

*Revised proposal including detailed description of the budget for
2002.*

Danish National Programme for collection of fisheries data

by

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Copenhagen 27. August 2001

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Danish National Programme for collection of fisheries data.

1. Introduction.

This document describes the Danish Programme for collection of data in the fisheries sector. The programme has been developed in accordance with the rules laid down in the “*Draft Commission Regulation (EC) N^o .../.. of establishing the Minimum and Extended Community Programmes for the collection of data in the fisheries sector and laying down detailed rules for the application of Council Regulation (EC) N^o 1543/2000*”, hereafter in this programme called “the Implementation Regulation”. The programme will be conducted in close cooperation between:

- **Danish Directorate of Fisheries**
Danish Directorate of Fisheries (FD) performs control and authority exercises at the commercial fisheries and the recreational and game fisheries.
- **Danish Institute of Agricultural and Fisheries Economics**
The Danish Institute of Agricultural and Fisheries Economics (SJFI) is a Public Research Institute. The researchers and academic staff of the Institute have backgrounds and experience in economics, agricultural and resource economics, agronomy, as well as a wide range of statistical methods and applied research tools.
- **Danish Institute for Fisheries Research**
Danish Institute for Fisheries Research (DIFRES) is a Public Research Institution which carries out research, investigations and provides advice concerning sustainable exploitation of live marine and fresh water resources. Moreover, processing and improvement of fish products as well as quality assurance in the fish industry are important parts of the research areas of the institution.

The Danish Directorate of Fisheries is acting as coordinator for the Danish Programme. A Steering Group has been established with members from all three Institutes involved in the programme. The main objective of the Steering Group is to coordinate of the work under the programme.

Primary data collected under the Danish programme will be stored in the following computerised databases:

- Vessel register. Data on fishing capacity. (FD)
- Logbook database. Data on origin of catches and on effort. (FD)
- Sales notes database. Data on quantities landed and prices. (FD)
- Species composition database. Data on species composition in landings for industrial purposes. (FD)
- Biological database. Data on discards and biological parameters. (DIFRES)
- Economic data. (SJFI)

In addition to the above-mentioned databases containing primary data a database, the Danish Fisheries Analyses Database (DFAD) containing information from all databases merged and aggregated by segments is established. This database contains most of the information requested in research projects and in relation to fisheries management.

Economic data will be collected by SJFI and stored in a database managed by the institute. These data are surrounded by strict confidentiality and will not in any circumstance be passed on to other persons or authorities. Each year SJFI produces an analytic file on the individual level, which includes relevant data for stratification and grouping for statistical purposes. Based on the analytic file a number of statistical files will be produced and made available for external users.

All data collected under the programme are dealt with in confidence. Accesses to the data are limited to authorised staff member from the three institutes and no one outside the institutes has access to the data without permission.

1.1 Co-operation and task sharing between Denmark and other Member States

Collection of information on fishing capacity, fishing effort, economic and landings statistics are carried out entirely on a national basis. Biological information on catches, information collected by research vessels and information on discards are in most cases coordinated internationally and carried out in close cooperation with research institutes in Member States and third countries.

In the economic field SJFI constitutes the Danish representative in the project Economic Assessment of European Fisheries organized under the Concerted Actions and Thematic Networks which is committed to develop a common method or standard for evaluation of the economic situation in the Community fisheries.

1.2 National Correspondent

Denmark has assigned the Danish Directorate of Fisheries as the National Correspondent.

1.3 Appreciation of the level of precision

The information on landings by species, catch areas, fishing effort and fishing capacity will be given on the highest possible level of precision.

For the biological and economical information level of precision can not be estimated at this stage. Within the first year of the programme methods and procedures to estimate the precision of the data will be developed

2. Module of evaluation of inputs: fishing capacity and fishing effort

2.1 C. Collection of data concerning fishing capacity

Minimum programme:

All Danish fishing vessels with the right to undertake commercial fishery are registered in the Vessel Register of the Danish Directorate of Fisheries. The Vessels Register is a computerised database and includes among others the following information:

- Vessel type e.g. trawler, seiner
- Vessels age (age of the hull)
- Dimensions of the vessel; GRT, length, width, draught.
- Engine power, type and age.
- Insurance value and –year.

The information in the Vessels Register is registered according to Regulation (EC) N° 2930/86 and N° 2090/98.

The Vessel Register is updated daily.

The information on fishing capacity is merged with other fishery dependent data and stored in the DFAD as described in Section 5.

Data on fishing capacity on an aggregated level by segments as described in Appendix III of the Implementation Regulation can at any time be delivered on a precision level of 3.

Extended Programme:

No data collection will be carried out within the framework of the extended programme.

2.2 D. Collection of data related to fishing effort

Minimum programme:

The base for the regulation concerning the collection of information on the catch origin is the EC-regulations on logbooks, etc. and the implementation of a control-regulation concerning the common fisheries policy and more explicit regulations of information on catches by Member States.

The set of regulations prescribes that all vessels used for commercial fishery are obliged to keep logbooks of the fishery. The only exception from these rules are vessels with a total length less than 10 m, and for fishing trips undertaken in agreement with a catch area declaration. A catch area declaration is made for vessels which limit its fishing activities to a single defined area (ICES sub-area).

All the information is stored in the Logbook database which is a computerised database of the Danish Directorate of Fisheries and includes among others the following information:

- Vessel name, number and captain
- Departure and arrival date and time
- Gear type employed
- Fishing ground, area and square
- Registration of fishing days
- Estimated catch per species once a day at the minimum.

The information in Logbook database is registered according to the provisions of Commission Regulation (EC) No 2807/83 and No 2847/93.

The information on fishing effort is merged with other fishery dependent data and stored in the DFAD as described in Section 5.

Data on fishing effort on an aggregated level by segments as described in Appendix V, Appendix VI and Appendix VIII of the Implementation Regulation can at any time be delivered on a precision level of 2 respectively level 1 for passive gears.

Information on fuel consumption will be collected within the data collection programme according to Chapter IV.

Extended Programme:

No data collection will be carried out within the framework of the extended programme.

3. Module of evaluation of catches and landings

3.1 E. Collection of data related to catches and landings

Minimum programme:

According to the legislation information on sold fish and shellfish has to be reported to the Danish Directorate of Fisheries.

The registration and information duty applies to the following persons and parties:

- Storage warehouses, cold storage warehouses, or other establishments receiving fish and shellfish with purpose for sale, storage, sorting, or other liking treatments before the fish is sold to first hand buyers.
- Persons or parties that as a part of their trade buy fish directly from the fishermen for sale purposes on the home-market, export including transistation, for conservation purposes or processing for later sale.

- Persons or parties receiving fish directly from the fishermen in cases where the sale has taken place before the landing of the fish.
- Fishermen selling the catch directly to the consumer, or who lands directly in a foreign country, or export including transistation, or process the fish from own landing.

Therefore, all information on sold fish and shellfish are registered and all these information are stored in the Sales Notes database which is a computerised database and includes among others the following information:

- Vessel number.
- Landing place and buyer.
- Species and size-class.
- Quality and purpose (e.g. human consumption).
- Weight in kilo and value in national currency (exchanged to DKK)

The information in the Sales Notes database is registered according to the provisions of Council Regulation (EC) No 2847/93 and No 104/2000.

The Danish fishery can be divided into two categories: A fishery with landings only for human consumption purposes and the so-called “Industrial fishery”, where all the landings are made for reduction purposes (fish meal and oil).

3.1.1 Collecting data on landings designated human consumption.

The above mentioned information in the Sales Notes database provides the background for collecting information of landings made for human consumption landed by Danish fishing vessels.

3.1.2 Collecting data on landings designated reduction purposes.

For landings made for reduction purposes only the target-species is registered. As by-catches occurs in the industrial fisheries the Sales Notes database does not contain reliable information on landings by species in these fisheries and additional information has to be collected to provide estimates of landings by species. The method and data used in estimation of landings by species is described in the following.

Sampling scheme for the industrial landings

The objectives of the Danish sampling scheme for industrial landings are:

- To collect data needed for estimation of the species composition of landings by statistical rectangle and month.
- To collect biological information on e.g. age and racial composition by species, month and area.

A number of random sub-samples are taken from the landings. The samples are sorted and weighted by species. The information registered includes e.g.:

- The vessel number.
- Landing harbour and landing date.
- Total landing in kilos.
- Total weight in grams per sample.
- Weight in grams per species.

The samples are collected and processed by the Danish Directorate of Fisheries and data are stored in the Species distribution database which is a computerised database in the Danish Directorate of Fisheries.

In addition to the above-mentioned samples, the Danish Directorate of Fisheries collects a number of samples, which are delivered to the Danish Institute for Fisheries Research. These samples are sorted by species and each species is length measured, weighed and selected species are aged.

The species composition of the landings is derived as follows:

The total landings for reduction purposes by month and area are calculated using the sales note database. The landings are then allocated to statistical rectangle using the relative geographical distribution from the logbook database of landings identified as have been taken for reduction purposes. The output is the total industrial landings by statistical rectangle and month.

The relative species composition by statistical rectangle and month is estimated using the information in the species composition and biological databases. An average composition by rectangle is estimated as the mean of all samples from the rectangle. If more than one sample is taken from the same landing, a mean composition of the landing is calculated and treated as one sample.

After calculation of average composition by rectangle a new average composition is calculated taking into account the species composition in all neighbouring rectangles. Taking the mean species composition of the rectangle and all 8 surrounding rectangles does this.

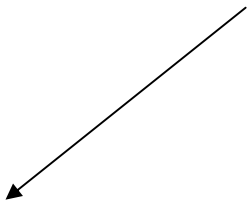
The total landings by species, statistical rectangle and month are calculated using the estimated species composition and total landings by rectangle and month.

The estimation procedure is illustrated by the flow diagram below.

Information contained in the biological database is used to estimate the total catch in numbers at age as well as other information needed as input in the assessment of the stocks.

SALESNOTES DATABASE
total catch by ICES
Division and month

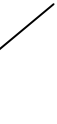
LOGBOOK DATABASE
relative distribution of landings by
ICES statistical rectangle and month



Total landings by
ICES statistical
rectangle and month



SPECIES COMPOSITION AND BIOLOGICAL
DATABASE
relative species composition by statistical rectangle
and month



Total landing by
species, ICES statistical
rectangle and month



BIOLOGICAL DATABASE
age and length composition by species and area



Total landings at age
by species

The information on landings is merged with other fishery dependent data and store in the DFAD as described in Section 5.

Data on landings for the stocks mentioned in Appendix XII of the Implementation Regulation will be given disaggregated as indicated in that Appendix.

Discards will be monitored for the stocks mentioned in Appendix XII of the Implementation Regulation and by type of technique as defined in Appendix III of the Implementation Regulation except for the stocks for which Appendix XII specifies another disaggregation rule. The information on discards will be collected according to the programme described in section H.

Information on human consumption landings will be given on a precision level 3.

As some of the species listed in Appendix XII of the Implementation Regulation occur as by-catch in landings made for reduction purposes in scarce quantities it is not possible to decrease the error without having disproportionately high resource expenses (Lewy 1996, Lewy 1995). Thus it will not be possible when estimating the by-catch quantities per species to reach a precision level higher than 1.

The programme for collecting data related to annual estimates of discards for the stocks mentioned in Appendix XII of the Implementation Regulation will be set up in order to achieve a precision level of 1 for the estimation of the amount of discards for the specific species.

A pilot study with the aim of estimate the landings of Baltic salmon made by recreational and game fisheries will be carried out taking into account the disaggregation level specified within Appendix XI of the Implementation Regulation.

3.2 Danish discard sampling

According to the Implementation Regulation chapter 3.E.1.b Denmark must collect discard data in order to be able to present estimates of discard rates for selected species. Collection of discard data in Danish fisheries was initiated in 1995 and since then the most important Danish fisheries in the North Sea, the Skagerrak and the Kattegat have been sampled systematically. The monitoring has been carried out as studies supported by the Commission

3.2.1 Danish sampling effort of relevant species and areas

Appendix II gives an overview of the species and areas for which discard estimates is to be made according to Article H section e). Furthermore Appendix II gives the number of samples to be taken according to the Implementation Regulation Annex XV.

The discard sampling effort will under the observance of the yearly sampling level given in appendix II be proportional to the fishing effort by strata, a relative large number of landings imply heavy sampling effort and relative smaller number of landings implies less sampling effort. This assures that the discard data are directly applicable to the national landing statistics.

All Danish discard sampling in the Kattegat and the Baltic Sea follows the rules laid down in the international agreed sampling manual established under EU study 98/024: "International Baltic Sea Sampling Program II" (IBSSP II). In this document all aspects of "at sea sampling" are covered (including: selection procedures for selecting fishing trips, description of sub-sampling procedures, recording of data, safety at sea etc). The document is at present under final editing and will be

available in August 2001. The same sampling procedure will be practiced in the North Sea and the Skagerrak Manuals for sampling procedures will be developed for these areas as well.

Within the overall framework given in appendix II, the sampling will be stratified on:

- ICES Division/Sub-division.
- Quarter.
- Discard pattern relevant defined segments.

The segments will be defined on vessel size, gear type, mesh size and target species.

The sampling of discards will normally be done on board during normal active fishery by observers trained and employed at DIFRES. Only in fisheries where it is verified that no advantages are obtained by sampling on board (e.g. fisheries where no discards are made), in fisheries where the vessels are too small to carry an extra person or where sampling on board for various reasons are impossible will discard sampling be made in harbours during landing. In such cases and when the observers are confident with the skipper and crew, the part of the catch, which normally will be discarded, will be landed separately from the normal landing part of the catch and worked up and recorded. In this case the same information are collected and recorded as if the observer has been on board.

In many cases the observer on board will have the possibility in the spare time between hauls to obtain length distributions for species not defined as mandatory according to Article H section e).

The vessels to be monitored will be selected randomly among a large number of vessels identified in close cooperation with the Danish Fishermen's Organisation. There is no authority in Danish law, which give the possibility to enforce the fishermen to have observers' onboard. Therefore, the vessels will not be sampled randomly among all vessels performing a given fishery but only among the vessels where the skipper beforehand has agreed in having observers on board. By the involvement of the Danish Fishermen's Organisation in the selection of vessels potential for sampling, some mutual concessions are facilitated allowing the broadest possible basis for the sampling, representing most categories of behaviour among fishermen and assuring representative data.

The fishery performed differs considerably by area in respect to duration, number of station per trip and handling of the catch. In the North Sea trips are often up to 3 weeks of duration, while trips of 1-2 days duration are common in the Kattegat and the Baltic Sea. Because of differences in the fisheries in the areas different sampling procedures are applied. If possible information on discards as well as landings will be sampled from each station.

The information to be sampled is:

- Vessel and gear characteristics
- Place, date, time and duration of fishing operation
- Total weight of discard and landing by all species caught.
- Separate length distributions of discard and landings by all relevant species caught. If the retained catch is landed in commercial weight categories separate length frequencies are obtained by category.
- Otoliths and individual mean weight per cm-length group of selected species.

In areas where the whole catch will be properly sampled, traditional harbour sampling will only be carried out occasionally in periods where it is difficult to collect a sufficient number of otoliths due to bad weather or regulation.

If the extensive sampling is not possible for example due to long trips or inadequate time between stations to work up the whole catch, only the discard part of the catch will be fully worked up (species distribution, length distribution and otoliths). In these areas traditional harbour sampling will be carried out regularly.

All weight measurements are recorded as un-gutted fish and the measurements are preferably made on un-gutted fish, but if gutted fish are used a weight conversion factor (Annex I) will be applied.

All data recorded in connection with the collection of discard are included in the Biological database (see Section 1 and Section 3.6) holding all biological catch data collected by DIFRES.

Danish discard figures will be raised to total yearly discard by species and fishery by applying the ratio between discard and retained amount in the sampled fishing trips to the total landing. Data will be made available for use in stock assessment.

3.2.2 International discard data storage

All Danish catch data sampled during discard sampling in the Kattegat and the Baltic Sea are included in the international common IBSSP database: BALTCOM. This database constitute the backbone in all international discard calculations made for the area and is essential for the further development and international co-operation concerning discard.

All countries around the Baltic Sea submit data to the database and have full access to all data collected if the data are used for scientific purposes.

It is the ambition that the database in the future besides providing age aggregated discard information, in addition shall provide the basis for central calculation of age-aggregated landings in numbers for all countries fishing in the Baltic Sea (per e.g. 1000 tons landed). The initial step has already been taken by including data from harbour sampling in the database and the development of software is almost finalised. This will assure that the input to the assessment model used by the Baltic Fish Assessment Working Group will be calculated in a consistent and well-documented way.

From mid year 2001 an updated web-based version of the database will be introduced allowing participating countries to access all data through an Internet browser.

3.2.3 Quality assurance

The discard data are collected in agreement and in cooperation with the Danish Fishermen's Association. A formal agreement on cooperation between DIFRES and the Danish Fishermen's Association has been signed. Two Working Groups, one for the North Sea and the Skagerrak and one

for the Kattegat and the Baltic Sea have been established with members from DIFRES and the Danish Fishermen's Association. The Working Groups develop the sampling plans and performs a very detailed quality check of the sampled data.

This assures a continuous and fruitful communication between the industry and the scientists and facilitates the possibility of a continuous adjustment of the sampling scheme to the actual activity and trends in the industry. At the same time the quality check of the data assures that the data collected are representative for the fisheries sampled.

A very important spin-off from the discard sampling at sea is the opportunity to intensify the communication with the Danish Fishermen's Association and the individual fisherman providing a natural possibility to explain and overcome some of the misunderstandings often existing between the fishermen and the scientists.

Extended Programme:

No data collection will be carried out within the framework of the extended programme.

3.3 F. Collection of data concerning the catches per unit effort and/or effective effort of specific commercial fleets.

Minimum programme:

The collecting of data concerning the catches per unit of effort and/or effective effort of specific commercial fleets will be done following the guidelines in the Minimum Programme, as both the catch and effort data are collected in the National Programme (Section 2.2).

Extended Programme:

No data collection will be carried out within the framework of the extended programme.

3.4 G. Eligibility of the scientific evaluation surveys of stocks

The Danish Institute for Fisheries Research command three research vessels. The R/V DANA which is a stern trawler with a loa of 78 meters. DIFRES uses R/V DANA when conducting the International Bottom Trawl Survey (IBTS), the Baltic International Trawl Survey (BITS) and the Herring Acoustic Survey (HERSUR).

One of the other Danish research vessels R/V HAVFISKEN, a 20 GRT side trawler is used at the BITS survey in the Kattegat and the Western Baltic area.

The smallest of the Danish Research vessels the R/V HAVKATTEN is normally only used in the very coastal areas and is not used within any of the surveys conducted within this framework of this programme.

All member states are obligated to undertake scientific research at sea to evaluate the abundance and distribution of stock independently of the data provided by the commercial fisheries in the case of stocks mentioned in of the Implementation Regulation. The below described surveys are of priority 1 and are thus a part of the minimal program defined in the Implementation Regulation Appendix XIV. Denmark will undertake 5 different surveys in the North Sea, the Skagerrak, the Kattegat and the Baltic Sea.

The surveys described in this programme are internationally co-ordinated and will remain so when the programme is implemented. The planning and co-ordination of the surveys are done in the ICES working groups connected with the surveys (IBTS Working Group, BITS Working Group, Herring Survey Planning Working Group).

Minimum programme:

3.4.1 International Bottom Trawl Survey (IBTS)

According to the Implementation Regulation is this survey classified as a Priority 1 survey. The survey is undertaken twice during a year, one in the first quarter (18 days at sea) and during the third quarter (18 days at sea) and is the Danish part of the IBTS. R/V DANA is used when conducting this survey.

The purpose is to estimate abundance of commercial and non-commercial fish species by means of bottom trawling and to collect otoliths of commercial species (cod, haddock, whiting, Norway pout, saithe, herring, sprat, and mackerel) to assess abundance by age, in particular for the recruiting year classes in the North Sea, the Skagerrak and the Kattegat.

The sampling procedure and the level of precision are defined in the Manual for the International Bottom Trawl Surveys. ICES CM 2000/D:07

The survey is ICES co-ordinated and performed in collaboration with research vessels from France, Norway, England, Germany, The Netherlands, Scotland and Sweden. The survey is carried out as a bottom trawl survey deploying a GOV trawl during daylight hours as a standard aboard all research vessels involved. In addition to the trawl-surveys, a Method Isaac Kidd trawl is deployed during night hours to estimate the abundance of fish larvae, in particular herring- and sprat larvae. Hydrographical data is collected with a CTD.

Data is stored in an international database in ICES and revised before usage in the relevant ICES Working Group.

3.4.2 Baltic International Trawl Survey (BITS)

According to the Implementation Regulation is this survey classified as a Priority 1 survey. The survey is undertaken twice during a year, in the 1st quarter (18 days at sea) and in the 4th quarter (18 days at sea) both with the research vessel R/V DANA and the smaller research vessel R/V

HAVFISKEN undertakes the second part of the BITS in the sub-areas 21-23 during the same periods.

The primary purpose of the part undertaken by R/V DANA is to develop indices for recruitment and stock abundance of the Baltic cod stocks. The second part undertaken by R/V HAVFISKEN provides in addition to cod also abundance indices for flatfish.

The sampling procedure and the level of precision are defined in the Manual for the Baltic International Trawl Surveys. ICES CM 2000/H:02

R/V DANA:

The cod population is estimated by means of establishing catch-rates in bottom-trawls in different depths and areas in the ICES subdivisions 24, 25, 26, and 28.

Data on gonadal maturity and weight of individual cod and organs is obtained to establish sex specific maturity ogives, mean weight and condition at age for cod. Hydrographical data is collected with a CTD.

R/V HAVFISKEN:

The species composition and the length distributions of all caught fish are recorded, and samples for ageing are taken of cod, plaice and sole. Hydrographical data is collected with a CTD.

Data is stored in an international database and used by relevant ICES Working Groups.

3.4.3 HERSUR (International acoustic herring survey)

According to the Implementation Regulation is this survey classified as a Priority 1 survey. The survey is undertaken during the 2nd and 3rd quarter and consists of a calibration part (2 seadays) and an acoustic abundance estimate of herring stocks (12 seadays) in the North Sea, the Skagerrak, and the Kattegat.

The purpose is to provide acoustic abundance estimates of herring and sprat in the North Sea (eastern part), the Skagerrak, and the Kattegat.

The sampling procedure and the level of precision are defined in the Manual for the Herring Hydro Acoustic Surveys ICES CM 1994/H:3

The acoustic abundance estimate is done in collaboration between Denmark, Norway, Scotland, Germany, and The Netherlands. The herring are length measured and weighted aboard and sent to the laboratory in Charlottenlund for further examinations such as sex, maturity, age, and spawningtype.

Hydrographical data is collected using a CTD.

Data is stored in a database and revised before usage in the relevant ICES Working Group.

Extended Programme:

No data collection will be carried out within the framework of the extended programme.

3.5 H. Biological sampling of catches: composition by age and by length and I. Other biological sampling

The Implementation Regulation gives the instructions that biological sampling must be performed in order to evaluate the composition in length and where appropriate in age of landings for all stocks specified in Appendix of the Implementation Regulation and for some species also other biological samplings.

Biological samplings must be performed if the Danish TAC or total landings of a certain species exceeds thresholds defined in the Implementation Regulation; Chapter H (1) (d) 1) and 2). Appendix III shows the landings made in Denmark by Danish flagged vessels and by other Member States flagged vessels. Information on the Danish and the total EU TAC is given for 2000. The purpose of the biological sampling of catches is to estimate the number of fish and their mean weight at age of the landings made in Danish harbours. The sampling will be performed by segments and the data will ultimately together with data on landings made by other nations flagged fishing vessels give the basic input data when analysing the historical exploitation of the stocks and further be the foundation when carrying out assessments on the stocks.

All biological sampling data will be stored in a central database at DIFRES. Data security is ensured by common standards. Data entry is conducted at the two laboratories in Charlottenlund and in Hirtshals to a closed network. To maintain data integrity and performance of the database a data manager will maintain the database.

The tasks of the data manager is:

- Merge data sampled on research vessel to the main base.
- Compact and tune the database at regular intervals
- Perform backup of data
- Act as help-deck for user of the base
- Maintain look-up tables
- Make error checking and consistency tests on the database
- Maintain a security system, that grant users and outside partners access to data at an appropriate level

Currently the database is implemented with the software Ingress from Computer Associates on a Unix system. The plan is to upgrade the system to a Microsoft NT system based on SQL server. It is expected that the new DFU-database will be use by the beginning of 2002.

3.5.1 The Danish standard sampling scheme

Standard samples are non-size graded samples. The standard sampling procedure will be to carry out sampling on a quarterly basis by ICES division in all the main harbours where landings takes place. Samples will be collected randomly and the number of samples will reflect the fishery activity. For each stock the intended sampling level is given in Appendix III (as outlined in the Implementation Regulation) for landings made by both Danish - and other Member States flagged vessels landing in Denmark.

The samples are either analysed in the harbour or send to DIFRES, where all biological measures are performed. The standard measures are:

- Length
- Weight
- Age

The ageing is performed according to the standardised method.

The aggregated data are stored in the Biological database (DFUBase) at DIFRES.

Concerning the ‘Other biological sampling’ outlined in the Implementation Regulation Chapter III I. (1) the parameters in sections (1) (a) (i) and (iii) will be sampled during surveys on all species as the samples of the commercial landings either are in such condition that histological measures are impossible or that the sampling is performed on gutted fish. However, samples of herring and sprat are subject to the parameters mentioned in sections 1 (a) (i) and (iii) as an improvement of the estimation of spawning stock biomass and recruitment to the spawning stock is of striking importance for the assessment of these stocks.

The ‘Other biological sampling’ outlined in the Implementation Regulation Chapter III I. (1) (a) (ii) will be fully completed for the relevant stocks.

With reference to Appendix III a description of the stocks that will be a part of the Danish sampling programme is given below. Each stock is described by the following structure: The Danish landings made in Denmark and the Danish TAC is given and the fishery for the stock is shortly described. If the biological sampling of catches deviates from the standard described above, the sampling is described. If any other biological analysis is conducted, this is described.

Minimum programme:

3.5.2 The Baltic Sea. ICES Area IIIb-d

Sprat

The Danish quota in sub-areas IIIb and IIIc in 2000 was 35,480 tonnes and the Danish TAC was 22 % of the EC shared TAC, and in sub-area III d the landings was 42,460 tonnes and the Danish TAC was 23 % of the EC share TAC; both obliging Denmark to sample this stock.

The Danish sprat fishery in ICES area IIIb-c is mainly landed for industrial purposes. The catches are mainly taken during the period from November to March.

Standard sampling procedure as described in 3.5.1 will be used.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of sex, maturity and fecundity per age, sex and population.

Sex and maturity stage is obtained from the individuals selected for ageing in each sample. The maturity estimates after aggregation has a CV which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity is determined following an international key (F. E. Alekseejev & E. I. Alekseejeva 1996).

Plaice

The Danish landings in 2000 were 2,153 tonnes and the Danish TAC was 84 % of the EC share TAC, obliging Denmark to sample this stock.

Sampling of plaice follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4 and. At least one sample from each size-grade-class will be collected during the high season (summer).

This stock is not subject to other biological analysis.

Herring.

The Danish quota in sub-areas IIIb and IIIc in 2000 was 23,243 tonnes and the Danish TAC was 11 % of the EC share TAC, and in sub-area IIIId the landings was 24,102 tonnes and the Danish TAC was 11 % of the EC share TAC; both obliging Denmark to sample this stock.

A major part of the herring catches (about 32,000 tonnes) in the Baltic is taken in sub-area 24-32. A minor part (about 13,000 tonnes) is taken in sub-area 22. The herring fishery takes place in all seasons, however, more intensively during periods when the cod fishery is low. The catches are only landed for human consumption purposes. The fleet is mainly smaller trawlers only part-time engaged in the herring fishery. In addition a few medium sized herring-trawlers participate in the fishery.

Standard sampling procedure as described in 3.5.1. will be used.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of sex and maturity per age and population.

Sex and maturity stage is obtained from the individuals randomly selected for ageing in each sample. The maturity estimates after aggregation has a CV, which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity is determined following the international 8 scale maturity key.

Cod

The Danish landings in 2000 were 31,070 tonnes and the Danish TAC was 45 % of the EC share TAC, obliging Denmark to sample this stock.

The cod population in the Baltic is divided into two different stocks: The Eastern stock (sub-areas 25-32) and a Western stock (sub-areas 22-24). The sampling and data revision is made for each stock.

Also the fishery is divided into East and West of the Baltic. East of Bornholm the fishery is exclusively performed during March to August with exception of the summer-stop during June and July, and is directed towards the spawning cod population. Almost all types and sizes of vessels are engaged in the fishery and the gears used are pelagic trawl, bottom trawl, gillnet and to a lesser extent hooks. The fishery is exclusively directed towards cod and only by-catches of flounder may occur during February and March. West of Bornholm the fishery is taking place during most of the year, except for the summer-stop, depending on the TAC's. The fishery is a combined fishery with cod as a main target-species with a considerable by-catch of flatfish. It is primarily smaller vessels that participate in the fishery and the gears used are bottom trawl, Danish seine, gillnet, trapnet and hooks. However, larger foreign vessels do participate in shorter periods.

The sampling of cod follows the standard sampling scheme, however it is performed by the size-grade-class stratification defined in EU standards from size-grade 1-5. In practise, at least one sample will be collected per size-grade-class and during the high season (summer) more intensive ensuring samples from each size-class.

If cod appears as by-catch in samples collected from other fisheries all individuals are sampled, length measured and aged. Data are treated as for the samples of cod taken from landings designated for human consumption.

This stock is not subject to other biological analysis.

Salmon

The Danish landings in 2000 were 97,198 individuals and the Danish TAC was 27 % of the EC share TAC, obliging Denmark to sample this stock.

The Danish salmon fishery is combined of a longline fishery from November to March and a driftnet fishery in the remaining months of the year except from a few summer-months, where there is no fishing for salmon. However, the majority of the fishing is taking place during September, October, and January. Approximately 25 vessels participate in the salmon fishery and none of these are full-time engaged in fishing.

The sampling of salmon is following the standard sampling scheme. In practise the sampling is done from 2 auction-halls in Bornholm where all landings are made. The sampling is size-class stratified and scales are taken from all size-classes. The scales are analysed at DIFRES.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of wild and reared salmon in the total landings of salmon.

In addition, the scales of wild and reared salmon will be compared in order to determine whether this feature is a method for routine distinction between the two types of salmon.

3.5.3 ICES AREA IIIA North and South

Blue whiting

The Danish landings in 2000 were 4,849 tonnes and the Danish TAC was 97 % of the EC share TAC, obliging Denmark to sample this stock.

The Danish fishery for blue whiting in ICES area IIIA is entirely for industrial purposes. The catches are taken all year round with a high season in summer.

Standard sampling procedure as described in 3.5.1. will be used.

This stock is not subject to other biological analysis.

Sprat

The Danish landings in 2000 were 12,720 tonnes and the Danish TAC was 72 % of the EC share TAC, obliging Denmark to sample this stock.

Small to medium sized trawlers using mesh sizes less than 32 mm participate in the sprat fishery that is exclusively for industrial purposes, and thus all mesh sizes are less than 32 mm. of size. Most catches are made during the 2nd and 4th quarter

Standard sampling procedure as described in 3.5.1. will be used.

Sex and maturity stage is obtained from the individuals selected for ageing in each sample. The maturity estimates after aggregation has a CV which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity is determined following an international key (F. E. Alekseejev & E. I. Alekseejeva 1996).

Hake

The Danish landings in 2000 were 231 tonnes and the Danish TAC was 92 % of the EC share TAC, obliging Denmark to sample this stock.

Hake is caught as by-catch in the fishery from gill-net vessels using mesh sizes larger than 100 mm and as by-catch in human consumption trawl fishery . Hake is mostly landed during summer.

The sampling of hake follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sample will be collected from each size grade.

This stock is not subject to other biological analysis.

Haddock

The Danish landings in 2000 were 985 tonnes and the Danish TAC was 84 % of the EC share TAC, obliging Denmark to sample this stock.

Haddock is landed all year round and only for human consumption purposes. Trawlers using gear with a mesh-size larger than 90 mm undertakes the fishery.

The sampling of haddock follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-3.

In cases where haddock appears as by-catch in the small meshed fishery all individuals sampled will be length measured and aged

This stock is not subject to other biological analysis.

Mackerel

The Danish landings in 2000 were 2,097 tonnes and the Danish TAC was 56 % of the EC share TAC, obliging Denmark to sample this stock.

Mackerel is landed during autumn and winter only for human consumption purposes. The fishery is undertaken by trawlers and purse seiners all using gear with a mesh-size larger than 32 mm.

Standard sampling procedure as described in 3.5.1. will be used.

This stock is not subject to other biological analysis.

Saithe

The Danish landings in 2000 were 832 tonnes and the Danish TAC was 8.4 % of the EC share TAC, obliging Denmark to sample this stock.

Saithe is landed all year round only for human consumption purposes. The fishery is undertaken by trawlers and gillnet vessels all using trawls and gill nets with a mesh-size larger than 90 mm.

The sampling of saithe follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sample per size grade will be collected.

This stock is not subject to other biological analysis.

Plaice

The Danish landings in 2000 were 6,678 tonnes and the Danish TAC was 79 % of the EC share TAC in sub-area IIIa North and in sub-area IIIa South the landings were 1,641 tonnes (89% of the EC share TAC), both obliging Denmark to sample this stock.

Plaice is caught both as a target species for smaller trawlers and gillnet vessels, and as by-catches in the nephrops and cod fishery. The catches are taken all year round and only for human consumption purposes. The gears used in the nephrops fishery is at least 70 mm and in other demersal human consumption fishery mesh-sizes larger than 90 mm.

The sampling of plaice follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sample per size-grade per season will be collected.

This stock is not subject to other biological analysis.

Herring

The Danish human consumption landings in 2000 were 33,380 tonnes and the Danish TAC was 48 % of the EC share TAC, and the by-catches of herring in the small meshed fishery in 2000 were estimated to app. 8,900 tonnes. These landings obliging Denmark to sample this stock.

The herring human consumption fishing fleet in Division IIIa consists of trawler and purse seiners using mesh sizes larger than 32mm and the landings of herring are landed for human consumption purposes. The fishery is mainly occurring during June to October. By-catches of herring the small meshed fishery occur and these landings are used for fish meal and oil production.

The herring population in this area is composed of 3 stocks, and the sampling is performed on the following categories (Article 11.1.a.ii):

- a) Autumn spawners from the North Sea.
- b) Spring spawners from the Western Baltic.
- c) Winter spawners both from the English Channel and local populations.

All revision of data and assessment are done on these spawning types.

Standard sampling procedure as described in 3.5.1. will be used.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of sex and maturity per age and spawning stock.

Sex and maturity stages are obtained from the individuals randomly selected for ageing in each sample. The maturity estimates after aggregations have a CV which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity are determined following an international 8 scale maturity key. The spawning type is determined from the otoliths following an intern manual (Mosegaard, H, L.A. Worsøe, and M. Lindberg 1999)

Sandeel

The Danish landings in 2000 were 10,200 tonnes and the Danish TAC was 95 % of the EC share TAC, obliging Denmark to sample this stock.

Sandeel is caught as a target species for trawlers. The catches are taken mainly during the 2nd quarter and are used for reduction purposes. The gears used have mesh-sizes less than 16 mm.

Standard sampling procedure as described in 3.5.1. will be used.

This stock is not subject to other biological analysis.

Sole

The Danish landings in 2000 were 684 tonnes and the Danish TAC was 84 % of the EC share TAC, obliging Denmark to sample this stock.

Sole is caught as a target species for smaller trawlers and gillnet vessels. The catches are taken during the 2nd and 3rd quarter and only for human consumption purposes. The gears used have mesh-sizes larger than 70 mm.

The sampling of sole follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-3. At least one sample will be collected by size-grade during the high season.

This stock is not subject to other biological analysis.

Cod

The Danish landings in 2000 was 7,656 tonnes and the Danish TAC was 83 % of the EC share TAC in sub-area IIIa North and in sub-area IIIa South the landing was 3,275 tonnes (62% of the EC share TAC), both obliging Denmark to sample this stock.

The cod fishery is taking place during all year and a major part of the cod fishery is done by trawlers and to a lesser extent by gillnets vessels (mainly during the winter). All gears used have a mesh size larger than 90 mm.

The sampling of cod follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-5. At least one sample will be collected by size-grade per season. In cases where cod appears as by-catch in the small meshed fishery all individuals are sampled, length measured and aged. Data are treated as for the samples of cod taken from landings designated for human consumption.

This stock is not subject to other biological analysis.

3.5.4 ICES AREA II.

Atlanto-Scandian Herring

The Danish landings in 2000 in Denmark were 8,709 tonnes and the Danish TAC was 35 % of the EC share TAC, obliging Denmark to sample this stock.

Atlanto-Scandian herring is landed during spring only for human consumption purposes. Purse seines using gear with a mesh-size between 32 and 40 mm undertakes this fishery.

As a major part of Danish landings of Atlanto-Scandian herring is taken place in Norway, an agreement concerning sampling of these landings will be made with Norway, as a supplement to the standard sampling in Denmark.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of sex, maturity and per age.

Sex and maturity stage is obtained from the individuals selected for ageing in each sample. The maturity estimates after aggregation has a CV which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity is determined following an international 8 scale maturity key.

Blue whiting

The Danish landings in 2000 were 5,555 tonnes and the Danish TAC was 97 % of the EC share TAC, obliging Denmark to sample this stock. Blue whiting is landed only for reduction purposes in all seasons and is landed by large trawlers.

Standard sampling procedure as described in 3.5.1

This stock is not subject to other biological analysis.

3.5.5 ICES AREA IV

Sandeel

The Danish landings in 2000 were 541,000 tonnes and the Danish TAC was 94 % of the EC share TAC, obliging Denmark to sample this stock.

Sandeel caught in the ICES area IV are landed exclusively for reduction purposes and the fishery is undertaken by trawler using bottom-trawls with mesh-sizes less than 16 mm. Sandeels are landed from early spring to late summer.

Standard sampling procedure as described in 3.5.1.

This stock is not subject to other biological analysis.

Anglerfish

The Danish landings in 2000 were 1,314 tonnes and the Danish TAC was 7,8 % of the EC share TAC, obliging Denmark to sample this stock.

Anglerfish caught in the ICES area IV are landed exclusively for human consumption purposes and most of the landings are taken as by-catch in all the Danish demersal trawl fishery.

The sampling of anglerfish follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sampler per size-grade will be collected.

This stock is not subject to other biological analysis.

Blue whiting

The Danish landings in 2000 were 33,900 tonnes and the Danish TAC was 97 % of the EC share TAC, obliging Denmark to sample this stock.

Blue whiting is landed all year round exclusively for reduction purposes. Large trawlers using trawls with a mesh-size less than 32 mm undertake the fishery.

Standard sampling procedure as described in 3.5.1.

This stock is not subject to other biological analysis.

Sprat

The Danish landings in 2000 were 191,200 tonnes and the Danish TAC was 91 % of the EC share TAC, obliging Denmark to sample this stock. Trawlers using mesh-size less than 32 mm conducts this fishery and all landings of sprat are landed for reduction purposes during the period from August to March.

Standard sampling procedure as described in 3.5.1.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of sex, maturity per age. Sex and maturity stage is obtained from the individuals selected for ageing in each sample. The maturity estimates after aggregation has a CV which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity is determined following an international maturity key (F. E. Alekseejev & E. I. Alekseejeva 1996).

Horse mackerel

The Danish landings in 2000 were 4,400 tonnes and the Danish TAC was 68 % of the EC share TAC, obliging Denmark to sample this stock. Most of the catches of horse mackerel are taken as by-catch in the small meshed fishery which is carried out mainly by large trawlers during winter and landed for reduction purposes.

The purpose is to estimate the number of fish and their mean weight at age of horse mackerel from ICES area IV landed in Denmark. However, a target-oriented sampling is not possible as horse mackerel only appears as by-catch in landings for reduction purposes.

This stock is not subject to other biological analysis.

Hake

The Danish landings in 2000 were 558 tonnes and the Danish TAC was 57 % of the EC share TAC, obliging Denmark to sample this stock...

Hake is caught as by-catch by demersal trawlers and by gill-net vessels using mesh sizes larger than 100 mm. Hake is mainly landed during summer.

The sampling of hake follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sample per size-grade will be collected.

This stock is not subject to other biological analysis.

Mackerel

The Danish landings in 2000 were 14,293 tonnes and the Danish TAC was 56 % of the EC share TAC, obliging Denmark to sample this stock. Mackerel is landed during autumn and winter only for human consumption purposes. The fishery is carried out by trawlers and purse seines all using gear with a mesh-size larger than 32 mm

Standard sampling procedure as described in 3.5.1.

This stock is not subject to other biological analysis.

Turbot

The Danish landings in 2000 were 430 tonnes and the Danish TAC was 16 % of the EC share TAC, obliging Denmark to sample this stock. Turbot is caught as by-catch in the fishery from vessels using either gill-net vessels or bottom trawls. Turbot is mainly landed during spring and summer by gill-net vessels using mesh-sizes larger than 200mm.

The sampling of turbot follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sample per size-grade will be collected.

This stock is not subject to other biological analysis.

Plaice.

The Danish landings in 2000 were 12,535 tonnes and the Danish TAC was 20 % of the EC share TAC, obliging Denmark to sample this stock. The fishery for plaice is carried out by a variety of vessel types: trawlers, gill netters, Danish seiners and beam-trawlers. All gears are having mesh-sizes larger than 100 mm. Plaice is landed all year round.

The sampling of plaice follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-4. At least one sample per size-grade will be collected per season.

This stock is not subject to other biological analysis.

Lemon sole

The Danish landings in 2000 were 1,156 tonnes and the Danish TAC was 15 % of the EC share TAC, obliging Denmark to sample this stock. The fishery for lemon sole is carried out by a variety of vessel types: trawlers, gill netters, Danish seiners and beam-trawlers. The landings are made all year round.

The sampling of lemon sole follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-2. At least one sample per size-grade will be collected.

This stock is not subject to other biological analysis.

Herring

The Danish landings in 2000 were 38,400 tonnes and the Danish TAC was 20 % of the EC share TAC, obliging Denmark to sample this stock.

The herring fishing fleet in ICES area IV consists of purse seiners and trawlers both using mesh-sizes larger than 32mm and the herring is landed for human consumption purposes. The fishery is mainly occurring during October to May. By-catches of herring taken in the small meshed fishery for sandeel, sprat and Norway pout is estimated in 2000 to 17,800 tonnes.

Standard sampling procedure as described in 3.5.1.

The purpose of the other biological sampling is to estimate on a yearly basis the distribution of sex, maturity per age and stock and in addition, to determine the spawningtype of the individual herring.

Sex and maturity stage is obtained from the individuals randomly selected for ageing in each sample. The maturity estimates after aggregation has a CV which do not exceed 5% for the interval of 20-90% of the mature fish. The sex and maturity is determined following an international key. The spawningtype is determined from the otoliths following an intern manual (Mosegaard, H, L.A. Worsøe, and M. Lindberg 1999)

Norway pout

The Danish landings in 2000 were 127,000 tonnes and the Danish TAC was 99 % of the EC share TAC, obliging Denmark to sample this stock.

Norway pout is mainly during autumn and winter. All the landing are made by demersal trawlers and used for reduction purposes.

Standard sampling procedure as described in 3.5.1.

This stock is not subject to other biological analysis.

Cod

The Danish landings in 2000 were 12,798 tonnes and the Danish TAC was 20 % of the EC share TAC, obliging Denmark to sample this stock.

The cod fishery is carried out during all seasons. The landings of cod are made by demersal trawler, gill netters and Danish seiners. All gears used have a mesh size larger than 100 mm.

The sampling of cod follows the standard sampling scheme, however it is performed by the size-class stratification defined in EU standards from 1-5. At least one sample per size-grade will be collected per season and fishery.

However, as the cod fishery is heavily regulated at the present, the sampling aim may not be realistic, though it will be attempted completed. From the samples 50 individuals are length measured and 25 of these aged, both selected on a random basis.

In cases where cod appears as by-catch in the small meshed fishery all individuals are sampled, length measured and aged. Data are treated as for the samples of cod taken from landings designated for human consumption.

This stock is not subject to other biological analysis.

Extended Programme:

No data collection according to the provisions in the Implementation Regulation Chapter H. Biological sampling of catches: composition by age and by length, and in Chapter I. Other biological samplings, will be carried out within the framework of the extended programme.

4. Module of evaluation of the economic situation of the sector

4.1 J. Collection of economic data by groups of vessels

The Danish programme for section J covering the information for the Community Programme, as defined in appendix XVII and XVIII, will be completed by two sources of data. The first being register data from the administrative and statistical registers of the Danish Directorate of Fisheries (FD) and secondly by sample statistics compiled at the Danish Institute of Agricultural and Fisheries Economics (SJFI).

Each year SJFI obtain an extract from the FD registers containing information on all active vessels for the year before. This extract forms the basis for the analysis and stratification of the population before the sample for the years account statistics is drawn. The register extract covers the whole economically active population and will together with the account statistics form the basis for reporting data on the economic situation for the vessel groups.

4.1.1 Data for basic economic evaluation

Minimum Programme

1. Statistics based on register data:

- Vessel data. The physical data for the vessels are verified according to the FD register of fishing vessels, that is the number of vessels, gross tonnage (GT), engine power (kW), and age of vessel.
- Effort. Vessel activity measured as days at sea according to the FD register of logbooks.
- Prices. Quarterly data on prices will be prepared using statistical files produced by FD based on the sales note register.

2. Sample statistics:

- Income / turnover: Value of production by species.
- Production costs: Labour costs, fuel, repair and maintenance, other operational costs.

- Fixed costs: Depreciation calculated individually by a fixed percentage based on expected lifetime.
- Financial position: Own capital / foreign capital.
- Invested capital: Replacement value of fishery assets at the beginning of the year. Insured values could also be included, but must be considered second best to the book value (replacement value).
- Employment: Calculated number of employed (part time / full time).

4.1.2 Supplementary data for improving the economic evaluation

Extended programme

Some of the entries in appendix XVIII of the Commission Regulation may call for specific pilot studies in order to access the possibilities to fulfil the requirements. For instance regional differentiation of costs by ICES subdivisions is not easily accomplished when many vessels have fishing trips in several subdivisions.

1. Statistics based on register data:

- Prices. Monthly data on prices prepared using statistical files produced by FD based on the sales note register.
- Production. Nominal catch in tonnes per species. Seasonal (monthly) data and by stock (ICES area) information could possibly be prepared using the statistical files from FD.

2. Sample statistics:

- Production. Nominal catch in tonnes per species. Seasonal (monthly) data and by stock (ICES area) data is not considered to be comprehensible for the account forms. But the register based statistics could complement the account statistics in this respect.
- Income/revenue/turnover. Subsidies separated from other income from fishery.
- Production costs. Further break down of operational costs into subgroups.
- Invested capital. Break down into type of fishery assets, for instance vessel (hull), engines and winches, electronic equipment, fishing gear, sheds/gear house, trucks or vans etc.
- Effort. The data for vessel activity are verified according to the FD register of logbooks. That is the number of days at sea and use of gear for each vessel.
- Employment: Separately calculated for the owner, partners, hired skippers and crew.

4.1.3 Compiling sample statistics

SJFI compile economic data based on balanced accounts drawn up by the individual fisherman's accountant following rules issued by the institute. The participation of the fisherman is on voluntary basis established by a previously given promise to allow their accountant to submit their data to the institute.

The accounts for each fisherman will be tested at the institute, and all errors and ambiguities will be addressed and verified in cooperation with the reporting accountant, before the accounts are approved for statistical use. The accountants will be entitled to remuneration for each reported and approved account.

The accounting form includes all specifications needed for the minimum programme as well as most of the specifications mentioned in the extended programme.

The population from which the sample will be drawn is defined by all fishing firms with a total value of landings of fish, crustaceans and molluscs, which is above 195.000 DKK (approx. 26.000 EURO). By this definition the population comprises about 1500 fishing firms, who covers 99% of all Danish commercial fishery.

The population is stratified by six variables:

- Single or multi vessel firm
- Economic size classes
- Product combination (most important fish species)
- Vessel category
- Age group (fisherman's age)
- Region

With size, product combination and vessel category as the primary stratifying variables.

For stratification into economic size classes and product combination categories the production of each fishing firm has been converted to Standard Catch Value (SCV) by weighting the catch of each species relative to the importance of that species for the fishery as a whole, the weight being the average prices for each species for the last 3 year period calculated on a live weight basis.

The sample comprises more than 20 per cent of the total production. The basic stratification for extracting the sample arises from combining 11 economic size groups with 18 groups of product combinations. This matrix is used when calculating the optimal allocation given a set of restrains like number of units and the total SCV for separate groupings. This method generates selection percentages, which increases with increasing economic size of the firms, because the number of firms reduces simultaneously to an increase in the variances on the accounts figures. The selection percentage varies from 11 per cent for the small size groups to 38-40 per cent for the biggest size groups.

The precision level or the uncertainty on the results can not be calculated by approximation to a distribution function, because it is not possible to carry out a random sampling. The element of voluntary participation has the result, that only a part of each stratum is available for selection. The most important task for improving the precision level is to increase the willingness among the fishermen to participate in the selection population. Through contact to the Organisation of Pelagic

Fishermen the Institute has recently succeeded in persuading all 11 Purse Seine fishermen to participate in the statistics. This strategy will be followed up by selective enquiries to recruit fishermen in the strata where the participation needs improvement.

For the year 2000 the basic data on the population has been completed with overall length measure and disaggregated vessel category information, which will make it possible to group both population and sample into the fleet segments required for the Minimum Community Programme. These measures will be incorporated in the stratification procedures in order to monitor and possible improve the precision level for the fleet segments in the future statistics.

One important improvement in the account statistics will be to produce individual cost calculations for each operative vessel in those cases where the fishing firm has more than one separately operating vessel.

At present the number of firms in the sample is 325 and the remuneration to the fisherman's accountant is about 355 EURO per reported account. It may be necessary to increase the number of accounts in order to meet the required precision for all fleet segments.

In the extended programme the more elaborate distinction based on number of days performing a specific type of fishing technique may be implemented. This is not fully identical with vessel type though there may be a high degree of correlation between vessel type and use of gear type.

4.1.4 Submission of data

All information required in the minimum programme is specified in the SJFI accounting forms for fishery. In possible co-operation with other Member States all statistical information will be aggregated to the harmonized variables as specified in the appendix to the Commission Regulation. Data will for each group of vessels (fleet segments) be prepared as totals and average per vessel.

4.2 K. Collection of data concerning the processing industry

The Danish programme for section K is to conduct studies analysing the possibilities for collection and managing of data concerning the processing industry.

Data for basic economic evaluation per primary and secondary industry by sectors.

General description	Minimum programme 1. Priority (annual)
Raw material	Total and per species (tonne)
Income (turn-over)	Total and per product
Production costs: - Labour - Energy - Raw material (value) - Packaging - Other running costs	Total and per category cost
Fixed costs	Average costs, calculated from investment
Financial position	Share of own / borrowed capital
Investment (asset)	- Historical - Replacement - Insurance
Prices / product	Value, tonne
Employment	Numbers / FTE
Capacity utilisation	Annual average

4.2.1 General description of the studies to collect data concerning the Danish fish processing industry

1. Examination and analysis of the existing collection of data by Statistics Denmark, The Directorate of Fisheries, and other relevant Authorities.
2. Analyse the need for collection of complementary data.
3. On the basis of the analyses, if it's possible and there is a need for it, work out a plan for collecting more data on the processing industry in Denmark.
4. Collection, evaluation and adaptation of complementary data.
5. Evaluation and reporting to the Commission.

- **Raw material**

For the gathering of data concerning the use of raw material in the processing industry, the data concerning catches and landings in Denmark collected by The Directorate of Fisheries may be used.

These data will probably not be sufficient and the possibility for collection of alternative data must therefore be analysed. The alternative data collection will concentrate on examining the existing

data collected by Statistics Denmark in Commodity Sales Statistics, Commodity Purchase Statistics, Accounts Statistics and National Accounts.

The data collected by The Directorate of Fisheries on first hand sale of fish per species from Danish auctions may be used to confirm or control the other data.

- **Income**
- **Prices / product**

Calculation of the total income and per product income in the processing industry per product.

The starting point for this analysis will be the balance on price per product in Statistics Denmark Commodity Statistics, where every single product is specified by its key in The Combined Nomenclature. For all products the amount sold is given in tonnes and the corresponding value in 1,000 DKK.

Going through these data it will be analysed in which case the data can be used directly or in which case it will be necessary to work out new data.

- **Production costs**
- **Fixed costs**
- **Financial position**
- **Investment**
- **Employment**

The collection of the following data: production costs, fixed costs, financial position, investment and employment is described together because the foundation on which the data is collected is the same. The data is collected by Statistics Denmark in Accounts Statistics.

The key point is to investigate the existing data collected by Statistics Denmark for the use of an analysis of the Danish fish processing industry. If possible SJFI will co-operate with Statistics Denmark in finding a solution to this part of the project.

SJFI will analyse the relevant data collected in Statistics Denmark's Commodity Statistics and Accounts Statistics for a description of the Danish fish processing industry, and evaluate the possibilities to provide new data for special types of commodities and branches.

Analyse data used for separating pure groups with only fish processing establishment and groups, which only partly consist of fish processing establishment, and addressing the possibilities for selecting the fish processing establishment inside these groups.

Going through these data it will be analysed in which case the data can be used directly or in which case it will be necessary to work out new data.

In the process of collecting data concerning the Danish fish processing industry there can be problems referring to confidentiality of the data given by the industry.

- **Capacity utilisation**

Capacity utilisation is not estimated for the Danish processing industry at present.

To estimate capacity utilisation SJFI will have to look at the parameters that describe the capacity in the Danish processing industry.

The analysis will be accomplished in collaboration among the relevant institutions and organisations to give the best possible evaluation to measure the capacity and which parameters that best can describe the capacity in the Danish processing industry.

4.2.2 Extended programme

To comply with the extended programme SJFI will have to finish the studies in order to disclose missing data and evaluate the possibilities to provide this data. On this basis SJFI will make an evaluation and a description of the project to fulfil the extended programme. It will therefore not be possible to make a precise project description of the extended programme at present.

5. Danish Fisheries Analyses Database (DFAD)

As mentioned in Section 1 all data collected according to the provisions concerning logbooks, sales notes and registration of fishing vessels and the primary data collected under the Danish programme will all be stored in the following computerised databases:

- Vessel register. Data on fishing capacity. (FD)
- Logbook database. Data on origin of catches and on effort. (FD)
- Sales notes database. Data on quantities landed and prices. (FD)
- Species composition database. Data on species composition in landings for industrial purposes. (FD)
- Biological database. Data on discards and biological parameters. (DIFRES)
- Economic data. (SJFI)

In order, for the three involved institutes, to use the same primary data on capacity, effort, and geographical distribution of the origin of the landings a common database will be produced, the Danish Fisheries Analyses Database (DFAD). This database will be a database where data from the register on Danish fishing vessels, data from the Danish logbooks and the catch area declarations database together with data from the Danish sales notes database are merged. It will therefore be possible to gain the possibility of categorise each landing in one fleet segment, in one fishery etc. This database will contain most of the information requested in research projects and in relation to fisheries management.

It will, at a later stage, be possible to merge DFAD with information from the Biological database and the Economic database.

The design and maintenance of the database will be made in a co-operation between the three above mentioned institutes.

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8. Appendixes

Appendix I. Conversion factors from gutted weight to live weight.

GUTTED, WITH HEAD:

COD	1.18
HADDOCK	1.18
WHITING	1.18
HAKE	1.18
LING	1.18
SAITHE	1.18
POLLACK	1.18
PLAICE	1.05
SOLE	1.05
EUROPEAN FLOUNDER	1.05
DAB	1.05
TURBOT	1.05
BRILL	1.05
LEMON SOLE	1.05
WITCH FLOUNDER	1.05
ATLANTIC HALIBUT	1.05
PORBEAGLE	1.33
PICKED DOGFISH	1.33
SALMON	1.10

GUTTED, WITHOUT HEAD:

COD	1.60
MONK	2.72

TAIL:

NORWAY LOBSTER	3.33
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Appendix II. Calculation of Danish discards sampling effort by species and area

Species	Area	Landings in 1998-2000 (tonnes) Ave.	Beforehand estimates		Yearly discard sampling required (Y/N)	Sampling frequency rules ¹⁾				Sampling frequency		
			Discard rates (weight)	Discard rates. (numbers)		Length measurement	Sampling Age readings	Number of individuals measured pr. sample	Number of fish aged pr. sample	Length samples	Number of individuals measured	Number of fish aged
Herring	Ila	13.026	<10%	<20%	N	1_1000	1_1000	50	25			
Cod	IIIaN	9.494	>10%	>20%	Y	1_100	1_100	50	50	95	4.747	4.747 ²⁾
Cod	IIIaS	3.825	>10%	>20%	Y	1_100	1_100	50	50	38	1.912	1.912 ²⁾
Cod	IIIb&c	12.789	>10%	>20%	Y	1_200	1_200	50	25	64	3.197	1.599 ²⁾
Cod	IIIId	19.726	>10%	>20%	Y	1_200	1_200	50	25	99	4.932	2.466 ²⁾
Cod	IV	17.067	>10%	>20%	Y	1_200	1_200	50	25	85	4.267	2.133 ²⁾
Haddock	IIIaN	1.680	<10%	>20%	Y	1_100	1_100	50	50	17	840	840
Haddock	IV	2.105	<10%	>20%	Y	1_200	1_200	50	25	11	526	263
Hake	IIIaN	197	<10%	<20%	N	1_100	1_100	50	50			
Hake	IV	570	<10%	<20%	N	1_100	1_500	50	50			
Herring	IV	27.193	<10%	>20%	Y	1_1000	1_1000	50	25	27	1.360	680
Mackerel	IIIa	2.566	<10%	>20%	Y	1_500	1_500	100	100	5	513	513
Mackerel	IV, VIIId	17.167	<10%	>20%	Y	1_1000	1_000	50	25	17	858	429
Norway lobster	IIIaN	1.993	>10%	>20%	Y	1_100		200		20	3.986	-
Norway lobster	IIIaS	1.444	>10%	>20%	Y	1_100		200		14	2.889	-
Norway lobster	IV	1.682	>10%	>20%	Y	1_100		400		17	6.730	-
Plaice	IIIaN	6.421	>10%	>20%	Y	1_100	1_100	50	50	64	3.211	3.211 ²⁾
Plaice	IIIaS	1.646	>10%	>20%	Y	1_100	1_100	50	50	16	823	823
Plaice	IIIb-d	1.577	>10%	>20%	Y	1_100	1_100	50	50	16	788	788
Plaice	IV	11.631	>10%	>20%	Y	1_500	1_500	50	25	23	1.163	582
Saithe	IIIaN	1.038	>10%	>20%	Y	1_100	1_100	50	50	10	519	519
Saithe	IV, VIIId	2.849	>10%	>20%	Y	1_200	1_200	50	25	14	712	356
Sole	IIIaN	196	>10%	>20%	Y	1_50	1_50	50	50	4	196	196
Sole	IIIaS	398	>10%	>20%	Y	1_50	1_50	100	100	8	796	796
Sole	IV	440	>10%	>20%	Y	1_200	1_200	50	25	2	110	55
Whiting	IV	21	>10%	>20%	Y	1_200	1_200	50	25	0	5	3

1) As specified in Commission Regulation No XX/XX of 2001.

2) Actual sampling level is adjusted downwards (see text for explanation).

Appendix III. Calculation of Danish sampling effort by species and area based on landings made in Danish harbours.

Species	Area	Total EU TAC	Danish TAC	Danish TAC in %	DK landings in DK in 2000 (tonnes)	Other Member States landings in DK in 2000 (tonnes)	DK landings in DK in 1998-2000 (tonnes) Avg.	Other Member States landings in DK in 1998-2000 (tonnes) Avg.
Anglerfish	IVa-c	17.660	1.380	7,8	1.314	151	151	186
Atlanto-Scandian Herring	IIa	108.600	37.880	34,9	8.709	6.460	13.026	7.610
Blue whiting	IIa	50.000	48.550	97,1	5.555		6.143	
Blue whiting	IIIa	50.000	48.550	97,1	4.849	768	18.832	2.178
Blue whiting	IVa-c	50.000	48.550	97,1	34.182	288	47.068	214
Blue whiting	VI				2.147	22.873	16.602	22.561
Blue whiting	V-IX,XII,XIVa-c				1.019	2.281		2.429
Cod	IIIaN	11.220	9.280	82,7	7.656	374	9.494	362
Cod	IIIaS	7.000	4.320	61,7	3.275	156	3.825	184
Cod	IIIb&c	64.262	28.865	44,9	13.466	20	12.789	98
Cod	IIIId	67.195	29.100	43,3	17.604	2.135	19.726	2.193
Cod	IVa-c	73.610	14.980	20,4	12.798	1.761	17.067	2.792
Haddock	IIIaN	2.760	2.320	84,1	985	193	1.680	177
Haddock	IVa-c	60.620	2.185	3,6	1.648	887	2.105	1.276
Hake	IIIaN	1.270	1.170	92,1	231	6	197	5
Hake	IVa-c	1.480	850	57,4	558	51	570	59
Herring	IIIa	68.830	33.380	48,5	31.364	21.112	30.157	15.622
Herring	IIIb&c	218.550	23.243	10,6	17.869	4.044	20.954	4.506
Herring	IIIId	220.850	24.102	10,9	31.670	53.278	21.157	28.127
Herring	IVa-c	189.000	38.457	20,3	32.807	8.849	31.089	11.170
Herring	VIa, VIIabcj					5.198		8.957
Horse mackerel	IVa-c, VIIId	49.400	33.630	68,1	8.323	138	6.762	46
Horse mackerel	VII&VIII				16.532		22.685	210
Lemon sole	IVa-c	12.000	1.790	14,9	1.156	132	933	159
Mackerel	IIIa	24.725	13.855	56,0	2.097	629	2.566	1.260
Mackerel	IVa-c, VIIId	24.725	13.855	56,0	14.293	6.873	17.167	6.563
Norway lobster	IIIaN				1.866	22	1.993	16
Norway lobster	IIIaS				1.444	16	1.444	11
Norway lobster	IVa-c	17.200	900	5,2	1.705	57	1.682	23
Norway pout	IIIa				14.545	-	10.939	-
Norway pout	IVa-c	180.000	179.840	99,9	133.490	-	74.678	-
Plaice	IIIaN	10.980	8.720	79,4	6.678	17	6.421	16
Plaice	IIIaS	2.800	2.490	88,9	1.641	21	1.646	28
Plaice	IIIb-d	3.200	2.700	84,4	2.153	3	1.577	5
Plaice	IVa-c	94.210	18.840	20,0	12.535	1.038	11.631	1.431
Saithe	IIIaN	41.680	3.520	8,4	832	240	1.038	190
Saithe	IVa-c, VIIId	41.680	3.520	8,4	2.621	5.518	2.849	7.093
Saithe	Vb,VI,XII,XIVa-c					95		332
Salmon	IIIb-d	357.577	97.198	27,2	378	238	410	210
Sandeel	IIIa	150.000	142.500	95,0	16.584	233	12.983	621
Sandeel	IVa-c	1.120.000	1.057.500	94,4	540.984	33.856	552.945	26.841
Shrimp	IIIa				1.740		1.895	
Shrimp	IVa-c				1.831		2.082	
Sole	IIIa	950	800	84,2	684	10	594	16
Sole	IVa-c	22.000	840	3,8	609	19	440	21
Sprat	IIIa	46.250	33.500	72,4	12.721	779	13.738	1.833
Sprat	IIIb&c	158.120	35.480	22,4	9.501	349	9.946	438
Sprat	IIIId	182.120	42.460	23,3	43.000	52.611	76.487	61.602
Sprat	IVa-c, VIIId	220.000	200.200	91,0	191.192	-	161.672	1.317
Turbot	IVa-c, VIIId	9.000	1.410	15,7	430	26	390	41

Appendix III. Calculation of Danish sampling effort by species and area based on landings made in Danish harbours. CONTINUED

Species	Area	Sampling required (Y/N) DK 2000	Sampling required (Y/N) F 2000	Sampling required (Y/N) DK98-2000	Sampling required (Y/N) F 98-2000	Sampling Length measurement	Sampling Age readings	Number of fish measured pr. sample	Number of fish aged pr. sample	Estimated Number of samples	Estimated number of fish measured	Estimated number of fish aged
Anglerfish	IVa-c					1_200	1_200	25	25	7	183	183
Atlanto-Scandian Herring	IIa					1_1000	1_1000	50	25	15	758	379
Blue whiting	IIa		N		N	1_1000	1_1000	50	25	6	278	139
Blue whiting	IIIa					1_1000	1_1000	50	50	6	281	281
Blue whiting	IVa-c					1_1000	1_1000	50	50	34	1723	1723
Blue whiting	VI					1_1000	1_1000	50	25	25	1251	625
Blue whiting	V-IX,XII,XIVa-c			N		1_1000	1_1000	50	25	3		
Cod	IIIaN					1_100	1_100	50	50	80	4015	4015
Cod	IIIaS					1_100	1_100	50	50	34	1716	1716
Cod	IIIb&c		N		N	1_200	1_200	50	25	67	3371	1686
Cod	IIIId					1_200	1_200	50	25	99	4935	2467
Cod	IVa-c					1_200	1_200	50	25	73	3640	1820
Haddock	IIIaN					1_100	1_100	50	50	12	589	589
Haddock	IVa-c					1_200	1_200	50	25	8	412	206
Hake	IIIaN		N		N	1_100	1_100	50	50	2	119	119
Hake	IVa-c		N		N	1_100	1_500	50	50	1	61	12
Herring	IIIa					1_1000	1_1000	100	100	52	5248	5248
Herring	IIIb&c					1_1000	1_1000	100	50	22	2191	1096
Herring	IIIId					1_1000	1_1000	100	100	85	8495	8495
Herring	IVa-c					1_1000	1_1000	50	25	42	2083	1041
Herring	Vla, VIIabcj	N		N		1_1000	1_1000	50	25	5		
Horse mackerel	IVa-c, VIIId				N	1_1000	1_1000	100	25	8	846	212
Horse mackerel	VII&VIII					1_1000	1_1000	50	25	17	827	413
Lemon sole	IVa-c					1_200	1_200	25	25	6	161	161
Mackerel	IIIa					1_500	1_500	100	100	5	545	545
Mackerel	IVa-c, VIIId					1_1000	1_1000	50	25	21	1058	529
Norway lobster	IIIaN		N		N	1_100		200		19	3776	
Norway lobster	IIIaS		N		N	1_100		200		15	2920	
Norway lobster	IVa-c		N		N	1_100		400		18	7049	
Norway pout	IIIa		N		N	1_1000	1_1000	50	50	15	727	727
Norway pout	IVa-c		N		N	1_2000	1_2000	50	50	67	3337	3337
Plaice	IIIaN		N		N	1_100	1_100	50	50	67	3347	3347
Plaice	IIIaS		N		N	1_100	1_100	50	50	17	831	831
Plaice	IIIb-d		N		N	1_100	1_100	50	50	22	1078	1078
Plaice	IVa-c					1_500	1_500	50	25	27	1357	679
Saithe	IIIaN					1_100	1_100	50	50	11	536	536
Saithe	IVa-c, VIIId					1_200	1_200	50	25	41	2035	1017
Saithe	Vb,VI,XII,XIVa-c	N	N	N		1_100	1_500	50	50			
Salmon	IIIb-d					1_100	1_100	50	50	6	308	308
Sandeel	IIIa					1_1000	1_1000	50	50	17	841	841
Sandeel	IVa-c					1_2000	1_2000	50	50	287	14371	14371
Shrimp	IIIa		N		N	1_100		100		17	1740	
Shrimp	IVa-c		N		N	1_500		100		4	366	0
Sole	IIIa		N		N	1_50	1_50	50	50	14	695	695
Sole	IVa-c		N		N	1_200	1_200	50	25	3	157	78
Sprat	IIIa					1_1000	1_1000	100	100	13	1350	1350
Sprat	IIIb&c					1_2000	1_2000	100	50	5	492	246
Sprat	IIIId					1_2000	1_2000	100	50	48	4781	2390
Sprat	IVa-c, VIIId					1_2000	1_2000	50	50	96	4780	4780
Turbot	IVa-c, VIIId		N		N	1_200	1_200	25	25	2	57	57

Appendix IV. Detailed Budget for 2002. PERSONNEL

I. INPUTS (capacity)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1 (see comments)	0,2	8.450	1.690
	2 (see comments)	0,5	5.092	2.546
Technician	3 (see comments)	0,5	4.550	2.275
	4 (see comments)		3.358	0
Total		1,2		6.511
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

Comments:

Grade 1: Head of Departments

Grade 2: Scientists, senior scientists; Head of divisions, Special advisers

Grade 3: Head of sections, IT-specialists

Grade 4: Fishery technicians, Assistants

I. INPUTS (effort)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	0,2	8.450	1.690
	2	0,5	5.092	2.546
Technician	3	0,5	4.550	2.275
	4		3.358	0
Total		1,2		6.511
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. CATCH and C.P.U.E (landings)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	0,5	8.450	4.225
	2	2,0	5.092	10.184
Technician	3	3,0	4.550	13.650
	4		3.358	0
Total		5,5		28.059
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

Detailed Budget for 2002. PERSONNEL (continued)

I. CATCH and C.P.U.E (discards)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,0	8.450	8.450
	2	3,0	5.092	15.276
Technician	3	3,0	4.550	13.650
	4	92,3	3.358	309.943
Total		99,3		347.319
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. CATCH and C.P.U.E (Recreational fishery)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1		8.450	0
	2	0,1	5.092	509
Technician	3	0,2	4.550	910
	4	0,3	3.358	1.007
Total		0,6		2.427
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. CATCH and C.P.U.E (c.p.u.e.)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	0,2	8.450	1.690
	2	1,0	5.092	5.092
Technician	3	0,5	4.550	2.275
	4		3.358	0
Total		1,7		9.057
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

Detailed Budget for 2002. PERSONNEL (continued)

I. SURVEYS AT SEA

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,0	8.450	8.450
	2	15,0	5.092	76.380
Technician	3	1,0	4.550	4.550
	4	93,2	3.358	312.966
Total		110,2		402.346
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. BIOLOGY (age/length Landings)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,8	8.450	15.210
	2	6,5	5.092	33.098
Technician	3	5,0	4.550	22.750
	4	91,4	3.358	306.921
Total		104,7		377.979
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. BIOLOGY (age/length discards)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,3	8.450	10.985
	2	3,0	5.092	15.276
Technician	3	4,5	4.550	20.475
	4	20,0	3.358	67.160
Total		28,8		113.896
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

Detailed Budget for 2002. PERSONNEL (continued)

I. BIOLOGY (other parameters)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,3	8.450	10.985
	2	9,5	5.092	48.374
Technician	3	3,3	4.550	15.015
	4	24,0	3.358	80.592
Total		38,1		154.966
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. ECONOMY (catch sector)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	2,0	8.450	16.900
	2	16,0	5.092	81.472
Technician	3	8,0	4.550	36.400
	4		3.358	0
Total		26,0		134.772
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. ECONOMY (production industry)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	0,2	8.450	1.690
	2	6,0	5.092	30.552
Technician	3	3,0	4.550	13.650
	4		3.358	0
Total		9,2		45.892
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

Detailed Budget for 2002. PERSONNEL (continued)

I. COORDINATION (databases)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,3	8.450	10.985
	2	1,0	5.092	5.092
Technician	3	13,0	4.550	59.150
	4	1,0	3.358	3.358
Total		16,3		78.585
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. COORDINATION (other)

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	1,3	8.450	10.985
	2	0,6	5.092	3.055
Technician	3	1,0	4.550	4.550
	4	1,0	3.358	3.358
Total		3,9		21.948
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

I. GRAND TOTAL

Personnel costs (€)				
Categorie *	Grade **	Number of Men/month	Monthly Rate***	Total
Scientist	1	12,3	8.450	103.935
	2	64,7	5.092	329.452
Technician	3	46,5	4.550	211.575
	4	323,2	3.358	1.085.306
Total		446,7		1.730.268
* Scientific or technical staff only.				
** Please specify grade according to the salary scale of the organisation				
*** Including wages, social costs, social security, and pension contributions BUT excluding indirect costs (OVERHEADS)				

Appendix V. Detailed Budget for 2002. TRAVEL

II. INPUTS (capacity)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	5	2	1	0	300	300
Total	5					300

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. INPUTS (effort)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	5	2	1	0	300	300
Total	5					300

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. CATCH and C.P.U.E. (landings)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	10	2	1	0	25	250
Total	10					250

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. CATCH and C.P.U.E. (discards)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
At sea. Div. IV and IIIaN	45	1	7,3	49	8.200	24297
At sea. Div. IIIaS-IIIId	98	1	1,6	49	13.000	20683
Other travel within DK	5	1	2	49	3.400	3890
Total	148					48.870

* for journeys outside the Community, prior agreement of the Commission shall be required.

Detailed Budget for 2002. TRAVEL (continued)

II. CATCH and C.P.U.E. (recreational fishery)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	1	1	1,0	49	335	384
Total	1					384

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. CATCH and C.P.U.E. (c.p.u.e.)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	0	0	0,0	0	0	0
Total	0					0

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. SURVEY AT SEA.

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
R/V Dana	3	7	19,0	49	6.800	26351
R/V Havfisken	2	3	22,0	49	5.500	11968
IBTS meeting	1	1	7,0	49	1.200	1543
HERSUR meeting	1	1	7,0	49	1.200	1543
BITS meeting	1	1	7,0	49	1.200	1543
Total	8					42.948

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. BIOLOGY (It is not possible to give figures for each type of data)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	150	1	1,0	49	3.200	10550
DK inland	70	1	3,0	49	29.400	39690
DK inland	11	3	3,0	49	14.800	19651
Total	231					69.891

* for journeys outside the Community, prior agreement of the Commission shall be required.

Comments:

It is not possible to give figures for each type of data. Therefore, travel expenditure for travel connected with collection of samples in the different ports are merged.

Detailed Budget for 2002. TRAVEL (continued)

II. ECONOMY (catch sector)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
Inside EU	1	2	3	49	2.626	2920
DK inland	1	3	3	49	1.449	1890
DK inland	2	3	1	49	396	690
Total	4					5.500

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. ECONOMY (production industry sector)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	4	1	2	49	1.164	1556
DK inland	1	2	1	49	346	444
Total	5					2.000

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. COORDINATION (databases)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	30	1	1	10	900	1200
DK inland	5	1	2	49	1.500	1990
Total	35					3.190

* for journeys outside the Community, prior agreement of the Commission shall be required.

II. COORDINATION (other)

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
DK inland	20	1	2	49	6.000	7960
Total	20					7.960

* for journeys outside the Community, prior agreement of the Commission shall be required.

Detailed Budget for 2002. TRAVEL (continued)

II. Travel Total

Travel costs (€)						
Destination*	A Number of trips	B Number of persons	C Number of days	D Daily allowance	E Travel expenses	A*B*C*D+E Total
All trips						181.593
Total						181.593

* for journeys outside the Community, prior agreement of the Commission shall be required.

III. All types of data except Economic data

Durable equipment (€)					
Description	A Amount (VAT excluded)	B Number of months of use *	C Depreciation period **	D Percentage of use ***	A*B/C*D Total
10 PC	20000	12	36	100%	6667
2 Microscopes	12000	12	60	100%	2400
2 Electronic length measuring boards	30000	12	60	100%	6000
Total					15067

* The period used to calculate this amount starts on the actual date of commencement of the programme, or the date of purchase of the goods where this occurs after the date of commencement, and ends on the date of completion of the programme.

** Durable goods will be considered to have a probable life of 36 months in the case of computer equipment of a value not exceeding EUR 10.000 and 60 months in the case of others goods

*** Equal to 100% if the goods are exclusively used for this programme; otherwise, account should be taken of the use made during that period.

III. Economic data

Durable equipment (€)					
Description	A Amount (VAT excluded)	B Number of months of use *	C Depreciation period **	D Percentage of use ***	A*B/C*D Total
3 PC	6000	12	36	100%	2000
1 working place	1400	12	50	100%	336
1 PC	2000	12	36	100%	667
Total					3003

* The period used to calculate this amount starts on the actual date of commencement of the programme, or the date of purchase of the goods where this occurs after the date of commencement, and ends on the date of completion of the programme.

** Durable goods will be considered to have a probable life of 36 months in the case of computer equipment of a value not exceeding EUR 10.000 and 60 months in the case of others goods

*** Equal to 100% if the goods are exclusively used for this programme; otherwise, account should be taken of the use made during that period.

III. Total

Durable equipment (€)					
Description	A Amount (VAT excluded)	B Number of months of use *	C Depreciation period **	D Percentage of use ***	A*B/C*D Total
Total					18069

Appendix VI. Detailed Budget for 2002. DURABLE EQUIPMENT

Appendix VII. Detailed Budget for 2002. CONSUMABLE MATERIAL AND SUPPLIES.

IV. CATCH AND C.P.U.E

Consumable material and supplies (€)			
Description *	A Unit cost	B Quantity	A*B Total
Computer software to be used for "Inputs" and Catch and C.P.U.E. data	500	4	2000
Personel Safety equipment	800	5	4000
Total			6000
* Office supplies is an unauthorised expenditure			

IV. SURVEYS AT SEA

Consumable material and supplies (€)			
Description *	A Unit cost	B Quantity	A*B Total
Computer software and licences	500	4	2000
Computer software and licences	1500	2	3000
Total			5000
* Office supplies is an unauthorised expenditure			

IV. BIOLOGY

Consumable material and supplies (€)			
Description *	A Unit cost	B Quantity	A*B Total
Computer software and licences	500	2	1000
Computer software and licences	1500	2	3000
Freight expenditure	100	80	8000
Rent of or buying of fish	1,8	38520	69336
Working clothes	375	26	9750
Payment for use of cars when collection of samples	0,35	200000	70000
Personel safety equipment and maintenance of this	800	5	4000
Other unforeseen expenditure	5000	1	5000
Total			170086
* Office supplies is an unauthorised expenditure			

Detailed Budget for 2002. CONSUMABLE MATERIAL AND SUPPLIES (continued)

IV. ECONOMY

Consumable material and supplies (€)			
Description *	A Unit cost	B Quantity	A*B Total
Computer software and licences	1334	3	4002
Total			4002
* Office supplies is an unauthorised expenditure			

IV. Total

Consumable material and supplies (€)			
Description *	A Unit cost	B Quantity	A*B Total
			185088
Total			185088
* Office supplies is an unauthorised expenditure			

Appendix VIII. Detailed Budget for 2002. COMPUTER COSTS.

None. Can not be detailed separately. Personnel used for data-handling is included in the other types of data.

Appendix IX. Detailed Budget for 2002. SUBCONTRACTING AND OTHER COSTS.

VI.A. CATCH AND C.P.U.E

Subcontracting and other costs (€) *	
Description	Total Cost
Payment to fishermen for having scientific observers onboard (65 EUROS per day)	29250
Payment to the Danish Fishermens Association for having meetings for coordination of the discards sampling and data quality check.	35750
Total	65000
* Prior agreement of the Commission is requested for Subcontracting or unforeseen expenditure not falling within one of the above categories.	

VI.A. SURVEYS AT SEA

Subcontracting and other costs (€) *	
Description	Total Cost
36 IBTS survey using the institutes R/V DANA at a price of 13,254 per day.	477144
36 BITS survey using the institutes R/V DANA at a price of 13,254 per day.	477144
14 HERSUR survey using the institutes R/V DANA at a price of 13,254 per day	185556
40 BITS survey using the institutes R/V HAVFISKEN at a price of 705 per day	28200
Total	1168044
* Prior agreement of the Commission is requested for Subcontracting or unforeseen expenditure not falling within one of the above categories.	

VI.A. ECONOMY

Subcontracting and other costs (€) *	
Description	Total Cost
Remuneration to accountants for preparing/reporting accounts (1)	115000
Other external assistance (Catch sector data)	4000
Other external assistance (Production industry sector data)	13000
Total	132000
* Prior agreement of the Commission is requested for Subcontracting or unforeseen expenditure not falling within one of the above categories.	

Comments: (1) The remuneration to accountants is the same amounts per reported account as for the accounts for agriculture holdings used for reporting to FADN/RICA.

VI.A. Total

Subcontracting and other costs (€) *	
Description	Total Cost
	1365044
Total	1365044

Appendix X. Detailed Budget for 2002. OTHER COSTS

VI.B. For age only

Other costs (€) *	
Species/Group	Per Unit
Herring/sprat/sandeel	0,597
Norway pout	0,716
Sole	2,387
Plaice	0,895
Cod/haddock/saithe/whiting	0,895
Cod from the Baltic	1,790
* Average of <u>direct</u> cost of reading <u>one</u> otolith for each species/group	

Comments: Salary for Technician 2 is used at the above calculation and time used for storing otoliths in the archive is not included.	Daily salary
	179

Appendix XI. Detailed Budget for 2002. VESSEL COCTS

VII. For surveys only

VESSEL COSTS (€) *					
1) vessel characteristics	2002 price	2002 price			
Vessel Name	DANA	HAVFISKEN (1)			
Lengh	78,43 m	12,8m			
Engine power	4640 HP	180HP			
Tonnage	2483 Brt	19,95 Brt			
Crew size	14 - 19				
2) Operating costs per day					
Fuel	2.282				
Lubricating oil	83				
Salaries and social cost for the crew	7.532				
Food	194				
Maintenance	1.494				
Harbour dues	-				
Insurance	-				
Hire of equipment to operate the vessel and external assistance in ports	1.572				
Others (specify) Travel-expences	97				
TOTAL	13.254	705			
3) Total operating costs (one table per year)					
Vessel Name	DANA	HAVFISKEN			
Number of days of use	166				
Daily cost	13.148				
TOTAL	2.182.568				

Comments: For R/V Havfisken no special crew is hired. When sailing, normally 3 person (fishery technicians) are onboard, and they are doing the sailing, the fishery and the scientific work onboard. Sallaries for this personel is included in data type I Surveys at Sea.

Appendix XII. Total Danish Budget for 2002. All types of data.

**Danish National Programme for collection of Fisheries Data
2002**

Costs (euros) for Minimum Programme 2002

Type of data	Sallary	Travel	Durable equipment	Consumables	Other costs	Total
INPUTS						
Capacity	6.511	300				
Effort	6.511	300				
Not specified						
Total	13.022	600	0	0	0	13.622
CATCH AND C.P.U.E.						
Landings	28.059	250				
Discards	347.319	48.870				
Recreational fishery	2.427	384				
C.p.u.e.	9.057	0				
Not specified			3.333	6.000	65.000	
Total	386.862	49.504	3.333	6.000	65.000	510.699
SURVEYS AT SEA						
Total	402.346	42.948	6.000	5.000	1.168.044	1.624.338
BIOLOGY						
Age/length (landings)	377.979					
Age/length (discards)	113.896					
Other parameters	154.966					
Not specified		69.891	5.734	170.086		
Total	646.841	69.891	5.734	170.086	0	892.552
ECONOMY						
Catch sector	134.772	5.500				
Production industry	45.892	2.000				
Not specified			3.003	4.002	132.000	
Total	180.664	7.500	3.003	4.002	132.000	327.169
COORDINATION						
Databases	78.585	3.190				
Other	21.948	7.960				
Not specified						
Total	100.533	11.150	0	0	0	111.683
GRAND TOTAL	1.730.268	181.593	18.070	185.088	1.365.044	3.480.062

Appendix XIII. Budget for 2002-2006. INPUTS: Fishing capacity and fishing effort.

I. INPUTS

Minimum programme

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	0,4	0,4	0,4	0,4	0,4	8.450
Scientist 2	1,0	1,0	1,0	1,0	1,0	5.092
Technician 1	1,0	1,0	1,0	1,0	1,0	4.550
Technician 2						3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	13.021	13.672	14.356	15.074	15.827	71.951
Travel expenses	600	630	662	695	729	3.315
Durable equipment						0
Consumables						0
Other costs (External)						0
Total expenditure	13.621	14.302	15.017	15.768	16.557	75.266

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XIII. Budget for 2002-2006. CATCH and C.P.U.E: Landings, discards, recreational fishery and c.p.u.e.

II. CATCH and C.P.U.E.

Minimum programme

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	1,7	1,6	1,5	1,5	1,5	8.450
Scientist 2	6,1	5,6	5,1	5,1	5,1	5.092
Technician 1	6,7	6,5	6,3	6,3	6,3	4.550
Technician 2	92,6	92,6	92,6	92,6	92,6	3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	386.879	401.707	417.051	437.904	459.799	2.103.339
Travel expenses	49.504	51.979	54.578	57.307	60.172	273.541
Durable equipment	3.333	7.000	11.025	11.576	12.155	45.090
Consumables	6.000	6.300	6.615	6.946	7.293	33.154
Other costs (External	65.000	68.250	71.663	75.246	79.008	359.166
Total expenditure	510.716	535.236	560.932	588.978	618.427	2.814.290

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XV. Budget for 2002-2006. SURVEY AT SEA

III. SURVEY AT SEA

Minimum programme

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	1,0	1,0	1,0	1,0	1,0	8.450
Scientist 2	15,0	15,0	15,0	15,0	15,0	5.092
Technician 1	1,0	1,0	1,0	1,0	1,0	4.550
Technician 2	93,2	93,2	93,2	93,2	93,2	3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	402.359	422.477	443.601	465.781	489.070	2.223.289
Travel expenses	42.948	45.095	47.350	49.718	52.204	237.315
Durable equipment	6.000	6.300	6.615	6.946	7.293	33.154
Consumables	5.000	5.250	5.513	5.788	6.078	27.628
Other costs (External)	1.168.044	1.226.446	1.287.769	1.352.157	1.419.765	6.454.180
Total expenditure	1.624.351	1.705.569	1.790.847	1.880.390	1.974.409	8.975.566

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XVI. Budget for 2002-2006. BIOLOGY: Age/length landings, age/length discards and other parameters.

IV. BIOLOGY

Minimum programme

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	4,4	4,4	4,4	4,4	4,4	8.450
Scientist 2	19,0	19,0	19,0	19,0	19,0	5.092
Technician 1	12,8	12,8	12,8	12,8	12,8	4.550
Technician 2	135,4	135,4	135,4	135,4	135,4	3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	646.860	679.203	713.163	748.821	786.262	3.574.310
Travel expenses	69.891	73.386	77.055	80.908	84.953	386.192
Durable equipment	5.733	9.520	13.671	14.355	15.072	58.351
Consumables	170.086	178.590	187.520	196.896	206.741	939.833
Other costs (External)						0
Total expenditure	892.570	940.699	991.409	1.040.979	1.093.028	4.958.686

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XVII. Budget for 2002-2006. ECONOMY: Catch sector and production industry sector.

V. ECONOMY

Minimum programme

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	2,2	2,2	2,2	2,2	2,2	8.450
Scientist 2	22,0	25,0	22,0	22,0	22,0	5.092
Technician 1	11,0	11,0	11,0	11,0	11,0	4.550
Technician 2						3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	180.651	205.722	199.168	209.126	219.583	1.014.250
Travel expenses	7.500	7.875	8.269	8.682	9.116	41.442
Durable equipment	3.003	3.150	3.308	3.473	3.647	16.581
Consumables	4.002	4.202	4.412	4.633	4.864	22.114
Other costs (External)	132.000	152.250	145.531	152.807	160.447	743.035
Total expenditure	327.156	373.199	360.688	378.721	397.658	1.837.422

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XVIII. Budget for 2002-2006. COORDINATION: Databases and others.
VI. COORDINATION **Minimum programme**

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	2,6	2,6	2,6	2,6	2,6	8.450
Scientist 2	1,6	1,6	1,6	1,6	1,6	5.092
Technician 1	14,0	14,0	14,0	14,0	14,0	4.550
Technician 2	2,0	2,0	2,0	2,0	2,0	3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	100.530	105.557	110.835	116.376	122.195	555.493
Travel expenses	11.150	11.708	12.293	12.908	13.553	61.611
Durable equipment						0
Consumables						0
Other costs (External)						0
Total expenditure	111.680	117.264	123.127	129.284	135.748	617.104

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XIX. Budget for 2002-2006. TOTAL MINIMUM PROGRAMME

**BUDGET 2002-2006
TOTAL DANISH DATA COLLECTION PROGRAMME
Minimum programme**

BUDGET SCHEDULE (all figures in EURO)						
Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	12,3	12,2	12,1	12,1	12,1	8.450
Scientist 2	64,7	67,2	63,7	63,7	63,7	5.092
Technician 1	46,5	46,3	46,1	46,1	46,1	4.550
Technician 2	323,2	323,2	323,2	323,2	323,2	3.358

SUMMARY COSTS						
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Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	1.730.301	1.828.338	1.898.174	1.993.082	2.092.737	9.542.632
Travel expenses	181.593	190.673	200.206	210.217	220.727	1.003.416
Durable equipment	18.070	25.970	34.619	36.350	38.167	153.176
Consumables	185.088	194.342	204.060	214.262	224.976	1.022.728
Other costs (External)	1.365.044	1.446.946	1.504.962	1.580.210	1.659.220	7.556.382
Total expenditure	3.480.096	3.686.270	3.842.021	4.034.121	4.235.827	19.278.333

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XX. Budget for 2002-2006. ECONOMY. Extended programme.

ECONOMY

Extended programme

BUDGET SCHEDULE (all figures in EURO)

Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	0,2	0,2	0,2	0,2	0,2	8.450
Scientist 2	2,0	2,0	2,0	2,0	2,0	5.092
Technician 1						4.550
Technician 2						3.358

SUMMARY COSTS

Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	11.873	12.467	13.090	13.744	14.432	65.606
Travel expenses						0
Durable equipment						0
Consumables						0
Other costs (External)						0
Total expenditure	11.873	12.467	13.090	13.744	14.432	65.606

Comments to the budget:

A price rise of 5% per year is estimated

Appendix XX. Budget for 2002-2006. GRAND TOTAL Minimum and extended programme.

BUDGET 2002-2006

GRAND TOTAL DANISH DATA COLLECTION PROGRAMME

Minimum programme and Extended programme

BUDGET SCHEDULE (all figures in EURO)						
Personnel	2002	2003	2004	2005	2006	Personel rate per month (2002)
	Number of man months					1 EURO = 7,45 DKKR
Scientist 1	12,5	12,4	12,3	12,3	12,3	8.450
Scientist 2	66,7	69,2	65,7	65,7	65,7	5.092
Technician 1	46,5	46,3	46,1	46,1	46,1	4.550
Technician 2	323,2	323,2	323,2	323,2	323,2	3.358

SUMMARY COSTS						
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Total expenditure	2002	2003	2004	2005	2006	Total Amount (EURO)
Personnel	1.742.174	1.840.805	1.911.264	2.006.827	2.107.168	9.608.238
Travel expenses	181.593	190.673	200.206	210.217	220.727	1.003.416
Durable equipment	18.070	25.970	34.619	36.350	38.167	153.176
Consumables	185.088	194.342	204.060	214.262	224.976	1.022.728
Other costs (External)	1.365.044	1.446.946	1.504.962	1.580.210	1.659.220	7.556.382
Total expenditure	3.491.969	3.698.736	3.855.110	4.047.865	4.250.259	19.343.939

Comments to the budget:

A price rise of 5% per year is estimated

**Danish National
Programme for
collection of Fisheries
Data given per type
of data and per
fishing area for 2002.**

**Costs (euros) for Minimum
Programme 2002**

Type of data per fishing area	Sallary	Travel	Durable equipment	Consumables	Other costs	Total
INPUTS						
Kattegat+Baltic						
Norht Sea+Skagerrak+IIa+6+7+8						
Not possible to split in fishing areas.	13,022	600				
Total	13,022	600	0	0	0	13,622
CATCH AND C.P.U.E.						
Kattegat+Baltic	152,820	29,000			26,000	207,820
Norht Sea+Skagerrak+IIa+6+7+8	194,499	20,000			39,000	253,499
Not possible to split in fishing areas.	39,543	504	3,333	6,000		49,380
Total	386,862	49,504	3,333	6,000	65,000	510,699
SURVEYS AT SEA						
Kattegat+Baltic	238,196	26,466	3,000	2,500	561,010	831,172
Norht Sea+Skagerrak+IIa+6+7+8	164,150	16,482	3,000	2,500	607,034	793,166
Not possible to split in fishing areas.						
Total	402,346	42,948	6,000	5,000	1,168,044	1,624,338
BIOLOGY						
Kattegat+Baltic	241,760	33,820	1,730	51,385		328,695
Norht Sea+Skagerrak+IIa+6+7+8	405,081	36,071	4,004	118,701		563,857
Not possible to split in fishing areas.						
Total	646,841	69,891	5,734	170,086	0	892,552
ECONOMY						
Kattegat+Baltic						
Norht Sea+Skagerrak+IIa+6+7+8						

Not possible to split in fishing areas.	180,664	7,500	3,003	4,002	132,000	327,16
Total	180,664	7,500	3,003	4,002	132,000	327,16
COORDINATION						
Kattegat+Baltic						
Norht Sea+Skagerrak+IIa+6+7+8						
Not possible to split in fishing areas.	100,533	11,150				
Total	100,533	11,150	0	0	0	111,68
TOTAL						
Kattegat+Baltic	632,776	89,286	4,730	53,885	587,010	1,367,68
Norht Sea+Skagerrak+IIa+6+7+8	763,730	72,553	7,004	121,201	646,034	1,610,52
Not possible to split in fishing areas.	333,762	19,754	6,336	10,002	132,000	501,85
GRAND TOTAL	1,730,268	181,593	18,070	185,088	1,365,044	3,480,06