder (federal states, provinces, or regional level), and municipalities (local level). The fisheries laws are executed by the Länder as in principle, according to the constitution, the federal laws and regulations are executed by

the administration of the Länder. In terms of the legislative power at the federal level, the federal state can enact laws on sea and coastal fisheries within the so-called "concurrent legislation" whereas the Länder are exclusively responsible for national inland water fisheries. Therefore fishery acts exist both at the federal level, including provisions on sea and coastal fisheries (Seefischereigesetz - SeeFischG) and at the Länder level with provisions on inland water fisheries and territorial waters (within 12 sm zone). None of the fisheries laws (Fischereigesetz - FischereiG) of the sixteen Länder include explicitly the term aquaculture. For instance, the Fisheries Law of Brandenburg refers to the rearing or culture of fish and other aquatic organisms in all artificial ponds and other facilities ("Aufzucht und Haltung von Fischen und anderen Wasserorganismen in allen künstlich angelegten Fischteichen und sonstigen Anlagen").

Other relevant subject matters subject to concurrent legislation include protective measures in connection with the marketing of food, feedstuffs (Art. 74 No 20 GG); inland waterways (Art. 74 Nr. 21 GG); the promotion of agricultural production (including fisheries), deep sea and coastal fishing (Art. 74 No 17 GG). In contrast the regional planning and management of water resources (Art. 75 GG) falls under the federal framework legislation.

The Act on the Regulation of Matters Relating to Water of 1957 (Federal Water Act, Wasserhaushaltsgesetz – WHG), last amended in 2001), as a framework law of the Federal Government, lays down basic provisions relating to water resource management measures (management of water quantity and quality). Therefore it has a key role for aquaculture. This frame law is complemented by the water legislation of the Länder, like for example by the Water Act of Mecklenburg Western-Pomerania.

The Federal Water Act includes provisions on the use of ground and surface water, the handling of substances hazardous to waters, the wastewater disposal as well as the development of waters.

Since the most important federal acts in the field of water resources management (Federal Water Act and Federal Wastewater Charges Act) are only framework statutes, the water resources regulations in the Federal States (state water acts, state wastewater acts and various statutory orders) also contain important provisions which supplement the federal regulations or define them in greater detail. For example, the Federal States regulate ownership of waters, monitoring of waters, maintenance of waters, licensing procedures for uses of waters, and indirect discharges (i.e. discharges via wastewater treatment plants) into waters.

The Federation participates in the discharge of responsibilities of the Länder, in the improvement of the agrarian structure and of coastal preservation including fisheries (Law on the Improvement of the Agrarian Structure and the Coastal Protection- Gesetz über die Verbesserung der Agrarstruktur und des Küstenschutzes). It is a joint task, because such responsibilities are important to society as a whole and federal participation is necessary for the improvement of living conditions.

There is no single authority responsible for aquaculture. Several authorities are concerned with aquaculture matters, such as the authorities in charge of water management, nature protection or construction. The most important authorities with respect to aquaculture are the water authorities. The supreme Water authority (oberste Wasserbehörde) in Brandenburg decides about the policy guidelines and supervises the lower water authorities (untere Wasserbehörde) and the superior water authorities (obere Wasserbehörde/ Landesumweltamt) in Brandenburg. The lower administrative water authorities are the county administrations. These authorities issue, restrict, withdraw or revoke licences for water use. In general, aquaculture authorisations are granted at discretion of the competent water boards (management discretion). The superior water authority is competent in cases of specialized formal legal water procedures.

Trends, issues and development

Aquaculture is a small fringe activity along the German coast and compared with other EU member countries its overall production is negligible other than for mussel farming. There are tight control measures, some of which have cost implications which make it difficult for inland and near-coast fish

farmers to maintain economic viability. In contrast to neighbouring countries, the overall production trend is downward. Even mussel farming which is considered to be an extensive, environmentally friendly farming activity, faces increasing regulatory difficulties that will not allow its expansion despite the fact that the demand for aquatic products is continuously increasing (Rosenthal et al., 2000).

Over the last ten years, fish production from aquaculture facilities has remained constant in terms of production volume with the amount of marketable size fish and shellfish running at approximately 40 000–50 000 tonnes produced per annum. The main reasons for this stagnation has been the high costs for energy and labour, restrictions in terms of environmental and animal protection, a shift of consumer preferences away from species like carp (produced in German aquaculture facilities) towards other species (like salmon imported from Norway) and cheap imports from abroad (carp, trout, salmon). Although a number of technical and biotechnological solutions and developments particularly in the area of flow-through-systems for trout culture have had a positive impact on aquaculture, the above mentioned restrictions have however prevented a significant growth in production volumes.

Great hope has been set in the development of in house recirculation systems for fish production. Technical problems (with the biological purification of recirculation production water in particular) and high costs for energy and equipment have so far prevented such facilities becoming economically feasible in a larger number. Against the trend in neighbouring European countries (Netherlands, Denmark), recirculation production systems in Germany have hardly been able to increase their output and are still contributing just around one percent to total fish production from aquaculture facilities. An increasing effort has been made in the marketing of products produced by aquaculture; a central marketing association is now trying to improve the image of such products.

Owners of aquaculture facilities have to comply with a number of environmental limitations. Great effort has been made to reduce effluents from fish farms, e.g. nutrients, organic and inorganic particles and fractions, by the installation of mechanical and biological water purification units, improvement of fish feed composition and its degree of digestibility as well as limitations on stocking densities.

IV.A.2 Data acquisition

Concerning mussels and eels production no primary data collection is already undertaken, despite concerning production volume in value and weight. So Germany will send out a questionnaire to the mussel and eel producers.

IV.A.3 Data quality

As the questionnaire will be send to all relevant companies including all relevant variables, a census is aimed. Especially concerning the mussel sector one has to have in mind that only 8 enterprises work in the blue mussel sector and only one deal with oysters. So the problem of anonymity may arise.

IV.A.4 Regional coordination

Not applicable

IV.A.5 Derogations and non-conformities

As stated in the introduction to aquaculture above, Council Regulation 199/2008 and the draft commission decision (2008/XXX/EC) are not completely consistent. Non-marine species are generally not covered by the regulation. The exception salmon is not produced in aquaculture in Germany. Sea

bass and other marine species aquaculture is still on an experimental scale (as soon as a commercial scale is reached Germany will collect data for this species). Germany includes eel aquaculture in its program so no derogations or non-conformities remains.

As stated in the data quality paragraph, the problem of anonymity may arise in the mussel sector and so the data will may not be reported or published.

IV.B Collection of data concerning the processing industry

IV.B.1 Data acquisition

Data are collected by additional questionnaire where data from the German Federal Statistical Office are not accessible or collected. Since enterprises with 50 and more employees are responsible for more than 80% of the sector's sales and more than 75% of the sector's employment, the focus will lie on these enterprises for data collection purposes. For the other segments of the sector, data will be collected as well, but with a lower precision level.

The methods and the planned target differ from segment to segment. For the enterprises with 50 and more, employees data by the Federal Statistical Office are already collected for all variables but imputed value of unpaid labour, capital value, debt and employment by gender. In some cases, it collects also data for enterprises with more than 20 employees. Additional questionnaires will be sent out for the variables capital costs, debt, value of unpaid labour, and employment by gender. For the segment with 50 and more employees, all companies will be asked, and in the other segments (0-19, 20-49 employees), questionnaires will be send out to 25% of the companies randomly.

The definition of the data will follow Commission Decision (2008/XXX/EC)/SBS where applicable. Concerning capital costs, historical value, actual value and age will be asked for. Concerning unpaid labour, the number of hours worked without payment will be asked for. Where applicable, a ratio of wages and salaries of staff divided by total working hours will be used as estimation for unpaid labour. This ratio may differ from segment to segment. Where no such ration can be calculated, the lowest legal payment per hour in this sector will be used for estimation.

Most data are available with a two-year delay, which means that e.g. costs data for 2006 are available in the second half of 2008. Table IV.B.2 shows the respective reference years for each variable. The left year in the column 'reference years' indicates the reference year for 2009 data collection, the right one for 2010. In 2009, a questionnaire asking for sales and employment of companies fish processing activities will be send out to all companies holding a fish processing license.

IV.B.2 Data quality

The data quality depends on the segment. In the segment '50 and more employees', a coverage rate of 95% of all companies is planned and for almost all variables already given by official data from the Federal Statistical Office. To ensure the same quality for the missing variables, personal visits with presentations directly at the companies and on trade shows are planned to enhance trust in the data security of the national data collection system. Additional questionnaires will be sent out. For the other segments, a coverage rate of 25% is planned. The questionnaire here will be sent to 25% of the companies of the segments chosen randomly.

IV.B.3 Regional coordination

Not applicable

IV.B.4 Derogations and non-conformities

To enhance data quality, Germany uses the size of enterprises for stratified sampling. The segmentation differs a little from the Commission Decision (2008/XXX/EC), where the size segments are separated by 0-10, 11-49, 50-249, 250 and more employees. Germany intends to use the segmentation 0-19, 20-49 and 50 and more employees in order to make data comparable over the years since a lot of data concerning the variables are already collected by the Federal Statistical Office. Having in mind that the companies with 50 and more employees are responsible for more than 80% of sector's sales and more than 75% of sector's employment and that some data are collected by Federal Statistical Office for Companies with more than 20 employees, segmentation strictly according to the Commission Decision means new primary data collection for nearly all variables. This would mean the loss of quality since the companies are to answer questionnaires from the Federal Statistical Office on a mandatory basis, but not to questionnaires sent out by other bodies. Of course, Germany can provide the variable "number of enterprises" in the segmentation asked for in the Commission Decision. The segmentation for the stratified sampling will differ slightly, but data quality would be enhanced considerably.

It is not clear if this is a derogation or non-conformity, but if Germany hereby asks for acceptance.

V. Module of evaluation of the effects of the fishing sector on the marine ecosystem

In terms of temporal coverage, the data for the estimation of ecosystem indicators (Commission Decision 2008/XXX/EC, 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; Tab. 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 Tab. 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. For most vessels, the assignment of the fuel consumption and catch data to a metier does not appear to turn out as a major problem, because the vessels generally do not change the metier during a trip. Vessels for which landings are recorded only monthly are usually always active in the same metier.

VI. Module for management and use of the data

VI.A Management of the data

A new system architecture for data management is being deployed by the Federal Agency for Agriculture and Food (BLE), Unit G42. The new concept integrates a MicroStrategy Business Intelligence server (BI), the immediate benefit being that complex data analysis can be performed directly by fishery scientists or economists. It takes herewith into account the increased requirements on data analysis by the follow-up DCR legislation [Council Reg. 199/2008, Articles 13-17; Commission Regulation 665/2008, Article 8; Commission Decision 2008/XXX/EC, Annex Chapter VI.A].

The use of BI will allow 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 / export data from queries and reports.

In the context of this new concept, the existing parts of the current data architecture (e.g. the ftp server, Oracle database and data flow processes) will be updated. The new architecture will be productive in quarter 1 of 2009.

VI.A.1 System architecture

The new system architecture for data management is explained roughly in Fig. VI.A.1.

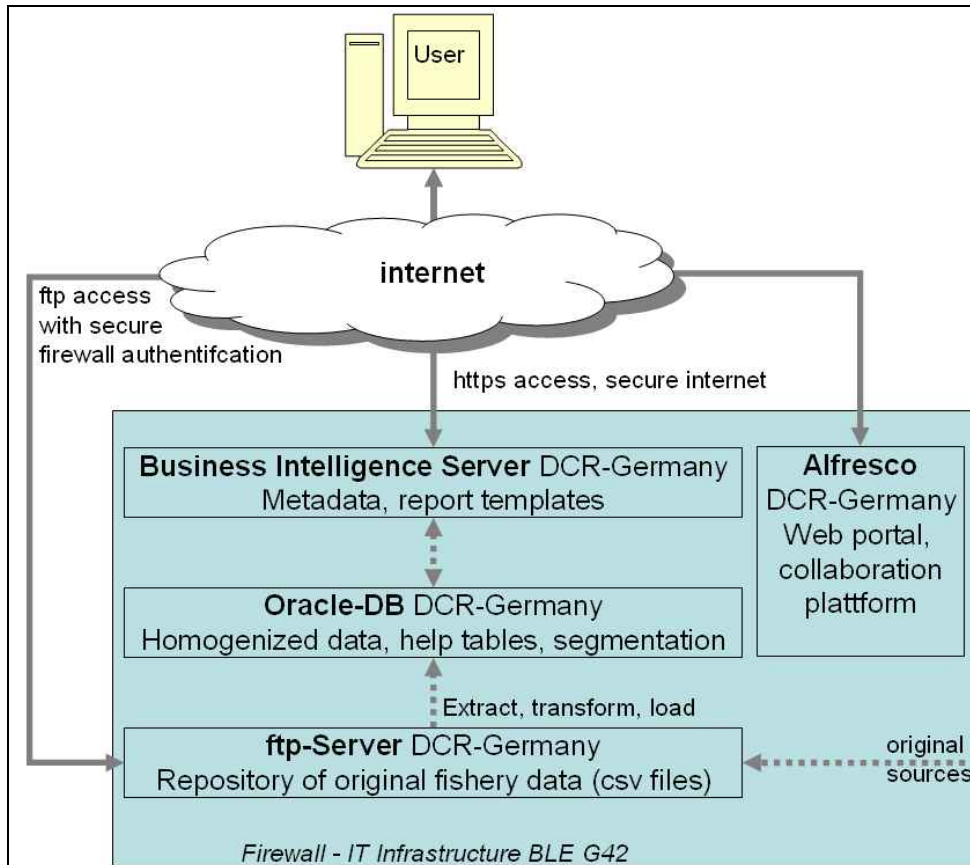


Fig. VI.A.1 System Architecture Data Management DCR-Germany

VI.A.1.1 Users

Users are at the top of the new system architecture. The users are the colleagues from 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 ftp, to access the ftp server and thus upload or download files from/to it. This access is restricted to registered users, and the ftp server is only accessible after secure firewall authentication.

VI.A.1.2 Data repository (ftp-server)

The DCR ftp server contains a repository of all the original data from 2002 to date. The data origins from different sources:

| Data category | Original data source | Data format & transfer |
|---|---|---|
| Fishery statistics: <ul style="list-style-type: none">• Vessel register• Logbook data• Landing statistics | Data is collected by BLE Unit 522, Hamburg. Data is stored in a central DB by BLE Unit G12, Bonn | Format: csv-files Yearly transfer. By February, data of the preceding year is transferred from G12 to G42 for usage within National Programme. |
| Economic data | vTI - Institute of Sea Fisheries (SF) | Format: mdb-file (MS Access). Yearly transfer. |

This ftp 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 ETL (extract, transform, load) procedures that include data homogenisation and data type conversions. The use of the Oracle database is:

- Data basis for calculations (main fishing technique, segmentation, effort),
- Decoding according to EU 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 deployment of MicroStrategy Business Intelligence (BI) for DCR-Germany is to:

- provide a transparent, consistent and homogeneous data basis for all DCR colleagues 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 visualization, 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 against the 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 for DCR-Germany means:

- 1) 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;
- 2) Define and set up the metadata: data source, database objects, attributes, aggregations, etc;
- 3) 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 G42. The use and analysis of DCR data will be carried out by the fishery scientists and economists.

VI.A.1.5 Alfresco Web Portal

According to Commission Regulation 665/2008, Article 8(2), a national web portal for DCR purposes will be set up with the Alfresco software, which is an Open Source web collaboration platform providing document management, collaboration, records management, knowledge management, web content management and imaging.

VI.A.2 IT Security

The following IT security analysis was carried out for the system architecture:

| Value | Protection level | Remarks / protection measures |
|-----------------------------|--|---|
| Data confidentiality | <input type="checkbox"/> low to medium <input checked="" type="checkbox"/> high <input type="checkbox"/> very high | <p>The original data contains confidential data (fishing activities from the logbook and landing files which can be matched to single vessels or legal/natural persons using the information from the vessel register).</p> <p>Measures to achieve data confidentiality:</p> <ul style="list-style-type: none"> ▪ The access via ftp to the ftp repository requires secure firewall authentication and is restricted to selected users with the right and need to access raw (primary) data. ▪ The access to the BI application and to the Alfresco portal is performed with secure internet access. ▪ Different user roles with different access rights are defined and deployed to ensure different access levels to data. ▪ The access to raw confidential data via BI is strictly restricted to DCR users with the right and need to access this information. ▪ Access to aggregated data is allowed to a wider user group. Aggregation guarantees that the fishing activities remain anonymous. |
| Data integrity | <input type="checkbox"/> low to medium <input checked="" type="checkbox"/> high <input type="checkbox"/> very high | <p>Data must be protected against manipulation and against casual or accidental change.</p> <p>Measures to achieve data integrity:</p> <ul style="list-style-type: none"> ▪ There are security copies of the original data stored in the ftp repository. The ftp repository can be overwritten with the files from security copy in case that data change occurred even with the access restriction measures explained above. ▪ Technically, the Oracle database cannot be accessed by external users. There are security backups of the Oracle database to be used for restoring the data basis in case of data damage. |

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| Data availability | <input checked="" type="checkbox"/> low to medium <input type="checkbox"/> high <input type="checkbox"/> very high | <p>Incidental access disruption to the web based services does not lead to economical losses nor does it threaten human lives.</p> <p>Measures to achieve data availability:</p> <ul style="list-style-type: none"> ▪ In case of access disruption to the data and web based services, it suffices that access is restored within one working day. |
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VI.B Use of the data

Germany regularly delivers biological data from surveys-at-sea (section III.G), transversal and biological data from landings and discards (sections III.C-III.F) and in the future eventually also economic data (section III.B) of the German fleet 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. Table VI.B.1 presents a preliminary list of expert group meetings that will be attended by German scientists for supporting the scientific advice for the assessed species or stocks.

VII. Follow-up of STECF recommendations

| Source | Comments | Action |
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| SGRN Evaluation of Tech.Rep. 2005 (July 2006) | DEADLINES AND TRANSLATION PROBLEMS For the completeness and equitability of its work, SGRN insist that, in future, MS scrupulously respect the deadline. SGRN recommends that, in the future, MS use the scientific Latin name for all species in the tables. | Germany respects the deadline set by SGRN. Latin names are used for all species in the tables of the technical report. |
| SGRN Evaluation of Tech.Rep. 2005 (July 2006) | ON THE QUALITY OF THE TECHNICAL REPORTS SGRN re-iterates its standpoint that the Technical Reports should be as concise as possible, while at the same time providing all the information that is necessary for the evaluation of the MS's achievements. | Germany is trying to layout the technical report as concise as possible while providing all required information. |
| SGRN Evaluation of Tech.Rep. 2005 (July 2006) | ON PRECISION LEVEL AS A DCR TARGET SGRN is of the opinion that a number of standard statistical methods are available and the absence of common procedures to calculate precision levels should not be used as an excuse for not providing estimates in the Technical Reports. | Germany is trying to find an appropriate statistical method to calculate precision levels not only for discards but also for other parameters. Nevertheless, Germany is in favour of the development of a common tool to estimate precision that guarantees the international comparability of precision levels. |
| SGRN Evaluation of Tech.Rep. 2005 (July 2006) | ON THE DEROGATION RULES REGARDING LOW LEVEL OF LANDINGS SGRN proposes that MS should undertake to sample to precision levels rather than on the basis of historical landings so that the mortality estimates derived from catch age and length sampling are accurate and achieve a high precision for the individual species and stocks affected. | Before sampling programmes are directed in order to reach certain precision levels, Germany is in favour of the development of a common tool to estimate precision that guarantees the international comparability of precision levels. |
| SGRN Evaluation of Tech.Rep. 2005 (July 2006) | ON THE FINAL STATUS OF THE NATIONAL PROGRAMMES SGRN recommends that the changes to the | Germany ensures that the finally accepted version of the NP are available to SGRN before the |

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| | <i>NP Proposals that were agreed during the bilateral negotiations be laid down in an addendum to the NP Proposal, and that these addenda be made available on the JRC data collection website.</i> | <i>corresponding evaluation meeting.</i> |
| <i>SGRN Evaluation of Tech.Rep. 2005 (July 2006)</i> | ON THE USE OF DCR DATA FOR OTHER THAN SCIENTIFIC PURPOSE <i>SGRN stresses that sensitive data which has been collected only with the cooperation of the fishing industry such as discard or economic data should only be used for scientific purposes and MS shall take all necessary measures to ensure that primary data collected under the DCR are dealt with in a confidential way (Article 9, 1639/2001).</i> | <i>Germany does make every effort to guarantee that collected sensitive data are only used for scientific purposes and are dealt with in a confidential way.</i> |
| <i>SGRN Evaluation of Nat.Prog. 2007 (Nov. 2006)</i> | On Parameter definition for economic data collection on the processing industry <i>Firstly, SGRN recommends that MS should comply with the provisions of the DCR. (...) SGRN suggests that the MS provide clear information in their NP Proposals and Technical Reports concerning the measurements of the parameters listed in Appendix XIX of the DCR.</i> | <i>Germany provides clear information in the NP Proposals and Technical Reports concerning the measurements of the parameters listed in Appendix XIX of the DCR.</i> |

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| <i>SGRN Evaluation of Tech.Rep. 2006 (August 2007)</i> | DEADLINES AND TRANSLATION PROBLEMS <i>For the completeness and equitability of its work, SGRN insist that, in future, MS scrupulously respect the deadline and recommends the Commission to make sure that all TR are available at least two weeks before the SGRN meeting.</i> | <i>Germany respects the deadline set by SGRN.</i> |
| <i>SGRN Evaluation of Tech.Rep. 2006 (July 2007)</i> | ON THE QUALITY OF THE TECHNICAL REPORTS <i>SGRN re-iterates its standpoint that the Technical Reports should be as concise as possible, while at the same time providing all the information that is necessary for the evaluation of the MS's achievements.</i> | <i>Germany is trying to layout the technical report as concise as possible while providing all required information.</i> |
| <i>SGRN Evaluation of Tech.Rep. 2006 (July 2007)</i> | ON THE DANGER AND IMPLICATION OF USING DCR DATA FOR CONTROL AND ENFORCEMENT PURPOSES <i>SGRN stated that the use of DCR data for enforcement purposes had the potential to negatively impact on the ability of MS's to fulfil their DCR obligations for at sea and market sampling, ...</i> | <i>DCR data are not used for enforcement purposes in Germany. Furthermore, Germany does make every effort to guarantee that collected sensitive data are only used for scientific purposes and are dealt with in a confidential way.</i> |
| <i>SGRN Evaluation of Tech.Rep. 2006 (July 2007)</i> | ON PRECISION LEVEL AS A DCR TARGET <i>SGRN has repeatedly recommend every MS to estimate the precision of the data obtained by sampling in order to assess the quality of the associated estimates.</i> | <i>Germany is still trying to find an appropriate statistical method to calculate precision levels not only for discards but also for other parameters. Following these attempts Germany has calculated precisions levels based on two methods. Nevertheless, Germany is in favour of the development of a common tool to estimate precision that guarantees the international comparability of</i> |

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| | | precision levels. Germany is looking forward to the outcome of the COST project. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON DATA COLLECTION OBLIGATIONS Specific data requests...such as ICCAT, ICES, IOTC, GFCM, CECAF, etc., and addressing data collection issues that are within the scope of the DCR but that go further than the requirements laid down in the DCR, should become an integral part of the National Programmes. The NPs of the MS's concerned should be adjusted accordingly and without delay, even in cases where such new rules are established after the submission deadline of the NPs proposals. | Germany is generally aiming at adjusting the NP according to the requirements of Regional Fisheries Science Organisations such as ICES and NAFO. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON THE RESULTS OF TUNA TAGGING SGRN is concerned about the effectiveness of the bluefin tuna pop-up tagging programmes carried out by several MS. | Germany has no tuna tagging program as there is no tuna fishery. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON THE LEVEL OF SAMPLE RETURN AND/OR RESPONSE RATE (Mod J and K) SGRN recognises in some segments/parameters a low sample and/or response rate. In that case SGRN advises the MS to modify the sampling strategy and increase their effort to improve the return rate in order to enhance the quality and reliability of the data. | <p>In Germany, fishermen are not legally obliged to provide data, and therefore there is no tool to overcome the reluctance in data provision. However, it has recently been made mandatory for all applicants for EFF fisheries subsidies to provide required economic data.</p> <p>It is mandatory for enterprises to give the requested data to the Federal Statistical Office. But not all indicators mentioned in Appendix XIX of EC No 1639/2001 are collected by the Federal Statistical Office. For the segment with less than 10 employees no data are collected by the Federal Statistical Office. For the segment 10-19 only a few indicators are collected. To improve the information on the missing indicators as well as the data on the segment of small scale enterprises, a questionnaire was sent out by the FAL. The response rate was much too low, while the response rate to the questionnaire of the Federal Research Institute for Fisheries was much better in 2006. So the questionnaire strategy of 2006 will be prolonged in the following years. Every two years a questionnaire will be sent out asking for the relevant data. This strategy is assisted by attendance at processor meetings, trade fairs, publications and visits of single enterprises to enhance compliance. But since answering the questionnaire is</p> |

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| | | voluntarily, the response rate will not reach the high level the questionnaires of the Federal Statistical Office reach. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON DEFINITION OF EMPLOYMENT (Mod J and K) SGRN advises MS to provide both employment and FTE indicators, giving the methodology used to calculate FTE. | All data have been provided. For FTE in the Fish Processing Industry sector (Module K) no segmentation is available by now. For the whole sector the number of working hours in enterprises with 10 and more employees is known, so simple mathematical operations deliver FTE. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON THE PROBLEM OF EXCLUDING SMALL/LOW TURNOVER VESSELS (Mod J and K) On several occasions, SGRN has insisted that MSs closely follow the provisions of the DCR with regards to the coverage of the vessel population for economic data collection (Mod J) and that they do not exclude vessels from the sampling population. | Germany does not exclude any vessels. (Not relevant for K) |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON LEVEL OF DETAIL IN PARAMETER DEFINITION IN THE NP/TR (Mod J and K) SGRN noticed that many MS failed to give full and meaningful details either in their NP proposal or in the TR on parameter definition and methods of calculation. SGRN insists that full details be given on these issues preferable in the NP proposal submission in future terms. Additionally SGRN insists the MS to provide this information of parameter definition, methodology and sampling strategy in one document (as a stand-alone document) without referring to workshops, studies or other documents (e.g. CA documents). SGRN also recommends that copies of the questionnaires used in the fleet surveys be given, preferably in an appendix to the NP proposal. | Germany has fulfilled the requirements. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON COVERAGE OF PARAMETERS (Mod J and K) SGRN noticed that many MS failed to give the full set of parameter listed in the Appendix XVIII. SGRN insists that the MS provides all parameters of the Appendix XVII parameter of the DCR in Table 12.1 (MP) and 12.2 (EP, if they applied for). | All parameters have been provided. For module K all parameters are listed in table 13.2, but not for all parameters Germany has data for (see above). |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON THE RANGE OF SAMPLE RATE AND RESPONSE RATE (Mod J and K) SGRN advises MS to provide the range of value in case of differences in the rates (sample and/or response) observed for collected Appendix XVII parameters as recommended in the footnote of Table 12.1. | All data have been provided. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON SEGMENTATION (Mod J and K) SGRN is aware that some MS still failed to provide the segmentation in line with the Appendix III demands in Table 12.1. sqq. | All data have been provided. |

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| | SGRN insists that the MS takes the necessary steps to remedy this omission and to make sure that the DCR is correctly implemented. | |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON SEGMENTS WITH LESS THAN 10 VESSELS (Mod J and K) SGRN insists that MS avoids doing aggregation with neighbouring gear type groups, which is not in accordance with the DCR rules. | All data have been provided, not applicable for Module K. |
| SGRN Evaluation of Tech.Rep. 2006 (July 2007) | ON WORDING OF THE SEGMENTS (Mod J and K) SGRN notes that some MS used wordings for the description of the segments in Table 12.1 sqq. as well as in the texts sections that does not fit with the wordings as written in Appendix III and IV of the DCR, e.g. MS used data transmission codification abbreviations. In addition, in some cases different names are used in the text and table parts of the Technical Reports. SGRN insists that the MS is in line with the DCR on this issue in order to avoid confusion and improve clarity. Supplementary information on the segment – if needed – should be enclosed in brackets. | Germany is in line with the requirements of the DCR. |

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| <i>SGRN Evaluation of Nat.Prog. 2008 (Dec. 2007)</i> | On getting information on fishing techniques for vessels < 10 meters: SGRN strongly recommends MS to develop appropriate ways of collecting landings and effort by métier for all the vessels belonging to their national fleet register. | In the Baltic, logbook data for vessels >8m are available since 2006. For smaller vessels, Germany will aim at collecting data on a pilot study basis. For the other regions, there are only few vessels <10m. |
| <i>SGRN Evaluation of Nat.Prog. 2008 (Dec. 2007)</i> | On sampling intensity and coordination for non-economic data: SGRN reiterates its recommendation that MSs to use the precision analysis of previous year's sampling to establish their sampling plan in the NP proposal. SGRN also recommends that the MS seeks international cooperation within the RCM to integrate its sampling programme at the Regional level in an attempt to jointly reach the required precision level. | A precision analysis of the sampling parameters is preferably to be carried out at the regional level, which will be done at the upcoming RCMs. |
| <i>SGRN Evaluation of Nat.Prog. 2008 (Dec. 2007)</i> | On coordinating discards sampling: SGRN recommends that MS should carefully evaluate their discard sampling schemes and re-allocate observers according to the importance of the métiers for discard practices. | This has been done in the current NP, according to COM Decision 2008/XXX/EC and the corresponding STECF guidelines (SGRN 08-01 report). |
| <i>SGRN Evaluation of Nat.Prog. 2008 (Dec. 2007)</i> | On Eel data collection: Since September 2007, European eel falls under a recovery plan (Council regulation (EC) N°1100/2007). (...) This implies that under Modules H and I, MS's cannot ask for a derogation based on a percentage share in the landings and/or on landings being less than the amount specified in the minimum programme of the DCR. SGRN encourages MS's to set up their length sampling programme for European eel | Germany will start a pilot project on eel sampling in early 2009 aiming at fulfilling these obligations. |

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| | <p>based on a precision target. According to the DCR a precision level of 1 for length should be achieved. The fallback option is to measure 100 eels for every 20 t landed. (...) <i>Age analysis should be at 200 eels per sample, or ... a minimum of 5 individuals per cm length interval. A minimum of 200 individuals should be analysed per management unit for yellow and silver eel separately</i>". SGRN supports these recommendations.</p> | |
| SGRN Evaluation of Tech.Rep. 2007 (July 2008) | <p>ON THE EXECUTION OF NP REGARDLESS OF FINANCIAL DELAYS: SGRN insists that all actions planned for the new DCR, regardless of any funding agenda issue, actually starts on the 1st of January 2009.</p> | Germany has always started the DCR work at the beginning of the year. |
| SGRN Evaluation of Tech.Rep. 2007 (July 2008) | <p>ON FISHING OUTSIDE COMMUNITY WATERS: MS are responsible for collecting the data on landings and discards for all the vessels flying their flag, wherever they fish, and provide data to the organisation responsible for advice and/or management. To SGRN opinion, all necessary information should be included in MS National Programme and gathered following the provisions of the DCR and the relevant RFMO (when the provisions of the RFMO is more specific or more precise than the provisions of the DCR). When landings occur in a EU country, the Member State on whose territory the first sale take place, shall be responsible for ensuring that biological sampling occurs according to the standards defined in this Community Programme (section B1-3.1 (a)). When landings occur in a non-EU country, MS shall make as much effort as possible to organise sampling by its own staff or make arrangements with the local state to ensure that the data is provided to the relevant RFMO. The information on landings, effort and sampling intensity, the description of methodology used and data transmission should be included in MS DCR National Programme.</p> | Germany will seek bilateral or regional agreements with regard to sampling fisheries in the CECAF area and in the South Pacific, see sections III.C.4 and III.E.4 for "Other regions" in this NP proposal. |
| SGRN Evaluation of Tech.Rep. 2007 (July 2008) | <p>ON PRECISION LEVELS: The common tool to evaluate the precision of the biological parameters (COST project), will be available to the public early in 2009. This tool will authorise all MS to evaluate the bias and calculate the precision of the biological parameters, provided that they export their data following the agreed Data Exchange Format. All MS are then invited to become acquainted with this format and to anticipate the exportation of their data.</p> | Germany welcomes the results of this project and will use the provided tools for precision analyses. |
| SGRN Evaluation of Tech.Rep. 2007 (July 2008) | <p>The survey for static gear vessels < 12m has not been carried out. SGRN insists that the survey is implemented in NP proposal 2009-2010 / 2008 TR.</p> | The survey has been implemented in the German NP 2009-2010. |

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| SGRN Evaluation of Tech.Rep. 2007 (July 2008) | No information on the representativeness of the non-random sampling survey and the census on vessels >40m is provided. SGRN requests a clear analysis on representativeness in NP proposal 2009-2010 / 2008 TR. | No common method for data quality estimation has been approved yet. As a preliminary approach the frequencies of the parameters "total catch" and "hours fished" have been compared between the total segment and the sample (see section III.B.2). By evidence, the parameters are not normally distributed in both the universe and the sample. Therefore the standard statistical tools for the estimation of precision level or standard error are not applicable. See also III.B.2 <i>Data quality</i> . Vessels >40m are sampled as census. This is the highest level of "representativeness" which can be achieved. The quality of the received data will be checked for plausibility by comparison within the same segment. |
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VIII. List of derogations

All derogations are listed in the following text:

a) NP 2009-2010:

On biological - metier-related variables:

The number of planned sampling trips is in many cases less than the recommendation of the DCR/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 sea 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 (e.g. brown shrimp fishery) is not fixed yet and depending on staff availability and regional agreements between Member States.

Germany applies for the following derogations with regard to metiers:

Baltic:

MIS_CAT_all_0_0

Reason: The eel fishery is subject to other (Federal Country directed) projects in Germany.

LLD_ANA_0_0_0

Reason: The longline fishery on salmonids in the Eastern Baltic came into the ranking matrix only for its high effort numbers.

North Sea and Eastern Arctic:

OTB_DEF_16_0_0 (Fishery directed on sandeel in the North Sea)

Reason: In accordance to the quota regulation (Council Regulation 40/2008), 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 of 96% for Sweden and 4% for Germany. Therefore, the share in sampling effort for Germany is negligible and subject of bilateral agreement with Sweden.

North Atlantic:

OTB_DEF_120_0_0 (Fishery directed on redfish in ICES area V)

Reason: This fishery recently took only place in 2007 and disappeared again in 2008. Therefore, sampling might not be possible. Germany will sample this metier if it occurs again.

FPO_CRU_all_0_0 (Fishery directed on deep water crustaceans)

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.

GNS_DEF_220_0_0 (Fishery directed on anglerfish and mixed species)

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.

OTM_DEF_120_0_0 (Fishery directed on redfish in ICES area XII, XIV)

This fishery disappeared in 2008. Germany will sample this metier if it occurs again.

Other:

OTM_SPF_32_0_0 (Fishery on small pelagics in Mauritanian waters)

Sampling in the CECAF area will be subject of multilateral negotiations in the relevant RCM.

OTM_SPF_32_0_0 (Fishery in the South Pacific)

Sampling in this area will be subject of multilateral negotiations in the relevant RCM. However, target species are not included in Appendix VII of the DCR.

On biological - stock-related variables:

Skagerrak and Kattegat: With regard to the exemption rules (Commission Decision 2008/XXX/EC, chapter III.B.B2.5), *Pollachius virens* in the Skagerrak has to be sampled. Catches in the Skagerrak are belonging to the same 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.

CECAF area: Sampling in the CECAF area will be subject of bi- or multilateral negotiations within the RCM 'Other areas'. During the last years, the main catches were taken by Lithuania, Spain and the Netherlands and were landed into Spain. Furthermore, the vessels are obliged to take Mauritanian observers onboard.

North Atlantic: For cod in the North East Atlantic and Western Channel, different quotas are assigned for following areas: 1) Vb(EU), VI, XII, XIV, 2) V, XIV (GL waters), NAFO 0&1 (GL waters), 3) VIIb-k, VIII, IX, X, CECAF34.1.1 (EU), 4) VIIa, 5) Vb (FAR). Germany has a share on the quotas in areas 1, 2 and 5. Only in area 2 (V, XIV (GL waters), NAFO 0&1 (GL waters)), the German share exceeds 10%. This fishery was re-established in 2007 and takes mainly place in ICES Sub-area XIV. Therefore, Germany will sample cod in this area.

Nine stocks will be sampled by Germany despite there is no obligation by the DCR 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: *Clupea harengus* in **ICES areas I and II**; *Sprattus sprattus* in the **Baltic Sea**; *Melanogrammus aeglefinus*, *Pleuronectes platessa*, *Solea solea* in the **North Sea and Eastern Channel**; *Micromesistius poutassou*, *Scomber scombrus*, *Trachurus trachurus* in the **North East Atlantic and Western Channel**.

b) NPs 2003 to 2008

NPs 2003/2004/2005 - Fishing Effort Request for derogation

The bulk of the German fleet covered by MAGP IV are vessels not obliged to report to logbooks. These are 75% of the fleet in terms of numbers. However, this part of the fleet took less than 4% of the German fleet landings in recent years (3.04% in 2000, 3.85% in 2001). The impact of this part of the fleet on the fishing mortality in general is thus negligible taking also into account that the German quotas for the relevant stocks are only a part of the EU-quota and/or the TAC. Based on EU Regulation 2847/93 this part of the fleet is not obliged to report daily catches and/or fishing effort data. To get information on fishing effort and gear defined in Chapter I Module D (1) (a) a statistically based sampling program has to be established including research to determine stratification and number of samples to be taken to comply with the requested precision level. The expected costs of such a sampling program including about 1700 vessels in relation to the gained information seem to be much too high.

Based on the above mentioned reasons Germany requests a derogation from sampling fishing effort data as defined in Chapter II Module D (1)(a)(i),(ii),iii) for vessels of the German fishing fleet which are not obliged to report to logbooks.

Status: The requested derogation for excluding vessels under 10m overall length from the calculations was not accepted by STECF.

NP 2003 - Scientific Surveys

Germany requests a derogation to discontinue Survey 2.2 (Atlanto-Scandian Herring survey). The national programmes of other member states for 2002 did not include this survey although it is a priority 1 survey. Germany stated that in this case it will not conduct this survey.

Status: The survey is now included in the programmes of the involved MS.

NPs 2007 and 2008 - Landings – Derogations and non-conformities

After utilisation of derogation rules, Germany needs to sample the stocks listed in Table 8.2 with the sampling intensity specified in Appendix XV of Regs. 1639/2001 and 1581/2004 for the stocks in question (Table 8.1). In case different sampling intensities were given in Appendix XV for stocks with a TAC covering several divisions, the sampling intensity of that division was chosen in which the German fleet took the bulk of the catches.

In many cases, a higher sampling effort than required will be applied to provide the relevant ICES/NAFO assessment working groups with catch in numbers at age, mean weight at age as well as maturity at age for the German landings. With the numbers requested in Appendix XV of Regs. 1639/2001 and 1581/2004, this cannot be ensured.

Status: Accepted in 2007 and 2008

NPs 2007 and 2008 - Eel sampling

As the average annual eel landings during recent years were considerably lower than 100 t (Table 8.2), Germany is not obliged to provide data under this module.

Germany is currently preparing a pilot study on eel monitoring, which is outlined in Annex 1.

Status: Accepted in 2007, but not in 2008. Pilot study will be conducted.

NPs 2007 and 2008 - Discards – Planned sampling

Germany will monitor discards only in those stocks which are by-catches in the fisheries targeting the stocks to be sampled (Tables 5.2 and 5.3). Fisheries not listed in Table 8.4 proved to be less exploited by the German fleet applying the derogation rules in Chapter III, H. 1(d) of Regs. 1639/2001 and 1581/2004. This implies in most cases that discards are of lesser amount. If this is not the case, measures will be taken to cover the relevant fisheries. However, if species sampled in addition to the ones in Table 8.1 are caught, they are also sampled as well as any other species brought on deck.

Status: Accepted in 2007 and 2008

NP 2007 - Data Concerning Fish Processing Industry

Because of the above mentioned low response rate, the indicators investment (assets), financial position and raw material use could not be gathered so far for the fish processing sector. A request for

support to the German association of food processing enterprises was rejected because they do not want to increase the bureaucratic burden of their members. It seems that additional indicators can only be successfully gathered if the response to our questionnaires will be compulsory for the fish processing enterprises.

Furthermore, identifying the total population of fish processing enterprises below 20 employees seems to be very difficult. The official business register contains about 270 fish processing enterprises, while more than 600 German enterprises have an official permission of public health authorities to process fish. However, the response rate of the small scale enterprises was also too low in 2004 and 2005. In 2006 and 2007, it is planned to introduce a significant financial incentive to increase the feedback rate.

Suggestion:

The whole data collection exercise for the fish processing sector has not been seriously discussed yet on a European level. Further steps should only be taken into consideration after a detailed evaluation of the national data collection experiences regarding Module

Status: Accepted in 2007

NPs 2006-2008 - Recreational – Derogations and non-conformities

Derogations exist for blue fin tuna and salmon.

Status: 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:

- *“The conclusion that there are no German recreational fisheries for blue fin tuna in the North Sea and Baltic was accepted.”*
- *“In view of the low level of the salmon recreational fishery, SGRN has no suggestions on follow-up studies.”*

The following table summarizes the derogations applied by Germany 2003 to 2008 and in the recent programme 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 |

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| Request for derogation on biological - stock-related variables | III.C - Biological - stock-related variables | pending | 2009/2010 |
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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 | Bruttoraumzahl (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 |

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| 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 Activités économiques dans la Communauté Européenne) |
| 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 |
| PGERS | ICES Planning Group on Redfish Surveys |
| 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 need and data collection |
| SGRS | ICES Study Group on Redfish Survey |
| SPS | Small pelagic fish |
| SQL | Structured Query Language, standard computer language for accessing & manipulating database systems |
| SSC | Scottish Seine |

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| 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 |
| WGMEGS | ICES Working Group on Mackerel and Horse Mackerel Egg Survey |
| WGNSSK | ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerak |
| WGWIDE | ICES Working Group on the Assessment of Wide Distributed Stocks |

X. Comments, suggestions and reflections

In the Guidelines for NP proposals, several paragraphs on economic and transversal variables seem to have been repeatedly inserted by “copy & paste” (e.g. III.F.3.2 referring to “effort” in a chapter on “landings”), without being of any relevance in the given context, e.g. data quality issues on variables which are derived from official, legally binding documents like logbooks and the fleet register. It cannot be the task of the DCR to scrutinise the reliability of data sources of this kind.

It would be more consistent to have separate table sheets for economic and for transversal data. Transversal data might require specifications different from economic data. Transversal data might have to be disaggregated by factors which are irrelevant for the collection of economic data, for instance by métier. This inconsistency is also reflected in the Commission Decision (2008/XXX/EC), in which economic and transversal data are mixed in a confusing manner in Appendix VI, while transversal data are specified again in a more detailed and useful way in Appendix VIII.

So far, there is no merger option for vessels operating in different supra-regions. In the particular case of Germany, there is only one vessel assigned to the third supra-region. It is evident that data for this vessel cannot be presented separately, due to confidentiality reasons. Therefore, data have to be merged with vessels from another supra-region before publication.

XI. References

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XII. Annexes

No annexes necessary.