

**COMMISSION REGULATION (EC) No 1639/2001**

**of 25 July 2001**

**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) No 1543/2000**

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EC) No 1543/2000, of 29 June 2000 establishing a Community framework for the collection and management of the fisheries data needed to conduct the common fisheries policy <sup>(1)</sup>, and in particular Articles 5(1) and 8(1) thereof,

Whereas:

- (1) Regulation (EC) No 1543/2000 establishes a Community framework for the collection and management of data needed to evaluate the situation of the fishery resources and the fisheries sector. To this end, it stipulates that Member States set up national programmes for the collection and management of fisheries data in accordance with Community programmes.
- (2) It is therefore necessary to establish a minimum Community programme covering the information strictly necessary for the scientific evaluations and to establish an extended Community programme which also includes information likely to improve in a decisive way the scientific evaluations.
- (3) The information required for each programme should be collected in the form of evaluation modules covering fishing capacities and fishing effort, catches and, finally, the economic situation of the sector.
- (4) The Member States' programmes for the collection of data for scientific evaluations should be compatible with the collection of data for the management of other aspects of the common fisheries policy and with the collection of data pursuant to the Member States' obligations to the Community's statistical programme.
- (5) Rules relating to the transmission of, and access to, the data, including with regard to confidentiality, as well as rules relating to technical modifications and exemptions to the Community programmes, should be set out. Procedures related to the monitoring of the national programmes should also be established.

- (6) The measures provided for in this Regulation are in accordance with the opinion of the Management Committee for Fisheries and Aquaculture,

HAS ADOPTED THIS REGULATION:

*Article 1*

**Subject matter**

The minimum and the extended Community programmes referred to in Article 5(1) of Regulation (EC) No 1543/2000 are hereby established as set out in the Annex.

This Regulation also lays down certain detailed rules for the data to be collected under the Member States' national programmes.

*Article 2*

**Definitions**

For the purposes of this Regulation, the following definitions apply:

1. 'segment' means a group of vessels as homogeneous as possible in terms of physical characteristics and of use of fishing gear resulting from a partition of the segments contained in the fourth multiannual guidance programme (MAGP IV);
2. 'commercial fishing fleet' means vessels registered and licensed, according to Council Regulation No 3690/93 <sup>(2)</sup> or otherwise authorised to fish for the purpose of commercial exploitation of fisheries; information on which Member States should provide to the Community's fishing vessel register under Commission Regulation No 2090/98 <sup>(3)</sup>;
3. 'recreational and game fisheries' means all fishing activities not conducted for commercial fishing purposes;
4. 'primary data' means data associated to individual vessels, natural or legal persons or individual samples;
5. 'effective fishing power' means the estimation of the fishing power of vessels by a comparison of the catches made by those vessels;

<sup>(1)</sup> OJ L 176, 15.7.2000, p. 1.

<sup>(2)</sup> OJ L 341, 31.12.1993, p. 93.

<sup>(3)</sup> OJ L 266, 1.10.1998, p. 27.

6. 'nominal fishing power' means the expression of the fishing power by a physical characteristic (engine power or tonnage) or by a combination of such characteristics;
7. 'fishing effort' means, for a vessel, the product of its fishing power and of the duration of its fishing activity and for a group of vessels, the sum of the fishing efforts of all the vessels concerned;
8. 'type of technique' means the use of a specific fishing gear, or to the use of one or more fishing gear inside a group of gears;
9. 'space-time disaggregation' means the combination of a time period and of a geographical stratification into subareas;
10. 'exhaustive sampling' means a study of a population in the statistical sense with regard to a parameter, if all the individuals constituting the aforementioned population are actually measured;
11. 'processing industry' means the industry involved in the preparation and preservation of fish, shellfish or molluscs as well as in the preparation of products containing fish, shellfish or molluscs;
12. 'sector of the processing industry' means a part of the processing industry based on the type of processing (frozen, salted/dried, smoked, canned, prepared dishes, others) and on channels according to the groups of species concerned (demersal and deepwater species, *Thunnidae*, pelagic species other than *Thunnidae*, other fish species, shellfish, cephalopods, bivalves, other molluscs, others);
13. 'aggregated data' means the aggregated data as defined in Article 2(b) of Regulation (EC) No 1543/2000;
14. 'functional unit' means an operational grouping of statistical rectangles, corresponding to the area of distribution of a geographically isolated biological stock or assemblage of biological stocklets as set out in Appendix II;
15. 'catches' means the total live weight of fish initially caught i.e. gross catch;
16. 'landings' means the live weight equivalent of the landings i.e. nominal catch;
17. 'discards' means the total live weight of undersized, not saleable, or otherwise undesirable fish, discarded at the time of capture or shortly afterwards.

#### Article 3

##### Requirements for the national programmes

The national programmes set up by the Member States taking into account the Community programmes set out in the Annex shall comprise in particular:

- (a) the links with the Community programmes, specifying the planned actions by section and by reference to the programme;
- (b) the elements of analytical accounts distributed by section and by programme as well as by geographical area as set out in Appendix I, level 2;
- (c) in the event of sampling, a detailed description on the strategies followed and the statistical estimates used making it possible to appreciate the levels of precision and relationship between the cost and precision;
- (d) the elements making it possible to demonstrate cooperation and task-sharing between Member States.

The programmes shall provide for estimates of levels of precision referred to in point (c) by 31 May 2003 at the latest.

#### Article 4

##### Submission of the national programmes

Each Member State shall submit to the Commission, by 31 May of each year at the latest, by electronic means, its national programme referred to in Article 6 of Regulation (EC) No 1543/2000.

#### Article 5

##### Transmission of data to international organisations

1. Data referred to in this Regulation may be transmitted by the Member States to the relevant international organisations in accordance with the specific rules and regulatory provisions of these organisations.
2. Member States shall inform the Commission of the transmission of the information referred to in paragraph 1 and provide the Commission with a computerised copy upon request.

#### Article 6

##### Coordination between Commission and Member States

1. The Commission shall examine the national programmes and check that the conditions provided for in this regulation are observed.

If the examination by the Commission of a national programme should reveal that it does not meet those conditions, the Commission shall immediately inform the Member State concerned and propose amendments to that

programme. Subsequently the Member State concerned may submit a revised national programme.

2. Member States shall submit, by 31 May 2003 at the latest and by the 31 May following each year of application of the programme thereafter, a technical report of activity detailing the state of completion of the aims set at the time of the drawing-up of the minimum programme and of the extended programme.

3. Each Member State shall designate the relevant authority in charge of the implementation of this regulation, hereinafter referred to as 'national correspondent'.

4. Each Member State shall communicate by 31 May 2001 at the latest the particulars of its national correspondent to the Commission and to the other Member States.

5. The national correspondent shall inform the Commission regularly of the state of progress of the national programmes.

#### Article 7

##### **Non-compliance with Community programmes**

If the Commission considers that the obligations set out in the modules of the Community programmes are not respected by a Member State and that the Member State concerned received Community financial assistance for these modules, it shall inform the Member State concerned which shall carry out an administrative enquiry.

The Member State shall inform the Commission of the progress and of the findings of this enquiry and send it without delay a copy of the report drawn up following the inquiry, notifying the main elements on which it is based.

The Commission may decide to reclaim any sum unduly paid, with interest for the period in question.

#### Article 8

##### **Technical modifications and exemptions**

1. The Commission may authorise the modifications of surveys referred to in the Annex, section G(1)(iii) on the basis of advice of the Scientific, Technical and Economic Committee for Fisheries ( hereinafter referred to as STECF).

2. The Commission may, upon advice of the STECF and in accordance with the procedure referred to in Article 9(2) of Regulation (EC) No 1543/2000, decide on exemptions from the obligations set out in the Annex, sections H and I.

#### Article 9

##### **Management of primary and aggregated data**

1. Member States shall take all necessary measures so that primary data collected under this regulation are dealt with in a confidential way.

2. The primary data shall be kept for the necessary time in order to carry out any relevant task and at least for five years.

3. Each Member State shall ensure that the aggregated data pertaining to the Community programmes are incorporated into computerised databases accessible by electronic means to the Commission and the national correspondents according to Articles 10 and 11.

4. Aggregated data referred to in paragraph 3, may not include any evidence which could make it possible to identify individual vessels, natural or legal persons.

5. Member States shall guarantee the safety of the data processing on their respective computer systems, in particular when the treatment requires transmission by network.

6. Member States shall take all the necessary technical measures to protect data against any accidental or illicit destruction, accidental loss, deterioration, distribution or unauthorised consultation and against any unsuitable form of treatment.

#### Article 10

##### **Access to data by the Commission**

1. If the Commission wishes to use aggregated data collected pursuant to this Regulation, it shall specify to the Member States concerned the data in question.

2. Member States shall take the necessary measures to enable the remote consultation of the data in question or their duplication within a period of time not exceeding 20 working days.

3. If a Member State is not in a position to satisfy the request for access made by the Commission, it must immediately inform the Commission and give reasons.

4. When a computer file has been set up by the Commission from the data of the Member States, this file may not be kept for more than 20 working days following the date for which the information was requested and must therefore be destroyed except when explicit written agreement of the Member States concerned has been obtained.

*Article 11***Access to data by Member States**

1. Member States shall take the measures necessary to facilitate access by the national correspondents of the other Member States, to the computerised database containing the aggregated data.
2. Member States shall communicate to the Commission and to other Member States the reasons which justify a suspension of access to data covered by this Regulation.
3. If a national correspondent wishes to have access to data held by another Member State, it shall send a request to the national correspondent responsible for access to this data. That national correspondent shall reply to the request within 10 working days following that request and must give reasons for any refusal.
4. Member States may conclude agreements or agree upon IT protocols relating to computer access in order to facilitate

access to the databases. They shall inform the Commission without delay thereof. The expenses generated by access to the databases shall be borne by the national correspondent requesting it.

*Article 12***Confidentiality**

The members of the STECF and participants of meetings that it organises are not permitted to make a copy of part or all of the data for use outside of the meeting.

*Article 13***Entry into force**

This Regulation shall enter into force on the seventh day following its publication in the *Official Journal of the European Communities*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 25 July 2001.

*For the Commission*

Franz FISCHLER

*Member of the Commission*

## ANNEX

## CHAPTER I

**CONTENTS AND METHODOLOGY****A. Contents of the Community programmes**

1. The minimum Community programme referred to in Article 5(1) of Regulation (EC) No 1543/2000 comprises the following modules:
  - (a) module of evaluation of inputs: fishing capacities and fishing effort;
  - (b) module of evaluation and of sampling of the catches and landings;
  - (c) module of evaluation of the economic situation of the sector.
2. The extended Community programme referred to in Article 5(1) of Regulation (EC) No 1543/2000 comprises the modules referred to in point 1 as well as additional information which is specified for each module.
3. For each module the parameters to be monitored, the disaggregation levels and the precision levels to be attained are specified for the minimum programme. For the extended programmes for which the precision levels are not fixed, each Member State must indicate in its national programme the precision levels it is aiming at, and the cost-precision relationship associated to the estimation procedures which will be used.

**B. Precision levels and sampling intensities**

1. When it is not possible to define quantitative targets for sampling programmes, neither in terms of precision levels, nor in terms of sample size, pilot surveys in the statistical sense will be established. Such pilot surveys must evaluate the importance of the problem and should also address the utility of more detailed surveys later on, and the cost-effectiveness relationship of such detailed surveys.
2. When quantitative targets can be defined, they can be specified either directly by sample sizes or sampling rates, or by the definition of the levels of precision and of confidence to be achieved.
3. When reference is made to a sample size or to a sampling rate in a population defined in statistical terms, the sampling strategies must be at least as efficient as simple random sampling. Such sampling strategies must be described within the corresponding national programmes.
4. When reference is made to precision/confidence level, the following distinction is established:
  - (a) level 1: level making it possible to estimate a parameter with precision of plus or minus 25 % for a 95 % confidence level;
  - (b) level 2: level making it possible to estimate a parameter with precision of plus or minus 10 % for a 95 % confidence level;
  - (c) level 3: level making it possible to estimate a parameter with precision of plus or minus 5 % for a 95 % confidence level.

## CHAPTER II

**MODULE OF EVALUATION OF INPUTS: FISHING CAPACITIES AND FISHING EFFORT****C. Collection of data concerning fishing capacities**

1. For the minimum programme, data must be collected in order to assess, for each segment as defined later, the number of vessels that are attached to it and the average value per vessel of the parameters defined in point (a).

## (a) Parameters:

the data collected must include all fishing vessels covered by multi-annual guidance programme (MAGP) IV:

- the tonnage (gross tonnage),
- the maximum continuous engine power actually developed by the main engine, after derating if appropriate, expressed in kW as defined in Council Regulation (EC) No 2930/86 <sup>(1)</sup>,
- the age of the vessel calculated on the basis of the age of the hull.

## (b) Disaggregation levels:

- data must be gathered in a way which makes it possible to individualise the segments defined in Appendix III,
- data must be updated annually.

## (c) Precision levels:

data arising from Regulation (EC) No 2090/98 must be gathered exhaustively. For the other types of data mentioned in point (1)(a), sampling programmes can be drawn up to allow estimates attaining level 3 precision as defined in section B.

## 2. Extended programme

## (a) Complementary parameters include:

- the maximum continuous power of the main engine before derating,
- the maximum overall power of the auxiliary engine(s) used for hoists and winches for the vessels with an overall length of more than 12 meters,
- the characteristics of a standard fishing gear associated with each fishing technique, including the dimensions and the insured value of this standard gear,
- the average number per vessel of the fishing gears associated with the various types of fishing techniques.

## (b) Disaggregation levels:

- segments to be considered are defined in Appendix IV,
- types of fishing techniques to be considered are also defined in Appendix IV.

**D. Collection of data related to fishing effort**

## 1. At the minimum programme level, data must be collected in the following way:

## (a) Parameters:

- (i) fuel consumption <sup>(2)</sup>;
- (ii) fishing efforts by type of technique: they are measured by the weighted sum of the fishing days associated with an area and with a specific period:
  - each day is weighted by a measuring unit related to the nominal fishing power of each vessel; these units being defined in Appendix V,
  - a day at sea is regarded as a calendar day of fishing if at least one fishing operation has been carried out by a fishing vessel on that day, or if a passive fishing gear has been left at sea during this day,
  - each day is attributed to the area where the first fishing operation took place within this day. However, for passive gears, if no operation took place from the vessel within a day while at least one (passive) gear remained at sea, this day will be associated to the area where the last setting of a fishing gear was carried out on that fishing trip;
- (iii) specific fishing efforts: they are associated with stocks of special interest. They are defined as effort by technique, but the only days to be taken into account are those where the catches kept on board of the stocks mentioned in Appendix VI exceed the thresholds referred to in that Appendix.
  - for specific stocks additional measuring units apart from those defined in Appendix V, may be used on condition that they comply with the specifications established by the regional fisheries organisations involved in the assessment of these stocks.

<sup>(1)</sup> OJ L 274, 25.9.1986, p. 1.

<sup>(2)</sup> The data are considered as part of the economic evaluation collected as Chapter IV.

## (b) Disaggregation levels:

- (i) as regards fuel consumption, data expressed in volume and cost must be gathered in a way which makes it possible to estimate the average fuel consumption per vessel within each segment as defined in Appendix III, on an annual basis <sup>(1)</sup>;
- (ii) for fishing effort by technique, data must be collected by types of techniques defined in Appendix VIII, on a quarterly basis and, according to level 3 of geographical disaggregation defined in Appendix I;

In addition to the overall effort, the contribution of each segment defined in Appendix III shall be individualised (effort by technique and by segment) <sup>(1)</sup>;

- (iii) at the level of specific fishing efforts, data will be collected as for efforts by technique: by separating types of fishing techniques specified in Appendix VIII, on a quarterly basis, and according to level 3 of geographical disaggregation defined in Appendix I.

## (c) Precision levels:

the data corresponding to the provisions of Commission Regulation (EEC) No 2807/83 <sup>(2)</sup> (defining the special procedures of recording of information concerning fish landings by the Member States) must be collected in an exhaustive way. When other data are necessary, they are collected according to sampling procedures making it possible to reach for the estimated averages by segment, the level of precision 2 for data concerning fuel consumption, the level of precision 2 for fishing effort by technique, the level of precision 1 for specific fishing effort. Pilot surveys may be conducted for fishing effort of passive gears.

## 2. Extended programme

## (a) Complementary parameters:

for the efforts by technique and specific efforts referred to in point 1(a)(ii) and (iii):

- other measuring units than those defined in Appendix V, can be used on condition that they are detailed and justified in the national programmes,
- stocks and/or thresholds other than those defined in Appendix VI can be taken into consideration to define specific effort,
- in addition, for fishing gear other than traps, pots and pond nets, fishing efforts could be measured by operation. In such cases, basic units will refer to fishing operations and not to fishing days. Each operation will correspond to a contribution to the thus defined fishing effort by following the rules defined in Appendix IX. Other rules than those indicated in that Appendix could also be used in as far as they are fully described and justified,
- data on fishing effort of traps, pots and pond nets can be collected as number of gears at sea, multiplied by time (number of days of each gear at sea on an annual basis).

## (b) Disaggregation levels:

- (i) fuel consumption data can be gathered in a way which makes it possible to estimate the average fuel consumption per vessel within each segment defined in Appendix IV, on a quarterly basis;
- (ii) as regards to the fishing effort by technique and the specific fishing effort:
  - effort data can be individualised according to the types of fishing techniques referred to in Appendix X; more detailed typology can be used as long as the usefulness is described and justified in the national programme,
  - effort data by segment can be gathered with reference to the segments defined in Appendix IV,
  - effort data can be gathered on a monthly basis, and referring to the level of geographical disaggregation 4 of Appendix I; for the stocks mentioned in Appendix VII specific effort data can be gathered by separating the ranges of depth specified in that Appendix.

<sup>(1)</sup> The data are considered as part of the economic evaluation collected as Chapter IV.

<sup>(2)</sup> OJ L 276, 10.10.1983, p. 1.

## CHAPTER III

## MODULE OF EVALUATION OF THE CATCHES AND LANDINGS

## E. Collection of data related to catches and landings

1. At the minimum programme level, data must be gathered in the following way.

## (a) Parameters:

- data collection must make it possible to assess:
  - commercial landings for all stocks, and
  - for stocks mentioned in Appendix XII, total catches, landings and discards, and
  - catches from recreational and game fisheries in marine waters for stocks mentioned in Appendix XI,
- each Member State must describe the conversion factors it has applied.

## (b) Disaggregation levels:

- for each Member State, an estimate of overall annual commercial landings will be provided by species, distinguishing the geographical origin of the catches according to level 2 of geographical disaggregation of Appendix I. However, if grouping of several species is considered to be more appropriate, Member States can obtain a derogation from the Commission, provided this is fully justified,
- for the stocks mentioned in Appendix XII, commercial landings will be disaggregated as indicated in that Appendix,
- landings by weight and value of each segment identified in Appendix III must be individualised by species, by quarter and, as regards the geographical origin of the catches, at the level of geographical disaggregation 2 according to Appendix I <sup>(1)</sup>,
- discards will be monitored for the stocks in Appendix XII in order to estimate the average volume of the annual catches by weight per three-year period, by type of technique defined in Appendix III, except for the stocks for which Appendix XII specifies another disaggregation rule,
- a pilot survey, as defined in section B, needs to be implemented for recreational and game fisheries mentioned in Appendix XI, taking into account the disaggregation level specified within the same Appendix.

## (c) Precision level:

- the assessment of commercial landings must be made on the basis of the exhaustive data gathered under Council Regulation (EEC) No 2847/93 <sup>(2)</sup> and on the basis of Council Regulation (EC) No 104/2000 <sup>(3)</sup> and for the data not covered by these Regulations by sampling and statistical procedures, in such a way that the estimates achieve a precision of level 3 for stocks subject to TAC and quota regulations, level 2 for stocks not subject to TACs and quotas listed within Appendix XII, and level 1 for the other cases,
- data related to annual estimates of discards for stocks mentioned in Appendix XII must lead to a precision of level 1. However, if Member States can not reach this level of precision or only at excessive costs, they can obtain a derogation from the Commission to reduce the precision level, sampling frequency or to implement a pilot survey provided this request is fully documented,
- discards related to other stocks than those for which Appendix XII states a yearly estimate must be covered by pilot surveys. The conclusions of these studies must be forwarded to the Commission by 31 October 2003 at the latest,
- catches from recreational and game fisheries mentioned in Appendix XI must be subject to pilot surveys. The conclusions of these surveys must be forwarded to the Commission by 31 October 2003 at the latest.

(d) In accordance with the provisions of Regulation (EEC) No 2847/93, Member States shall take necessary measures to ensure the registration of all relevant data according to Article 9 of that Regulation.

In addition, Member States will, when appropriate, cooperate with other Member States to obtain comprehensive data covering the landings of vessels flying their flag.

<sup>(1)</sup> The data are considered as part of the economic evaluation collected as Chapter IV.

<sup>(2)</sup> OJ L 261, 20.10.1993, p. 1.

<sup>(3)</sup> OJ L 17, 21.1.2000, p. 22.



## 2. Extended programme

### (a) Complementary parameters:

- landings from stocks mentioned in Appendix XIII,
- catches from game and recreational fisheries for stocks other than those mentioned in Appendix XI,
- for salmon, the catches taken in estuaries, lakes and rivers in the geographical area of the Baltic Sea and the North Sea.

### (b) Disaggregation level:

- data concerning the commercial landings of the stocks mentioned in Appendix XII can be disaggregated in accordance with the provisions defined in that Appendix for the extended programme. Complementary geographical stratification, according to depth or another criterion, can be made, in as far as this stratification is consistent with section D, point (2)(b)(ii), third indent, and that the corresponding national programme justifies its usefulness,
- data concerning the stocks mentioned in Appendix XIII can be collected on a quarterly basis, by separating the catches according to the types of techniques defined in Appendix III, and by the geographical level 3 areas according to Appendix I. For stocks mentioned in Appendix VII, data can be further separated according to the ranges of depth defined in that Appendix,
- catch data can be collected by segment as defined in Appendix IV or Appendix X,
- discards data can be collected under the extended programme:
  - on a quarterly basis, by type of technique according to Appendix III and according to the geographical level 3 of Appendix I, for the stocks where Appendix XII mentions an annual evaluation of discards within the minimum programme,
  - on an annual basis, with possible separation of the types of fishing technique according to Appendix III, without geographical disaggregation, for the stocks where Appendix XII does not require an annual estimate of discards within the minimum programme,
  - on an annual basis, with no other disaggregation for the stocks mentioned in Appendix XIII.

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

### 1. At the minimum programme level, data must be collected in the following way:

each national programme includes a review of the utility of the detailed catch and effort data from fishing vessels flying their flag, which have been used during the years 1995 to 2000 by scientific assessments working groups. This review will analyse the weight given in the final stock assessment to the corresponding abundance or partial fishing effort indices, the possibility prolonging the corresponding times series on the basis of disaggregated catch and effort figures as mentioned respectively in sections D and E, as well as the possible necessity to refer to even more detailed data. Each Member State will forward the corresponding conclusions to the Commission by 31 December 2002 at the latest. The Commission will submit to the STECF the results of these analyses, and fix the contents of the minimum programme for this section by 31 March 2003 at the latest.

### 2. Extended programme level:

any study covering the definition of indexes of abundance or of effective effort on the basis of detailed catch and effort data coming from the commercial fleets is eligible under the extended programme. The potential usefulness of these indexes should be established by the national programme. These studies will be submitted to the STECF. If the opinion of the STECF does not confirm the usefulness of these indexes, the corresponding study will not be considered eligible from there on.

## G. Eligibility of the scientific evaluation surveys of stocks

### 1. Minimum programme level:

- (i) All surveys mentioned by Appendix XIV with priority 1, must be covered;
- (ii) Member States must guarantee within their national programmes continuity with previous survey designs;
- (iii) Notwithstanding points (i) and (ii), Member States may propose a modification in the survey effort or sampling design, provided that this will not negatively affect the quality of the results.

2. At the extended programme level all surveys indicated with priority 2 in Appendix XIV are eligible.

#### H. Biological sampling of catches: composition by age and by length

1. At the minimum programme level, data must be collected in the following way.

- (a) Parameters:

biological sampling must be performed in order to evaluate the composition in length and where appropriate in age, of the landings for all the stocks specified in Appendix XV.

- (b) Disaggregation and precision levels:

the necessary disaggregation levels are specified in Appendix XV as well as the basic stratification and the sampling intensities. However, Member States can apply another sampling strategy than that corresponding to the basic stratification with simple random sampling within strata defined in Appendix XV, and other sampling intensities than those defined in Appendix XV, providing this alternative approach achieves the same or a higher precision level at the same or at a lower cost, and that this is established by the corresponding national programme.

- (c) Sampling programme implementation:

the Member State on whose territory landings take place are responsible for installing sampling programmes according to the standards defined in this article. If necessary, Member States will co-operate with the authorities of third countries to set up the biological sampling of the landings carried out by vessels flying these third countries flag.

In accordance with Regulation (EEC) No 2847/93, each Member State takes the necessary measures to ensure the gathering of all data concerning the activities of the vessels which fly its flag whatever their places of landings.

- (d) Exemptions concerning the sampling rules:

— lengths:

- (1) the national programme of a Member State can exclude the estimation of the length distribution of the landings for stocks for which TACs and quotas have been defined under the following conditions:

- (i) the relevant quotas must correspond to less than 5 % of the Community share of the TAC or to less than 100 tonnes on average during the previous three years;
- (ii) the sum of all quotas of Member States whose allocation is less than 5 %, must account for less than 15 % of the Community share of the TAC.

If the condition set out in point (i) is fulfilled, but not the condition set out in point (ii), the relevant Member States may set up a coordinated programme to achieve for their overall landings the implementation of the sampling scheme described in Appendix XV, or another sampling scheme, leading to the same precision.

If appropriate, the national programme may be adjusted until 31 January of every year to take into account the exchange of quotas between Member States;

- (2) for stocks for which TACs and quotas have not been defined and outside the Mediterranean area, the same rules apply on the basis of the average landings of the previous three years and with reference to the total Community landings from a stock;
- (3) for the stocks in the Mediterranean area, the landings by weight of a Mediterranean Member State for a species corresponding to less than 5 % of the total national landings from the Mediterranean area, or to less than 200 tonne, except for bluefin tuna.

— ages:

- (1) the national programme of a Member State can exclude the estimation of the age distribution of the landings for stocks for which TACs and quotas have been defined under the following conditions:

- (i) the relevant quotas correspond to less than 10 % of the Community share of the TAC or to less than 200 tonnes on average during the previous three years;
- (ii) the sum of all quotas of Member States whose allocation is less than 10 %, accounts for less than 25 % of the Community share of the TAC.

If the condition set out in point (i) is fulfilled, but not the condition set out in point (ii), the relevant Member States may set up a coordinated programme to achieve for their overall landings the implementation of the sampling scheme described in Appendix XV, or another sampling scheme, leading to the same precision.

If appropriate, the national programme may be adjusted until 31 January of every year to take into account the exchange of quotas between Member States;

- (2) for stocks for which TACs and quotas have not been defined and outside the Mediterranean area, the same rules apply on the basis of the average landings of the previous three years and with reference to the total Community landings from a stock;
- (3) for the stocks in the Mediterranean area, the landings by weight of a Mediterranean Member State for a species corresponding to less than 5 % of the total national landings from the Mediterranean area, or to less than 200 tonnes, except for bluefin tuna;
- (4) Whenever possible, age-reading should be performed on commercial catches. If this is not the case, Member States should specify it within their national programme.

— Others:

if cooperation between Member States guarantees that the overall estimate of the parameters under point (a) reach the necessary precision level, each concerned Member State is not held individually to guarantee that its own data are enough to reach this precision level.

(e) Discards

Discards must be the subject of an estimation of the distribution of the lengths when they represent on an annual basis, either more than 10 % of the total catches by weight or more than 20 % of the catches in numbers for the stocks for which annual discard data must be collected as specified in Appendix XII and according to the rules defined in that Appendix for commercial landings.

The sampling intensities are those as defined in Appendix XV for commercial landings.

When discards take place for length ranges which are not represented in the landings, age-reading must take place in accordance with the rules set out in Appendix XV.

However, if Member States can not reach this level of precision or only at excessive costs, they can obtain a derogation from the Commission provided this request is fully documented.

(f) Recreational and game fisheries

For the stocks specified in Appendix XI, Member States must set up pilot surveys consistent with the level of disaggregation defined in that Appendix. These surveys must make it possible to establish the levels of precision required for the future. The conclusions of these surveys must be forwarded to the Commission by 31 October 2003 at the latest.

2. Extended programme:

complementary parameters:

- all the sampling programmes for the estimation of the composition by age or length of the landings and specified Appendix XV,
- the sampling programmes for the estimation of the annual composition in lengths of landings for the stocks specified in Appendix XIII,
- the sampling programme for the estimation of the annual composition in lengths of the discards for stocks specified in Appendix XII and Appendix XV.

### I. Other biological samplings

(1) At the minimum programme level, data must be collected in the following way.

(a) Parameters

- (i) The growth curves by length and by weight, the relations between age/length and maturity, and the relation between age/length and fecundity must be provided for all stocks mentioned in Appendix XVI, including for those not subject to an annual estimation of the age composition of the catches.

- (ii) Biological sampling programmes of the landings must be implemented to estimate the share of the various stocks in these landings for: herring in the Skagerrak, Kattegat, and eastern North Sea separately, wild and reared salmon in the Baltic Sea, the various species of skates and rays in areas IV and VIII.
- (iii) Member States should perform their sampling scheme for sex ratio from their commercial catches. However, in cases in which this task is impossible, samples obtained during scientific surveys may be used.

(b) Disaggregation level

For parameters referred to in point (a)(i):

- definitions are provided by stock according to the periodicity defined in Appendix XVI. The validity of existing data used for biological parameters estimation must be checked every three to six years as defined in Appendix XVI. Member States must update these parameters if needed,
- for the Norway lobster (*Nephrops*), Greenland halibut, deep sea shrimps (*Pandalus borealis*), plaice, sole and hake, the growth curves and maturity ogives are established separately for males and for females.

For parameters referred to in point (a)(ii):

data should be provided quarterly and following the fishing techniques typology described in Appendix IV.

(c) Precision levels

(i) For growth curves:

- for stocks for which ages of individual fish can be read, average weights and lengths for each age must be estimated with a precision of level 3, up to an age such that cumulated landings for the corresponding ages account for at least 95 % of the national landings for the relevant stock,
- for stocks for which age reading is not possible, but for which a growth curve can be estimated, average weights and lengths for each age must be estimated with a precision of level 2, up to an age such that cumulated landings for the corresponding ages account for at least 90 % of the national landings, for the relevant stock.

(ii) For maturity, fecundity and sex ratios, a choice can be made between reference to age or length, provided that Member States which have to conduct the corresponding biological sampling have agreed the following:

- for maturity and fecundity, precision of level 3 must be achieved within the age and/or length range, the limits of which correspond to a 20 % and 90 % of mature fish,
- for sex ratio, precision of level 3 must be achieved, up to an age or length such that cumulated landings for the corresponding ages or lengths account for at least 95 % of the national landings for this stock.

(iii) Stocks and species compositions of the catches referred to in point (a)(ii) must be estimated with level 1 precision.

(d) Exemptions

(1) The national programme of a Member State can exclude the estimation of the biological parameters for stocks for which TACs and quotas have been defined under the following conditions:

- (i) the relevant quotas correspond to less than 10 % of the Community share of the TAC or to less than 200 tonnes on average during the previous three years;
- (ii) the sum of all quotas of Member States whose allocation is less than 5 %, accounts for less than 20 % of the Community share of the TAC.

If appropriate, the national programme can be adjusted until 1 February of every year to take into account the exchange of quotas between Member States.

(2) For stocks for which TACs and quotas have not been defined, the same rules apply on the basis of the average landings of the previous three years and with reference to the total Community landings.

If cooperation between the Member States guarantees that the overall estimates of all parameters set out in point (a)(i) reach the necessary precision levels, a Member State concerned is not held individually to guarantee that its own data is enough to reach this precision level.

2. At the extended programme level

Complementary parameters:

- for the stocks mentioned in Appendix XVI, an annual updating and discrimination by sex will be eligible,
- for stocks not mentioned in Appendix XVI, but mentioned in Appendix XV and for which length data have been collected, growth, maturity and sex ratio data will be eligible every three years,
- the growth and maturity curves for the species mentioned in Appendix XIII are eligible, but the updating of the data will not be performed more frequently than every three years,
- for the groups of species mentioned in Appendix XII or XIII, sampling programmes of the catches to establish the species composition will be eligible every three years.

#### CHAPTER IV

#### MODULE OF EVALUATION OF THE ECONOMIC SITUATION OF THE SECTOR

##### J. Collection of economic data by groups of vessels

1. At the minimum programme level, data must be gathered in the following way.

(a) Parameters:

- data must be collected to cover all the parameters mentioned in Appendix XVII according to the segmentation set out in Appendix III,
- investment must be measured in order to estimate the overall value of assets, including the capital value of the leased equipment. Insured values must be preferred. If the collection of the insured value proves too difficult, the replacement value of the vessel can be gathered by default. In such a case, the need for this substitution must be shown in the national programme,
- within production costs, labour costs must cover all expenditures paid by employers, including social security, health insurance, retirements and other related taxes.

(b) Disaggregation levels:

- each parameter is estimated for each group of vessels as defined in Appendix III,
- in accordance with the specifications of Annex IV of Regulation (EC) No 1543/2000, data concerning prices are gathered on an annual basis, while distinguishing for the fleets performing in the Mediterranean the catches coming from the various geographical areas mentioned in Appendix I, level 3.

(c) Precision levels:

for each parameter and for each segment, level 1 precision must be achieved.

2. Extended programme level

(a) Complementary parameters:

the extended programme covers all the data defined in Appendix XVIII.

(b) Disaggregation levels:

the partition of the groups of vessels referred to in point (1)(a), first indent, may be carried up to the level defined in Appendix IV and regarding the regional differentiation of level 2 of Appendix I.

##### K. Collection of data concerning the processing industry

1. At the minimum programme level

Member States should conduct pilot surveys in order to assess the annual value per sector of the parameters listed in Appendix XIX; these pilot surveys must compare the cost-efficiency relationship of different data collection strategies, including sampling schemes. The conclusions of these surveys must be forwarded to the Commission by 31 October 2003 at the latest.

2. Extended programme level

(a) Complementary parameters

Activities of collecting and managing the data shall make it possible:

- (i) to appreciate the overall sensitivity of the sector and/or of the companies located in the coastal regions (nomenclature of territorial units for statistical purposes, NUTS 3) with respect to the catches from the stocks subject to TACs and quotas and/or affected by other measures connected with the conservation of fishery resources, or with respect to the catches from outside of Community waters;
- (ii) to assess the impact, including the social and the economic impact, on the processing industry of measures taken on behalf of the CFP such as measures envisaged by Council Regulation (EEC) No 3759/92 <sup>(1)</sup>, Council Regulation (EC) No 2792/1999 <sup>(2)</sup>, and specific measures adopted for the fisheries and aquaculture sector of the most remote regions (programme of options specific to remoteness and to insularity, POSEI).

(b) Disaggregation levels

The analysis of the companies of the sector may take into account the establishment of these companies in various regions, coastal or not, at the NUTS 3 level.

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<sup>(1)</sup> OJ L 388, 31.12.1992, p. 1.

<sup>(2)</sup> OJ L 337, 30.12.1999, p. 10.

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## Appendix I

**Geographic stratification by regional fisheries organisations**

	ICES	NAFO	ICCAT	GFCM	CCAMLR	IOTC	Other
Level 1	Area	Area	FAO area	Area e.g. 37 Mediterranean and Black Sea	Area e.g. 48	FAO area	FAO area
Level 2	Subarea e.g. IV North Sea	Subarea e.g. 21.2 Labrador	FAO Subarea	Subarea e.g. 37.1 Mediterranean	Subarea e.g. 48.1 Antarctic Peninsula	FAO Subarea	FAO Subarea
Level 3	Division e.g. IVc	Division e.g. 21.2H	Division 5° × 5°	Division e.g. 37.1.2 Gulf of Lions	Division 5° × 5°	Division 5° × 5°	Division 5° × 5°
Level 4	Rectangle 30' × 1°	Rectangle	Rectangle 1° × 1°	Rectangle 1° × 1°	Rectangle 1° × 1°	Rectangle 1° × 1°	Rectangle 1° × 1°



## Appendix II

Functional Units (FU) and Statistical rectangles for *Nephrops norvegicus*

FU No	Name	ICES zone	Statistical rectangles
3	Skagerrak	IIIa	47G0-G1; 46F9-G1; 45F8-G1; 44F7-G0; 43F8-F9
4	Kattegat	IIIa	44G1-G2; 42-43G0-G2; 41G1-G2
5	Botney Gut — Silver Pit	IVb, c	36-37 F1-F4; 35F2-F3
6	Farn Deeps	IVb	38-40 E8-E9; 37E9
7	Fladen Ground	IVa	44-49 E9-F1; 45-46E8
8	Firth of Forth	IVb	40-41E7; 41E6
9	Moray Firth	IVa	44-45 E6-E7; 44E8
10	Noup	IVa	47E6
11	North Minch	VIa	44-46 E3-E4
12	South Minch	VIa	41-43 E2-E4
13	Clyde	VIa	39-40 E4-E5
14	Irish Sea East	VIIa	35-38E6; 38E5
15	Irish Sea West	VIIa	36E3; 35-37 E4-E5; 38E4
16	Porcupine Bank	VIIc, k	34D6-D8; 33D5-D8; 32D5-D6
17	Aran Grounds	VIIb	34-35 D9-E0
18	Ireland NW coast	VIIb	37D9-E1; 36D9
19	Ireland SW and SE coast	VIIg, j	31-33D9-E0; 31E1; 32E1-E2; 33E2-E3
20	NW Labadie, Baltimore and Galley	VIIg, j	
21	Jones and Cockburn	VIIg, h, j	27-29E1-E2; 31E2-E4; 32E3
22	Smalls	VIIg	
23	Bay of Biscay north	VIIIa	22-24E6-E7; 23-24E5
24	Bay of Biscay south	VIIIb	20-21E7-E8; 19E8
25	North Galicia	VIIIc	15E0-E1; 16E1
26	West Galicia	IXa	13-14E0-E1
27	North Portugal (North of Cape Espichel)	IXa	6-12E0; 9-12E1
28	South-west Portugal (Alentejo)	IXa	3-5E0-E1
29	South Portugal (Algarve)	IXa	2E0-E2
30	Gulf of Cadiz	IXa	2-3E2-E3
31	Cantabrian Sea	VIIIc	16E4-E7
32	Norwegian Deep	IVa	44-52F2-F6; 43F5-F7
33	Off Horn Reef	IVb	39-41E4; 39-41E5

## Appendix III (section C)

## Basic segmentation of vessels for capacities (MP)

Vessel length		< 12 m	12 – < 24 m	24 – < 40 m	≥ 40 m
Type of fishing technique					
Mobile gears	Beam trawl				
	Demersal trawl and demersal seiner				
	Pelagic trawl and seiners				
	Dredges				
	Polyvalent				
Passive gears	Gears using hooks	(1)			
	Drift and fixed nets				
	Pots and traps				
	Polyvalent				
Polyvalent gears	Combining mobile and passive gears				

(1) This segment is aggregated for all passive gears.

Note 1: If a gear category contains fewer than 10 vessels, then the cell can be merged with a neighbouring length category to be specified in the national programme.

Note 2: If a vessel spends more than 50 % of its time using a specific type of fishing technique, it should be included in the corresponding segment.

Note 3: Length is defined as length overall (LOA).

## Detailed disaggregation of vessels for capacities (EP)

Vessel length		< 10 m	10 – < 12 m	12 – < 18 m	18 – < 24 m	24 – < 40 m	≥ 40 m
Type of fishing technique							
Mobile gears	Beam trawl	North Sea < 221 kW					
		North Sea ≥ 221 kW					
		Outside North Sea					
	Demersal trawl and demersal seine	Bottom trawl					
		Danish and Scottish seiners					
		Polyvalent					
	Pelagic trawl and seiners	Pelagic trawl					
		Pelagic seiner and purse					
		Polyvalent					
	Dredges						
Polyvalent mobile gears							
Passive gears	Gears using hooks	Longlines					
		Other gears using hooks					
	Drift nets and fixed nets						
	Pots and traps						
	Polyvalent passive gears						
Polyvalent gears							

## Appendix V (section D)

**Fishing power units by type of fishing technique**

Fishing technique	Fishing power units
Mobile gears	kW and GT
Fixed gears	GT
Polyvalent	kW

## Appendix VI (section D)

**Stocks for which specific effort must be defined (MP)**

Species and area	Threshold 1 <sup>(1)</sup>	Threshold 2 <sup>(2)</sup>
Salmon (Baltic Sea)	30 %	5 %
Cod (all areas)	30 %	5 %
Haddock (all areas)	30 %	5 %
Saithe (all areas)	30 %	5 %
Whiting (all areas)	30 %	5 %
Plaice (all areas)	30 %	5 %
Sole (all areas, except Mediterranean)	10 %	5 %
Sole (Mediterranean)	30 %	5 %
Nephrops (all areas)	30 %	5 %
Hake (all areas)	30 %	5 %
Anchovy (all areas)	30 %	5 %
Sardine (all areas)	50 %	5 %
Mackerel (all areas)	50 %	10 %
Horse mackerel (all areas)	50 %	10 %
Swordfish (all areas)	30 %	5 %
Bluefin tuna (all areas)	30 %	5 %
Big-eye tuna (all areas)	30 %	5 %
Albacore (all areas)	30 %	5 %
Yellowfin tuna (all areas)	30 %	5 %
Herring (all areas)	50 %	10 %
Sprat (all areas)	50 %	10 %
Sandeel (all areas)	70 %	
Norway pout (all areas)	70 %	

<sup>(1)</sup> A fishing day is to be considered as targeting one specific species, if the percentage of this species in total daily catch is higher than threshold 1.

<sup>(2)</sup> A fishing day is to be considered as affecting significantly a species, if the percentage of the particular species is higher than threshold 2.

## Appendix VII (section D)

**Target species and depths (EP)**

Stock	Area	Threshold
Cod	NAFO	30 %
Grenadiers	All areas	30 %
Greenland halibut	All areas	30 %
Redfish	All areas	30 %
<i>Pandalus</i> spp.	All areas	30 %
<i>Pagelus bogaraveo</i>	ICES	30 %
<i>Aphanopus carbo</i>	ICES	30 %
<i>Argentina silus</i>	ICES	30 %
<i>Beryx</i> spp.	ICES	30 %
<i>Coryphaenoides rupestris</i>	ICES	30 %
<i>Hoplostethus atlanticus</i>	ICES	30 %
<i>Molva dypterygia</i>	ICES	30 %
<i>Molva molva</i>	ICES	30 %

Depth ranges: 0 - 200 m, 201 - 500 m, 501 - 1 000 m, > 1 000 m

## Appendix VIII (section D)

**Intermediate typology for effort information (MP)**

Types of fishing techniques			
Mobile gears	Beam trawl	North Sea < 221 kW	
		North Sea $\geq$ = 221 kW	
		Outside North Sea	
	Demersal trawl and demersal seine	Bottom trawl	
		Danish and Scottish seiners	
		Total	
	Pelagic trawl and seiners	Pelagic trawl	
		Pelagic seiner and purse seiner	
		Total	
	Dredges		
Total mobile gears			
Passive gears	Gears using hooks	Longlines	
		Other gears using hooks	
	Drift and fixed nets		
	Pots and traps		
	Total		
Grand total			

*Appendix IX (section D)***Definition of fishing effort in relation to fishing operation (EP)**

Gear type	Variable
Trawls	Duration of haul × kW
Purse seiners	Number of sets
Nets	Number of nets × length × time at sea
Longlines	Number of hooks × time at sea
Pots, traps and pound nets	Numbers × annual time at sea

*Appendix X (section D)***Detailed typology of fishing techniques (EP)****I. Mobile gears****(a) Beam trawl**

## 1. Engine power &lt; 221 kW for vessels operating in North Sea

(i) mesh size: &lt; 32 mm, 80 – 109 mm, ≥ 110 mm

## 2. Engine power ≥ 221 kW for vessels operating in North Sea

(i) mesh size: 80 – 109 mm, ≥ 110 mm

## 3. Beam trawlers operating outside the North Sea

(i) mesh size: &lt; 32 mm, 80 – 109 mm, ≥ 110 mm

**(b) Demersal trawl and demersal seine**

## 1. Bottom trawl

(i) single trawl, paired trawl, twin trawl, other multirig trawl, four-panels trawl, high-opening trawl

(ii) mesh size: &lt; 32 mm, 32 – 54 mm, 55 – 69 mm, 70 – 79 mm, 80 – 109 mm, ≥ 110 mm

(iii) (i) and (ii) may be combined

## 2. Danish seiners

(i) mesh size: &lt; 32 mm, 32 – 54 mm, 55 – 69 mm, 70 – 79 mm, 80 – 109 mm, ≥ 110 mm

## 3. Scottish seiners

(i) mesh size: &lt; 32 mm, 32 – 54 mm, 55 – 69 mm, 70 – 79 mm, 80 – 109 mm, ≥ 110 mm

**(c) Pelagic trawl and seiners**

## 1. Pelagic trawl

(i) single trawler, paired trawlers

(ii) mesh size: trawl: &lt; 32 mm, 32 – 54 mm, 55 – 69 mm, 70 – 79 mm, 80 – 109 mm, ≥ 110 mm (Atlantic and North Sea); &lt; 32 mm, 32 – 90 mm, 91 – 105 mm, 106 – 119 mm, ≥ 120 mm (Baltic Sea); 14 – 49 mm, 50 – 99 mm, 100 – 119 mm, ≥ 120 mm (Mediterranean)

## 2. Pelagic seiner and purse seiner

(i) with fish aggregating devices (FAD)

(ii) without FAD

**(d) Dredges**

(i) hydraulic dredge

(ii) Other dredges

**II. Passive gears****(a) Fixed gears and lines**

## 1. Fixed nets

(i) trammel nets

(ii) entangling nets



- (iii) gill nets
  - (iv) subdivision by mesh size, also permitted: 10 - 99 mm, 100 - 119 mm,  $\geq 120$  mm (Atlantic and North Sea);  $< 105$  mm, 105 - 119 mm,  $\geq 120$  mm (Baltic Sea)
2. Longlines
    - (i) surface longlines
    - (ii) bottom longlines
    - (iii) mid-waterlines
  3. Other gear using hooks
    - (i) troll line
    - (ii) pole line with live bait
    - (iii) pole line without live bait
- (b) Drift nets
- (i) mesh sizes for the Baltic:  $\leq 30$  mm,  $\geq 150$  mm
  - (ii) mesh sizes for the Mediterranean:  $\leq 150$  mm, 151 - 299 mm,  $\geq 300$  mm
- (c) Pots and traps
- (i) fish traps, including trap nets and pound nets
  - (ii) crustaceans pots with possible subdivision by target species.

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*Appendix XI (section E)*

**List of recreational fisheries stocks (MP)**

1. Salmon (marine waters in the Baltic Sea and North Sea):  
catch figures collected in weight and number:  
by Geographical area as defined Appendix 1, level 2.
  2. Bluefin tuna (all areas):  
catch figures collected in weight and number by:
    - annual
    - geographical area as defined Appendix 1, level 2.
    - distinguishing catch of fish below and above 10 kg.
-

## Appendix XII (section E)

**List of stocks for landings and discards monitoring (MP)**

## LEGEND:

*Catch and landings monitoring:* within the market or sea-sampling programme the stratification of sampling is prioritised at the total or fleet level, with monthly, quarterly or annual sampling schemes, with data reported by rectangle, division or area.

## Fishing technique stratification:

M	Monthly by type of fishing technique (Appendix III)
N	Monthly total
Q	Quarterly by type of fishing technique (Appendix III)
R	Quarterly total
Y	Yearly by type of fishing technique (Appendix III)
Z	Yearly total

## Geographical stratification:

0	Functional unit
1	ICES Statistical rectangle
2	ICES/NAFO divisions
3	ICES/NAFO subareas
4	ICCAT 1° rectangle
5	ICCAT 5° rectangle
6	FAO division
7	FAO subarea
8	FAO area

Species	Area	Sampling strata		Discards
		MP	EP	MP

**Baltic ICES Area III (excluding Skagerrak)**

Herring	<i>Clupea harengus</i>	IIIb-c	Q2	M1	
Herring	<i>Clupea harengus</i>	III d	Q2	M1	
Herring	<i>Clupea harengus</i>	IIIa S	Q2	M1	
Cod	<i>Gadus morhua</i>	IIIa S	Q2	M2	Yearly
Cod	<i>Gadus morhua</i>	IIIb-d	Q2	M2	Yearly
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Yearly
Plaice	<i>Pleuronectes platessa</i>	IIIa	Q2	M1	Yearly
Plaice	<i>Pleuronectes platessa</i>	IIIb-d	Q2	M1	Yearly
Salmon	<i>Salmo salar</i>	IIIb-d	R2	Q1	
Sea trout	<i>Salmo trutta</i>	IIIb-d	R2	Q2	
Sole	<i>Solea solea</i>	IIIa	R2	Q1	Yearly
Sprat	<i>Sprattus sprattus</i>	IIIb-d	Q2	M1	
Sprat	<i>Sprattus sprattus</i>	IIIa S	Q2	M1	

**North Sea (Skagerrak) ICES area IIIa (north)**

Sandeel	<i>Ammodytidae</i>	IIIa N	Q2	M1	
Herring	<i>Clupea harengus</i>	IIIa N	Q2	M1	Yearly
Cod	<i>Gadus morhua</i>	IIIa N	Q2	M2	Yearly
Haddock	<i>Melanogrammus aeglefinus</i>	IIIa N	Q2	M1	Yearly
Hake	<i>Merluccius merluccius</i>	IIIa N	Q2	M1	Yearly
Blue whiting	<i>Micromesistius poutassou</i>	IIIa N	Q2	M1	
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Yearly
Pandalid shrimps	<i>Pandalus spp.</i>	IIIa N	R2	Q1	
Plaice	<i>Pleuronectes platessa</i>	IIIa N	Q2	M1	Yearly
Saithe	<i>Pollachius virens</i>	IIIa N	Q2	M1	Yearly
Mackerel	<i>Scomber scombrus</i>	IIIa N	Q2	M1	
Sole	<i>Solea solea</i>	IIIa N	R2	Q1	Yearly
Sprat	<i>Sprattus sprattus</i>	IIIa N	Q2	M1	
Norway pout	<i>Trisopterus esmarki</i>	IIIa N	Q2	M1	

Species		Area	Sampling strata		Discards
			MP	EP	MP
<b>ICES area I, II</b>					
Atlanto-Scandian herring	<i>Clupea harengus</i>	IIa, V	Q2	M2	Yearly
Cod	<i>Gadus morhua</i>	I, II	Q2	M2	Yearly
Haddock	<i>Melanogrammus aeglefinus</i>	I, II	Q2	M2	Yearly
Shrimp	<i>Pandalus borealis</i>	I, II	Y2	Q2	
Saithe	<i>Pollachius virens</i>	I, II	Q2	M2	Yearly
Redfish	<i>Sebastes</i> spp.	I, II	Y3	Q2	
<b>North Sea and Eastern Channel ICES areas IV, VIIId</b>					
Sandeels	<i>Ammodytidae</i>	IV	Q1	M1	
Herring	<i>Clupea harengus</i>	IV, VIIId	Q2	M1	Yearly
Shrimp	<i>Crangon crangon</i>	IV, VIIId	Q1	M1	
Sea bass	<i>Dicentrarchus labrax</i>	IV, VIIId	Y3	Q3	
Cod	<i>Gadus morhua</i>	IV, VIIId	Q2	M1	Yearly
Four-spot megrim	<i>Lepidorhombus boscii</i>	IV, VIIId	Y2	Q2	
Megrim	<i>Lepidorhombus whiffiagonis</i>	IV, VIIId	Y2	Q2	
Black-bellied angler	<i>Lophius budegassa</i>	IV, VIIId	Y2	Q2	
Anglerfish	<i>Lophius piscatorius</i>	IV, VIIId	Y2	Q2	
Haddock	<i>Melanogrammus aeglefinus</i>	IV, VIIId	Q2	M1	Yearly
Whiting	<i>Merlangius merlangus</i>	IV, VIIId	Q2	M1	Yearly
Blue whiting	<i>Micromesistius poutassou</i>	IV, VIIId	Q2	M2	
Lemon sole	<i>Microstomus kitt</i>	IV, VIIId	Z2	R2	
Mullet	<i>Mullus barbatus</i>	IV, VIIId	Z2	Q2	
Red mullet	<i>Mullus surmuletus</i>	IV, VIIId	Z2	Q2	
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Yearly
Northern prawn	<i>Pandalus borealis</i>	IV	R2	Q1	
Scallops	<i>Pecten</i> spp.	VIIId	Z2	Q2	
Plaice	<i>Pleuronectes platessa</i>	IV	Q2	M1	Yearly
Plaice	<i>Pleuronectes platessa</i>	VIIId	Q2	M1	Yearly
Saithe	<i>Pollachius virens</i>	IV, VIIId	Q2	M1	Yearly
Turbot	<i>Psetta maxima</i>	IV, VIIId	Q2	M1	
Thornback ray	<i>Raja clavata</i>	IV, VIIId	Z2	R2	
Starry ray	<i>Raja radiata</i>	IV, VIIId	Z2	R2	
Cuckoo ray	<i>Raja naevus</i>	IV, VIIId	Z2	R2	
Spotted ray	<i>Raja montagui</i>	IV, VIIId	Z2	R2	

Species	Area	Sampling strata		Discards	
		MP	EP	MP	
Other rays and skates	<i>Rajidae</i>	IV, VII d	Z2	R2	
Mackerel	<i>Scomber scombrus</i>	IV, VII d	Q2	M1	Yearly
Brill	<i>Scophthalmus rhombus</i>	IV, VII d	Q2	M1	
Sole	<i>Solea solea</i>	IV	Q2	M1	Yearly
Sole	<i>Solea solea</i>	VII d	Q2	M1	Yearly
Sprat	<i>Sprattus sprattus</i>	IV, VII d	Q1	M1	
Horse mackerel	<i>Trachurus</i> spp.	IV, VII d	Z2	R2	
Norway pout	<i>Trisopterus esmarki</i>	IV	Q1	M1	

**NE Atlantic and Western Channel ICES II, V, VI, VII (excluding d) VIII, IX, X, XII, XIV**

Scabbardfish	<i>Aphanopus</i> spp.	IXa, X	Q2	Q3	
Alfonsinos	<i>Beryx</i> spp.	X	R2	Q2	
Crab	<i>Cancer pagurus</i>	All areas	Z2	Y2	
Herring	<i>Clupea harengus</i>	VIa, VIIa, b, c, j	Q2	M1	Yearly
Conger	<i>Conger conger</i>	X	R2	Q2	
Roundnose grenadier	<i>Coryphaenoides rupestris</i>	All areas	Y2	Q2	
Sea bass	<i>Dicentrarchus labrax</i>	All areas (excluding IX)	Y2	Q2	
Anchovy	<i>Engraulis encrasicolus</i>	IXa (only Cadiz)	Q2	M2	
Anchovy	<i>Engraulis encrasicolus</i>	VIII	Q2	M1	
Cod	<i>Gadus morhua</i>	VIa, VIb, VIIa, VIIb-k, VIII, XII, XIV	Q2	M2	
Blue-mouth rockfish	<i>Helicolenus dactylopterus</i>	IXa, X	Q2	M2	
Lobsters	<i>Homarus gammarus</i>	All areas	Z2	Y2	
Orange roughy	<i>Hoplostethus atlanticus</i>	All areas	Z2	Y2	
Four-spot megrim	<i>Lepidorhombus boscii</i>	Vb, VI, XII, XIV, VII, VIIIa-e, IX, X	Q2	M2	
Megrim	<i>Lepidorhombus whiffiagonis</i>	Vb, VI, XII, XIV, VII, VIIIa-e, IX, X	Q2	M2	
Common squid	<i>Loligo vulgaris</i>	VIIIc, IXa	Y2	Q2	
Black-bellied angler	<i>Lophius budegassa</i>	Vb, VI, XII, XIV, VII, VIIIa, b, d, e	Q2	M2	
Black-bellied angler	<i>Lophius budegassa</i>	VIIIc, IX	Q2	M2	
Anglerfish	<i>Lophius piscatorius</i>	Vb, VI, XII, XIV, VII, VIIIa, b, d, e	Q2	M2	
Anglerfish	<i>Lophius piscatorius</i>	VIIIc, IX	Q2	M2	
Haddock	<i>Melanogrammus aeglefinus</i>	Vb, VI, XII, XIV	Y2	Q2	Yearly
Haddock	<i>Melanogrammus aeglefinus</i>	VIa, VIb, VIIa, VII, VIII, XII, XIV	Q2	M2	Yearly
Whiting	<i>Merlangius merlangus</i>	Vb, VI, XII, XIV, VIIa, VIIb-k, VIII	Q2	M2	Yearly

Species	Area	Sampling strata		Discards	
		MP	EP	MP	
Whiting	<i>Merlangius merlangus</i>	IX	Y2	Q2	
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIa, b, VIIIc, IXa	Q2	M2	Yearly
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	Q2	M1	
Blue ling	<i>Molva dypterygia</i>	X	R2	Q2	
Ling	<i>Molva molva</i>	All areas	Y2	Q2	
Red mullet	<i>Mullus surmuletus</i>	All areas	Z2	Y2	
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	
Common octopus	<i>Octopus vulgaris</i>	VIIIc, IXa	Y2	Q2	
Shrimps	<i>Parapenaeus longirostris</i> , <i>Aristeus antennatus</i>	VIIIc, IXa	Y2	Q2	
Forkbeard	<i>Phycis phycis</i>	X	Q2	M2	
Plaice	<i>Pleuronectes platessa</i>	VIIa, VIIe-g	Q2	M2	Yearly
Saithe	<i>Pollachius virens</i>	Vb, VI, XII, XIV	Q2	M2	
Saithe	<i>Pollachius virens</i>	VII, VIII	Y2	Q2	
Wreckfish	<i>Polyprion americanus</i>	X	Y2	Q2	
Blond ray	<i>Raja brachyura</i>	All areas	Y2	Q2	
Thornback ray	<i>Raja clavata</i>	All areas	Y2	Q2	
Spotted ray	<i>Raja montagui</i>	All areas	Y2	Q2	
Cuckoo ray	<i>Raja naevus</i>	All areas	Y2	Q2	
Other rays and skates	<i>Rajidae</i>	All areas	Y2	Q2	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	Va, XII, XIV	Y2	Q2	
Sardine	<i>Sardina pilchardus</i>	VIII, IX	Q2	M1	
Spanish mackerel	<i>Scomber japonicus</i>	VIII, IX	Y2	R2	
Mackerel	<i>Scomber scombrus</i>	II, IIIa, IV, V, VI, VII, VIII, IX	Q2	M1	
Redfish	<i>Sebastes</i> spp.	Va, XII, XIV	Q2	M2	
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa	Y2	Q2	
Sole	<i>Solea solea</i>	VIIa, VIIe, VIIIf, g, VIIIa, b	Q2	M2	
Sole	<i>Solea solea</i>	VIIb, c, VIIIf, j, k, IXa	Y2	Q2	
Sea bream	<i>Sparidae</i>	VIIIc, IXa, X	Y2	Q2	
Blue jack mackerel	<i>Trachurus picturatus</i>	X	Q2	M2	
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, V, VI, VII, VIII, IX	Q2	M1	
Pouting	<i>Trisopterus luscus</i>	VIIIc, IXa	Y2	Q2	

Species	Area	Sampling strata		Discards	
		MP	EP	MP	
<b>Mediterranean</b>					
Blue-and-red shrimp	<i>Aristeus antennatus</i>	1.1, 1.3, 2.2, 3.1	Q,6	M,6	
Giant red shrimp	<i>Aristeomorpha foliacea</i>	1.1, 1.3, 2.2, 3.1	Q,6	M,6	
Bogue	<i>Boops boops</i>	3,1	Y,6	Q,6	
Seabass	<i>Dicentrarchus labrax</i>	1,2	Y,6	Q,6	
Curled octopus	<i>Eledone cirrosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	Y,6	Q,6	
White octopus	<i>Eledone moschata</i>	1.1, 1.3, 2.1, 2.2, 3.1	Y,6	Q,6	
Anchovy	<i>Engraulis encrasicolus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	Q,6	M,6	
Grey gurnard	<i>Eutrigla gurnardus</i>	1.3, 2.2, 3.1	Y,6	Q,6	
Billfish	<i>Istiophoridae</i>	All areas	Q5	Q4	
Common squid	<i>Loligo vulgaris</i>	1.3, 2.2, 3.1	Y,6	Q,6	
Black-bellied anglerfish	<i>Lophius budegassa</i>	1.1, 1.3, 2.2, 3.1	Q,6	M,6	
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.3, 2.2, 3.1	Q,6	M,6	
Hake	<i>Merluccius merluccius</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	Q,6	M,6	
Mullet	<i>Mullus barbatus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	Q,6	M,6	
Red mullet	<i>Mullus surmuletus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	Q,6	M,6	
Norway lobster	<i>Nephrops norvegicus</i>	1.3, 2.1, 2.2, 3.1	Q6	M,6	
Pandora	<i>Pagellus erythrinus</i>	1.1, 1.2, 2.1, 2.2, 3.1	Y,6	Q,6	
White shrimp	<i>Parapenaeus longirostris</i>	1.1, 1.3, 2.2, 3.1	Q,6	M,6	
Caramote prawn	<i>Penaeus kerathurus</i>	3,1	Y,6	Q,6	
Picarels	<i>Spicara maris</i>	3,1	Y,6	Q,6	
Thornback ray	<i>Raja clavata</i>	1.3, 2.1, 2.2, 3.1	Y,6	Q,6	
Brown ray	<i>Raja miraletus</i>	1.3, 2.1, 2.2, 3.1	Y,6	Q,6	
Atlantic bonito	<i>Sarda sarda</i>	All areas	Q5	Q4	
Sardine	<i>Sardina pilchardus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	Q,6	M,6	
Mackerel	<i>Scomber scombrus</i>	1.3, 2.2, 3.1	Y,6	Q,6	
Sharks	<i>Selachii</i>	All areas	Q5	Q4	
Cuttlefish	<i>Sepia officinalis</i>	1.3, 2.1, 3.1	Q6	M,6	
Sole	<i>Solea vulgaris</i>	1.2, 2.1, 3.1	Y,6	Q,6	
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	Y,6	Q,6	
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	1.1, 1.3, 3.1	Y,6	Q,6	
Albacore	<i>Thunnus alalunga</i>	All areas	Q5	Q4	

Species		Area	Sampling strata		Discards
			MP	EP	MP
Bluefin tuna	<i>Thunnus thynnus</i>	All areas	Q5	Q4	
Horse mackerel	<i>Trachurus trachurus</i>	1.1, 1.3, 3.1	Y,6	Q,6	
Tub gurnard	<i>Trigla lucerna</i>	1.3, 2.2, 3.1	Y,6	Q,6	
Swordfish	<i>Xiphias gladius</i>	All areas	Q5	Q4	

## NAFO areas

Cod	<i>Gadus morhua</i>	2J3KL	Y2	Q2	Yearly
Cod	<i>Gadus morhua</i>	3M	Y2	Q2	Yearly
Cod	<i>Gadus morhua</i>	3NO	Y2	Q2	Yearly
Cod	<i>Gadus morhua</i>	3Ps	Y2	Q2	
Witch flounder	<i>Glyptocephalus cynoglossus</i>	3NO	Y2	Q2	
American plaice	<i>Hippoglossoides platessoides</i>	3LNO	Y2	Q2	
American plaice	<i>Hippoglossoides platessoides</i>	3M	Y2	Q2	
Yellowtail flounder	<i>Limanda ferruginea</i>	3LNO	Y2	Q2	
Grenadier	<i>Macrouridae</i>	SA 2 + 3	Y2	Q2	
Pandalid shrimps	<i>Pandalus</i> spp.	3M	Y2	Q2	Yearly
Skates	<i>Raja</i> spp.	SA 3	Y2	Q2	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	Y2	Q2	Yearly
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	1D	Y2	Q2	
Redfish	<i>Sebastes</i> spp.	3M	Y2	Q2	Yearly
Redfish	<i>Sebastes</i> spp.	3LN	Y2	Q2	Yearly
Redfish	<i>Sebastes</i> spp.	3O	Y2	Q2	

## Highly migratory species, Atlantic, Indian, Pacific Oceans

Frigate tuna	<i>Auxis</i> spp.		Y	M4	Yearly
Atlantic back skipjack	<i>Euthynnus alleteratus</i>		Y	M4	Yearly
Billfish	<i>Istiophoridae</i>		Y	M4	Yearly
Skipjack tuna	<i>Katsuwonus pelamis</i>		M5	M4	
Atlantic bonito	<i>Sarda sarda</i>		Y	M4	Yearly
Shark	<i>Squalidae</i>		Y	M4	Yearly
Albacore	<i>Thunnus alalunga</i>		M5	M4	
Yellowfin tuna	<i>Thunnus albacares</i>		M5	M4	Yearly
Bigeye tuna	<i>Thunnus obesus</i>		M5	M4	Yearly
Bluefin tuna	<i>Thunnus thynnus</i>		M5	M4	
Swordfish	<i>Xiphias gladius</i>		M5	M4	



Species	Area	Sampling strata		Discards
		MP	EP	MP

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Black scabbardfish	<i>Aphanopus carbo</i>	Madeira	Q2	M2	
Hake	<i>Merluccius spp.</i>	Atlantic CE	Q6	M6	
Common octopus	<i>Octopus vulgaris</i>	Atlantic CE	Q4	M4	
Deepwater rose shrimp	<i>Parapeneus longirostris</i>	Atlantic CE	Q2	M2	
Southern pink shrimp	<i>Penaeus notialis</i>	Atlantic CE	Q3	M3	
Sardine	<i>Sardina pilchardus</i>	Atlantic CE	Q5	M5	
Mackerel	<i>Scomber japonicus</i>	Madeira	Q2	M2	
Horse mackerel	<i>Trachurus spp.</i>	Madeira	Q2	M2	

**WECAF**

Red snapper	<i>Lutjanus purpureus</i>	French Guiana ZEE	Y6	Q7	
Shrimp	<i>Penaeus subtilis</i>	French Guiana ZEE	M6	M7	

## Appendix XIII

## List of optional species for EP

Species	Area	Sampling strata	
<b>Baltic ICES area III (excluding Skagerrak)</b>			
Eel	<i>Anguilla anguilla</i>	IIIb-d	Z2
Whitefish	<i>Coregonus lavaretus</i>	III d	R2
Pike	<i>Esox lucius</i>	III d	R2
Dab	<i>Limanda limanda</i>	IIIb-d	R2
Haddock	<i>Melanogrammus aeglefinus</i>	IIIa S	R2
Whiting	<i>Merlangius merlangus</i>	IIIa S	R2
Hake	<i>Merluccius merluccius</i>	IIIa S	R2
Perch	<i>Perca fluviatilis</i>	III d	R2
Flounder	<i>Platichthys flesus</i>	IIIb-d	R2
Flounder	<i>Platichthys flesus</i>	IIIb-c	R2
Saithe	<i>Pollachius virens</i>	IIIa S	R2
Turbot	<i>Psetta maxima</i>	IIIb-d	R2
Pike-perch	<i>Stizostedion lucioperca</i>	III d	R2
<b>North Sea (Skagerrak) ICES area IIIa (north)</b>			
Dab	<i>Limanda limanda</i>	IIIa N	R2
Whiting	<i>Merlangius merlangus</i>	IIIa N	R2
Shark	<i>Squalidae</i>	IIIa N	Z3
<b>ICES area I, II</b>			
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	I, II	Y3
<b>North Sea and Eastern Channel ICES areas IV, VIId</b>			
Catfish	<i>Anarhichas</i> spp.	IV	Z3
Argentine	<i>Argentina</i> spp.	IV	Z3
Tusk	<i>Brosme brosme</i>	IV	Z3
Witch flounder	<i>Glyptocephalus cynoglossus</i>	IV	Z3
Blue-mouth rockfish	<i>Helicolenus dactylopterus</i>	IV	Z3
Dab	<i>Limanda limanda</i>	IV, VIId	Z2
Roughhead grenadier	<i>Macrourus berglax</i>	IV	Z3
Hake	<i>Merluccius merluccius</i>	IV, VIId	Z2
Blue ling	<i>Molva dypterygia</i>	IV	Z3
Ling	<i>Molva molva</i>	IV	Z3

	Species	Area	Sampling strata
Forkbeard	<i>Phycis phycis</i>	IV	Z3
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	IV	Z3
Salmon	<i>Salmo salar</i>	VI	Z0
Redfish	<i>Sebastes</i> spp.	IV	Z3
Deep water shark	<i>Selachii</i>	IV	Z3
Small shark	<i>Selachii</i>	IV, VIIId	Z3
Spurdog	<i>Squalus acanthias</i>	IV, VIIId	Z3

**NE Atlantic and Western Channel, ICES II, V, VI, VII (excluding d) VIII, IX, X, XII, XIV**

Scabbardfish	<i>Aphanopus</i> spp.	All areas, excluding IXa, X	Z2
Argentine	<i>Argentina</i> spp.	All areas	Y2
Meagre	<i>Argyrosoma regius</i>	All areas	Z2
Alfonsinos	<i>Beryx</i> spp.	All areas, excluding X	Z2
Whelk	<i>Busycon</i> spp.	All areas	Y2
Conger	<i>Conger conger</i>	All areas, excluding X	Y2
Sea bass	<i>Dicentrarchus labrax</i>	IX	Y2
Witch	<i>Glyptocephalus cynoglossus</i>	VI, VII	Y2
Blue-mouth rockfish	<i>Helicolenus dactylopterus</i>	All areas, excluding IXa, X	Z2
Common squid	<i>Loligo vulgaris</i>	All areas, excluding VIIIc, IXa	Y2
Capelin	<i>Mallotus villosus</i>	XIV	Y2
Wedge sole	<i>Microchirus variegatus</i>	All areas	Y2
Lemon sole	<i>Microstomus kitt</i>	All areas	Z2
Blue ling	<i>Molva dypterygia</i>	All areas, excluding X	Y2
Common octopus	<i>Octopus vulgaris</i>	All areas, excluding VIIIc, IXa	Z2
Pandalus shrimp	<i>Pandalus</i> spp.	All areas, excluding VIIIc, IXa	Z2
Forkbeard	<i>Phycis phycis</i>	All areas, excluding X	Z2
Plaice	<i>Pleuronectes platessa</i>	VIIbc, VIIhjk, VIII, IX, X	Y2
Pollack	<i>Pollachius pollachius</i>	All areas	Y2
Salmon	<i>Salmo salar</i>	All areas	Z0
Cuttlefish	<i>Sepia officinalis</i>	All areas, excluding VIIIc, IXa	Z2
Razor clam	<i>Solen</i> spp.	All areas	Z2

Species		Area	Sampling strata
Sea bream	<i>Sparidae</i>	All areas, excluding VIIIc, IXa, X	Z2
Spurdog	<i>Squalus acanthias</i>	All areas	Y2
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	VIII,IX	Y2
Pouting	<i>Trisopterus</i> spp.	All areas, excluding IXa, VIIIc	Z2
Other deepwater species	Other deepwater species	All areas	Z2

#### Mediterranean

Blue whiting	<i>Micromesistius poutassou</i>	1.1, 3.1	Y6
Clam	<i>Veneridae</i>	2.1, 2.2	Q6

#### NAFO Areas

Pandalid shrimp	<i>Pandalus</i> spp.	3LN	Y2
Redfish	<i>Sebastes</i> spp.	SA 1	Y2

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Anchovy	<i>Engraulis encrasicolus</i>		Y7
Silver scabbardfish	<i>Lepidopus caudatus</i>	Mauritania	Y7
Common squid	<i>Loligo vulgaris</i>	Atlantic CE	Y7
Bonito	<i>Sarda sarda</i>	Mauritania	Q7
Round sardinella	<i>Sardinella aurita</i>	Mauritania, Atlantic CE	Y7
Short-body sardinella	<i>Sardinella maderensis</i>	Mauritania, Atlantic CE	Y7
Chub mackerel	<i>Scomber japonicus</i>	Mauritania	Y7
Cuttlefish	<i>Sepia hierredda</i>	Atlantic CE	Y7
Finfish	<i>Sparidae, Serranidae, Haemulidae</i>	Atlantic CE	Y7
Horse mackerel	<i>Trachurus trachurus</i>	Mauritania	Y7
Cunene horse mackerel	<i>Trachurus trecae</i>	Mauritania	Y7
Scabbardfish	<i>Trichiuridae</i>		Y7

#### CCAMLR FAO 58

Antartic icefish	<i>Champsoccephalus gunnari</i>	Kerguelen	Y6
Antartic toothfish	<i>Dissostichus eleginoides</i>	Kerguelen	Y6
Grenadiers	<i>Macrouridae</i>	Kerguelen, Crozet	Y6
Grey rockcod	<i>Notothenia squamifrons</i>	Kerguelen	Y6
Skate	<i>Raja</i> spp.	Kerguelen, Crozet	Y6

	Species	Area	Sampling strata
<b>South-west Atlantic FAO 41</b>			
Antartic toothfish	<i>Dissostichus eleginoides</i>	Argentina/UK	Y7
Cusk-eel	<i>Genypterus blacodes</i>	Argentina/UK	Y7
Short-finned squid	<i>Illex argentinus</i>	Argentina/UK	Q7
Patagonian squid	<i>Loligo gahi</i>	Argentina/UK	Q7
Grenadier	<i>Macrourus</i> spp.	Argentina/UK	Y7
Patagonian grenadier	<i>Macruronus magellanicus</i>	Argentina/UK	Y7
Southern hake	<i>Merluccius australis</i>	Argentina/UK	Y7
Argentinean hake	<i>Merluccius hubbsi</i>	Argentina/UK	Q7
Southern blue whiting	<i>Micromesistius australis</i>	Argentina/UK	Y7
Rockcod	<i>Notothenia</i> spp.	Argentina/UK	Y7
Patagonian rockcod	<i>Salilota australis</i>	Argentina/UK	Y7
<b>Angola FAO 47</b>			
Red striped shrimp	<i>Aristeus varidens</i>	Angola	Q7
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Angola	Q7
Penaeus shrimps	<i>Penaeus</i> spp.	Angola	Q7

## Appendix XIV (section G)

## List of surveys (MP, EP)

Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				Days	Hauls	
<b>Baltic</b>						
BITS first/fourth quarter	IIIaS, IIIb-c	First and fourth quarter	Cod and other demersal species	129-157	510	1
IBTS first/third quarter	IIIa	First and third quarter	Haddock, cod, saithe, herring, sprat, whiting, mackerel, Norway pout.	22-26	95	1
Herring acoustic survey	IIIa, IIIb-d	Third and fourth quarter	Herring, sprat	60-74	180	1
Sprat acoustic survey	IIIc-d	Second quarter	Sprat	32-39	85	1
Herring larvae survey	IIIc	Second quarter	Herring larvae	54-66	400	2
German flatfish survey	IIIc	Third quarter	Flounder	24-30	20	2
<b>North Sea and Eastern Channel and area II</b>						
IBTS first quarter	IV, IIIa	First quarter	Haddock, cod, saithe, herring, sprat, whiting, mackerel, Norway pout.	117-143	360	1
Atlan/Scand. herring survey	Ila	May	Herring, blue whiting	27-33	90 + track	1
IBTS third quarter	IV, IIIa	Third quarter	Haddock, cod, saithe, herring, sprat, whiting, mackerel, Norway pout.	117-143	360	1
NS herring acoustic survey	IV, IIIa	July	Herring, sprat	68-83	150 + track	1
BTS	IVb, IVc, VIId	Third quarter	Plaice, sole	50-62	280	1
Sole net survey	IVb, IVc	Third quarter	Sole, plaice	14-17	60	1
Demersal young fish survey	Coasts of NS	Third, fourth quarter	Plaice, sole, brown shrimp	117-143	1 000	1
Herring larvae survey	IV, VIId	First, fourth quarter	Herring, sprat larvae	37-45	390	2
Greenland halibut survey	Ilb slopes	October since 1997	Greenland halibut	27-33	120 from 300-750 m water depth	2
Nephrops TV survey	IVa, IVb	Second quarter	Nephrops	17-21	90	2

Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				Days	Hauls	
Channel ground fish survey	VIIId	Fourth quarter	Whiting, cod, pout, plaice, red gurnard, black bream, red mullet	27-33	100	2
German cod survey	German Bight	First, fourth quarter	Cod, whiting, plaice and dab	14-18	70	2

**NE Atlantic area and Western Channel**

Western IBTS fourth quarter	Vla, VII, VIII, IXa	October-November	Groundfish survey (gadoids + pelagics) abundance indices	149-182	580	1
ISBCBTS	VIIa, f, g	September	Sole, plaice	22-26	120	1
Mackerel/horse mackerel egg survey	Vla, VII, VIII, IXa	January-July (triennial)	Mackerel, horse mackerel egg production	252-308	1 750 plankton/ 50 bottom trawls	1
Spawning/pre-spawning herring acoustic survey	Vla, VIIa, g	July, September, November, March, January	Herring, sprat	126-154	Acoustic track	1
Sardine, anchovy, horse mackerel acoustic survey	VIII + IX	March/April/May	Sardine, anchovy, mackerel, horse mackerel abundance indices	77-95	140	1
Bioman	VIII	May	Anchovy SSB (DEP)	18-22	600/20 pelagic hauls	1
Ressgasc	VIIIa, b	May + October	Abundance indices, discards for hake, sole	22-26	70	1
Nephrops TV survey	Vla	February + August/September	Nephrops (from burrow counts)	28-34	200	2
WCBTS	VIIe	October	Sole, plaice, anglerfish, lemon sole	7-9	55	2
Egg production survey	VIIa	January-May (five-yearly)	Egg production (demersal)	58-70	800	2
DARD groundfish	VIIa	March	Groundfish survey (gadoids + pelagics)	9-11	45	2
DARD herring larvae	VIIa	November	Larva indices: herring	5-6	60	2
DARD MIK-net	VIIa	May/June	Pelagic juvenile indices: gadoids	5-6	45	2
DARD nephrops	VIIa	April + August	Distribution and biology: Nephrops	14-18	80	2

Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				Days	Hauls	
Juvenile plaice survey	VIIa	May	Young plaice	6-8	25	2
Nephrops	VIIa	June	Nephrops ecology	6-8	25	2
Cod tagging	VIIa, b, VIa-b	March	Cod	9-11	30	2
Egg and larval survey	VI	April	Demersal (gadoids)	25-31	70	2
ARSA	IXa	March	Abundance indices for demersal stocks	15-19	50	2
Sardine-acoustic survey (SAR)	IXa	November	Abundance indices, recruitment	23-29	40	2
Nephrops	IXa	June	Nephrops abundance indices/Nephrops recruitment	15-19	60	2
Groundfish survey summer	IXa	July/August	Abundance for hake, horse mackerel, mackerel	23-28	65	2
Deep sea fish survey	IXa	August/September	Abundance indices of deep sea stocks	41-50	130	2
ARQDAÇO	X	April/May	Abundance of bluemouth rockfish, forkbeards, alfonsinos, conger, seabreams	41-50	35	2
DEEP	X	Fourth quarter	Distribution and abundance	27-33	25	2
Pelagicos	X	Third quarter	Distribution and abundance of tuna and shark	27-33	25	2
Sardine DEPM	VIIIc, IXa	Spring (VIII) winter (IX) triennial	Sardine SSB and use of CUFES to improve estimates	108-132	1 200	1
Greenland groundfish survey	ICES XIV, NAFO SA1	September/October	Distribution, abundance, biomass, recruitment of target species cod and other species	42-52	70 down to 400 m	2
IBTS (WCGFS)	VIIe-k, VIIa	March	Groundfish survey (gadoids + pelagics)	27-33	80	2
Scottish West Coast, young fish survey	VIa, VIIa	March	Gadoids, herring, mackerel	19-23	60	2
Rockall survey	VIb	September (biennial)	Haddock	12-14	40	2
Redfish survey	Irminger Sea	June (biennial)	Redfish abundance, age	24-30	20	1



Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				Days	Hauls	
<b>Mediterranean</b>						
Meditis	37(1, 2, 3.1)	Second quarter	30 species	320-391	1 100	1
Pelmed	37(2)		Sardine, anchovy (abundance indices)	23-28	15	2
GRUND	37(1,2)		Biological data of 10 target species	81-99	1 080	2
Anchovy	37(3.1)		Anchovy abundance estimation	11-13	110	2
Ecomed	37(1)	November-December	Sardine, anchovy (Abundance indices)	27-33	55	2
Sardine	37(3.1, 2.2)		Sardine abundance estimation	27-33	110	2
<b>NAFO area</b>						
Flemish cap groundfish survey	3M	July since 1988	Cod, American plaice, redfish, Greenland halibut, roughhead grenadier, shrimp	30-36	120 up to 750 m water depth	1
3NO groundfish survey	3NO	April/May since 1995	Yellowtail flounder, American plaice, cod, redfish, Greenland halibut, roughhead grenadier	27-33	120 to 1 250 m	2
<b>Indian and Atlantic Oceans</b>						
Tuna tagging	Indian and Atlantic Oceans		Yellowfin skipjack, bigeye, bluefin, albacore, swordfish			1

*Appendix XV (section H)***Age-length sampling scheme (MP, EP)**

- (a) Market sampling effort defined as the numbers of samples taken per tonne of landings on an annual basis.

A	1/20
B	1/50
C	1/100
D	1/200
E	1/500
F	1/1000
G	1/2000

- (b) Length of sampling level defined as the number of fish measured per sample.

0	400
1	200
2	100
3	50
4	25 or less as available

- (c) As regards ageing, in cases where the sampling scheme as given in this Appendix is excessive, the following rule applies.

For stocks for which age reading is possible, 40 individuals must be aged per year within each length interval. However, this number can be reduced if Member States establish that such a reduction will not affect the quality of the age composition estimate.

Species	Area	Landings sampling			
		Length		Age	
		MP	EP	MP	EP

**Baltic ICES area III (excluding Skagerrak)**

Eel	<i>Anguilla anguilla</i>	IIIb-d		C3		C3
Herring	<i>Clupea harengus</i>	IIIa S	F2	E2	F2	E2
Herring	<i>Clupea harengus</i>	IIIb-c	F2	E2	F3	E3
Herring	<i>Clupea harengus</i>	III d	F2	E2	F2	E2
Whitefish	<i>Coregonus lavaretus</i>	III d		C3		C3
Pike	<i>Esox lucius</i>	III d		C3		C3
Cod	<i>Gadus morhua</i>	IIIa S	C3	B2	C3	B2
Cod	<i>Gadus morhua</i>	IIIb-d	D3	C2	D4	C3
Dab	<i>Limanda limanda</i>	IIIb-d		D3		D3
Haddock	<i>Melanogrammus aeglefinus</i>	IIIa S		C3		C3
Whiting	<i>Merlangius merlangus</i>	IIIa S		C3		C3
Hake	<i>Merluccius merluccius</i>	IIIa S		C3		C3
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	C1	B1		
Perch	<i>Perca fluviatilis</i>	III d		C3		C3
Flounder	<i>Platichthys flesus</i>	IIIb-c		D3		D3
Flounder	<i>Platichthys flesus</i>	IIIb-d		D3		D3
Plaice	<i>Pleuronectes platessa</i>	IIIa	C3	B2	C3	B2
Plaice	<i>Pleuronectes platessa</i>	IIIb-d	C3	B2	C3	B2
Saithe	<i>Pollachius virens</i>	IIIa S		C3		C3
Turbot	<i>Psetta maxima</i>	IIIb-d		C3		C3
Salmon	<i>Salmo salar</i>	IIIb-d	C3	B2	C3	B2
Sea trout	<i>Salmo trutta</i>	IIIb-d	C3	B2	C3	B2
Sole	<i>Solea solea</i>	IIIa S	B2	B3	B2	B3
Sprat	<i>Sprattus sprattus</i>	IIIa S	F2	E2	F3	E3
Sprat	<i>Sprattus sprattus</i>	IIIb-d	G2	F2	G3	F3
Pike-perch	<i>Stizostedion lucioperca</i>	III d		C3		C3

**North Sea (Skagerrak) ICES area IIIa (north)**

Sandeel	<i>Ammodytidae</i>	IIIa N	F3	E2	F3	E2
Herring	<i>Clupea harengus</i>	IIIa N	F2	E2	F2	E2
Cod	<i>Gadus morhua</i>	IIIa N	C3	B2	C4	B2
Dab	<i>Limanda limanda</i>	IIIa N		C3		C3
Haddock	<i>Melanogrammus aeglefinus</i>	IIIa N	C3	B2	C3	B2

Species	Area	Landings sampling					
		Length		Age			
		MP	EP	MP	EP		
Whiting	<i>Merlangius merlangus</i>	IIIa N		C3		C3	
Hake	<i>Merluccius merluccius</i>	IIIa N	C3	B2	C3	B2	
Blue whiting	<i>Micromesistius poutassou</i>	IIIa N	F3	E2	F3	E2	
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	C1	B1			
Pandalid shrimps	<i>Pandalus</i> spp.	IIIa N	C0	B0			
Plaice	<i>Pleuronectes platessa</i>	IIIa N	C3	B2	C3	B2	
Saithe	<i>Pollachius virens</i>	IIIa N	C3	B2	C3	B2	
Mackerel	<i>Scomber scombrus</i>	IIIa N	E2	E3	E2	E3	
Shark	<i>Squalidae</i>	IIIa N		C4			
Sole	<i>Solea solea</i>	IIIa N	B3	B2	B3	B2	
Sprat	<i>Sprattus sprattus</i>	IIIa N	F2	E2	F2	E2	
Norway pout	<i>Trisopterus esmarki</i>	IIIa N	F3	E2	F3	E2	

#### ICES area I, II

Atlanto-Scandian herring	<i>Clupea harengus</i>	Ia, V	F3	E3	F4	E4	
Cod	<i>Gadus morhua</i>	I, II	D3	C2	E4	D3	
Haddock	<i>Melanogrammus aeglefinus</i>	I, II	D3	C2	E4	D3	
Northern prawn	<i>Pandalus borealis</i>	I, II	D2	C2			
Saithe	<i>Pollachius virens</i>	I, II	D2	C2	E3	D3	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	I, II		F3			
Redfishes	<i>Sebastes</i> spp.	I, II	E2	C2			

#### North Sea and Eastern Channel ICES areas IV, VIIId

Sandeel	<i>Ammodytidae</i>	IV	G3	G2	G3	G2	
Catfish	<i>Anarhichas</i> spp.	IV		C4			
Argentine	<i>Argentina</i> spp.	IV		C4			
Tusk	<i>Brosme brosme</i>	IV		C4			
Herring	<i>Clupea harengus</i>	IV, VIIId	F3	E3	F4	E4	
Sea bass	<i>Dicentrarchus labrax</i>	IV, VIIId	D3	C3		D4	
Cod	<i>Gadus morhua</i>	IV, VIIId	D3	C3	D4	C3	
Witch flounder	<i>Glyptocephalus cynoglossus</i>	IV		C4			
Blue-mouth rockfish	<i>Helicolenus dactylopterus</i>	IV		C4			
Four-spot megrim	<i>Lepidorhombus boscii</i>	IV, VIIId	E3	D3	E4	D4	
Megrim	<i>Lepidorhombus whiffiagonis</i>	IV, VIIId	E3	D3	E4	D4	
Dab	<i>Limanda limanda</i>	IV, VIIId		C4			

Species	Area	Landings sampling				
		Length		Age		
		MP	EP	MP	EP	
Black-bellied angler	<i>Lophius budegassa</i>	IV, VIId	D4	C4	D4	C4
Anglerfish	<i>Lophius piscatorius</i>	IV, VIId	D4	C4	D4	C4
Roughhead grenadier	<i>Macrourus berglax</i>	IV		C4		
Haddock	<i>Melanogrammus aeglefinus</i>	IV, VIId	D3	C3	D4	C3
Whiting	<i>Merlangius merlangus</i>	IV, VIId	D3	E4	D4	C3
Hake	<i>Merluccius merluccius</i>	IV, VIId		C4		
Blue whiting	<i>Micromesistius poutassou</i>	IV, VIId	F3	F2	F3	F2
Lemon sole	<i>Microstomus kitt</i>	IV, VIId	D4	C4	D4	C4
Blue ling	<i>Molva dypterygia</i>	IV		C4		
Ling	<i>Molva molva</i>	IV		C4		
Mullet	<i>Mullus barbatus</i>	IV, VIId	D3	C3		E3
Red mullet	<i>Mullus surmuletus</i>	IV, VIId	D3	C3		E3
Norway lobster (functional unit)	<i>Nephrops norvegicus</i>	IV	B0	A0		
Northern prawn	<i>Pandalus borealis</i>	IV	E2	D1		
Scallop	<i>Pecten</i> spp.	VIId	D3	C3		
Forkbeard	<i>Phycis phycis</i>	IV		C4		
Plaice	<i>Pleuronectes platessa</i>	IV	E3	D3	E4	D3
Plaice	<i>Pleuronectes platessa</i>	VIId	C1	C0	C3	C2
Saithe	<i>Pollachius virens</i>	IV, VIId	D3	C3	D4	C3
Turbot	<i>Psetta maxima</i>	IV, VIId	D4	C4	D4	C4
Thornback ray	<i>Raja clavata</i>	IV, VIId	E4	E3		
Starry ray	<i>Raja radiata</i>	IV, VIId	E4	E3		
Cuckoo ray	<i>Raja naevus</i>	IV, VIId	E4	E3		
Spotted ray	<i>Raja montagui</i>	IV, VIId	E4	E3		
Other rays and skates	<i>Rajidae</i>	IV, VIId	E4	E3		
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	IV		C4		
Salmon	<i>Salmo salar</i>	VI		C4		
Mackerel	<i>Scomber scombrus</i>	IV, VIId	F3	E3	F4	E4
Brill	<i>Scophthalmus rhombus</i>	IV, VIId	D4	C4	D4	C4
Redfish	<i>Sebastes</i> spp.	IV		C4		
Deep water shark	<i>Selachii</i>	IV		C4		
Small shark	<i>Selachii</i>	IV, VIId		C4		
Sole	<i>Solea solea</i>	IV	D3	C3	D4	C3

Species	Area	Landings sampling				
		Length		Age		
		MP	EP	MP	EP	
Sole	<i>Solea solea</i>	VII d	C1	C0	C3	C2
Sprat	<i>Sprattus sprattus</i>	IV, VII d	G3	G2	G3	G2
Spurdog	<i>Squalus acanthias</i>	IV, VII d		C4		
Horse mackerel	<i>Trachurus</i> spp.	IV, VII d	F2	E2	F4	E4
Norway pout	<i>Trisopterus esmarki</i>	IV	G3	G2	G3	G2

**NE Atlantic and Western Channel ICES areas II, V, VI, VII (excluding d) VIII, IX, X, XII, XIV**

Scabbardfish	<i>Aphanopus</i> spp.	All areas (excluding IXa, X)		F3		
Scabbardfish	<i>Aphanopus</i> spp.	IXa, X	B2	B1	B4	B3
Argentine	<i>Argentina</i> spp.	All areas		F4		
Meagre	<i>Argyrosoma regius</i>	All areas		F3		
Alfonsinos	<i>Beryx</i> spp.	X	A3	A2	A4	A3
Alfonsinos	<i>Beryx</i> spp.	All areas (excluding X)		F3		
Whelk	<i>Busycon</i> spp.	All areas		F3		
Edible crab	<i>Cancer pagurus</i>	All areas	D3	C3		
Herring	<i>Clupea harengus</i>	VIa, VIIa,b,c,j	F3	F4	F4	D3
Conger	<i>Conger conger</i>	All areas (excluding X)		F3		F4
Conger	<i>Conger conger</i>	X	B4	B3	B4	B3
Roundnose grenadier	<i>Coryphaenoides rupestris</i>	All areas	F3	D2	C2	
Sea bass	<i>Dicentrarchus labrax</i>	All areas (excluding IXa)	D3	C3	E4	D4
Sea bass	<i>Dicentrarchus labrax</i>	IXa		F3		F4
Anchovy	<i>Engraulis encrasicolus</i>	IXa, only Cadiz	B3	E2	F3	F2
Anchovy	<i>Engraulis encrasicolus</i>	VIII	D3	C2	E4	D2
Cod	<i>Gadus morhua</i>	VIa, VIb, VIIa, VIIb-k, VIII, XII, XIV	D3	B2	E4	D2
Witch	<i>Glyptocephalus cynoglossus</i>	VI, VII		F3	F4	
Bluemouth rockfish	<i>Helicolenus dactylopterus</i>	IXa, X	B3	B2	B4	A4
Bluemouth rockfish	<i>Helicolenus dactylopterus</i>	All areas (excluding IXa, X)		F3		F2
Lobster	<i>Homarus gammarus</i>	All areas	F3	F2		
Orange roughy	<i>Hoplostethus atlanticus</i>	All areas	F3	E3		
Four-spot megrim	<i>Lepidorhombus boscii</i>	Vb, VI, IX, XII, XIV, VII, VIIIa, b, c, d, e	C3	B2	E3	D2
Megrim	<i>Lepidorhombus whiffiagonis</i>	Vb, VI, XII, IX, XIV, VII, VIIIa, b, c, d, e	C3	B2	E3	D2
Common squid	<i>Loligo vulgaris</i>	All areas (excluding VIIIc, IXa)		F3		
Common squid	<i>Loligo vulgaris</i>	VIIIc, IXa	B1	B2		

Species	Area	Landings sampling				
		Length		Age		
		MP	EP	MP	EP	
Black-bellied angler	<i>Lophius budegassa</i>	Vb, VI, XII, XIV, VII, VIIIa, b, d, e	C3	B2	D4	C3
Black-bellied angler	<i>Lophius budegassa</i>	VIIIc, IX, X	B3	C2	E3	D2
Anglerfish	<i>Lophius piscatorius</i>	Vb, VI, XII, XIV, VII, VIIIa, b, d, e	C3	B2	D4	C3
Anglerfish	<i>Lophius piscatorius</i>	VIIIc, IX, X	B3	C2	E3	D2
Capelin	<i>Mallotus villosus</i>	XIV				
Haddock	<i>Melanogrammus aeglefinus</i>	Vb, VI, XII, XIV	F4	E4	F4	E4
Haddock	<i>Melanogrammus aeglefinus</i>	VIa, VIb, VIIa, VII, VIII, XII, XIV	D3	E4	E3	D2
Whiting	<i>Merlangius merlangus</i>	IX	F3	E3	F4	E4
Whiting	<i>Merlangius merlangus</i>	Vb, VI, XII, XIV, VIIa, VIIb-k, VIII	C3	B2	E3	D2
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIa, b, VIIIc, IXa	C3	B2	E3	D2
Wedge sole	<i>Microchirus variegatus</i>	All areas		F3		
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	F3	E3	F4	E4
Lemon sole	<i>Microstomus kitt</i>	All areas		F3		
Blue ling	<i>Molva dypterygia</i>	All areas (excluding X)		F3		F4
Blue ling	<i>Molva dypterygia</i>	X	A4	A3	A4	A3
Ling	<i>Molva molva</i>	All areas		F3		F4
Red mullet	<i>Mullus surmuletus</i>	All areas	F3	E3		
Norway lobster (functional unit)	<i>Nephrops norvegicus</i>	VI	B0	A0		
Norway lobster (functional unit)	<i>Nephrops norvegicus</i>	VII	B1	A1		
Norway lobster (functional unit)	<i>Nephrops norvegicus</i>	VIII, IX	A1	A0		
Common octopus	<i>Octopus vulgaris</i>	All areas (excluding VIIIc, IXa)	F3	F2		
Common octopus	<i>Octopus vulgaris</i>	VIIIc, IXa	B3	B2		
Pandalid shrimp	<i>Pandalus</i> spp.	All areas (excluding VIIIc, IX)		F3		
Shrimp	<i>Parapenaeus longirostris</i> , <i>Aristeus antennatus</i>	VIIIc, IXa	B1	A1		
Common scallop	<i>Pecten maximus</i>	VIIId	D3	C3		
Forkbeard	<i>Phycis phycis</i>	X	B3	B2	B4	B3
Forkbeard	<i>Phycis phycis</i>	All areas (excluding X)		F3		
Plaice	<i>Pleuronectes platessa</i>	VIIa, VIIe-g	B1	B0	B3	B2
Plaice	<i>Pleuronectes platessa</i>	VIIb, c, VIIh, j, k, VIII, IX, X		F3		F4
Pollack	<i>Pollachius pollachius</i>	All areas		F3		F4
Saithe	<i>Pollachius virens</i>	Vb, VI, XII, XIV	C3	B2	E3	D2

Species	Area	Landings sampling				
		Length		Age		
		MP	EP	MP	EP	
Saithe	<i>Pollachius virens</i>	VII, VIII	F3	E3	F4	E4
Wreckfish	<i>Polyprion americanus</i>	X	A4	A3		
Blond ray	<i>Raja brachyura</i>	All areas	F3	F4		
Thornback ray	<i>Raja clavata</i>	All areas	F3	F4		
Spotted ray	<i>Raja montagui</i>	All areas	F3	F4		
Cuckoo ray	<i>Raja naevus</i>	All areas	D3	E4		
Other rays and skates	<i>Rajidae</i>	All areas	F3	F4		
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	Va, XII, XIV	F3			F4
Salmon	<i>Salmo salar</i>	All areas		F3		
Sardine	<i>Sardina pilchardus</i>	VIII, IX	C2	C3	E3	D4
Spanish mackerel	<i>Scomber japonicus</i>	VIII, IX	D3	C3	F4	
Mackerel	<i>Scomber scombrus</i>	II, IIIa, IV, V, VI, VII, VIII, IX (excluding VIIIc, IXa)	F3	E3	F4	E4
Mackerel	<i>Scomber scombrus</i>	VIIIc, IXa	D4	C3	D4	C3
Redfish	<i>Sebastes</i> spp.	Va, XII, XIV	C2	B2	E3	D2
Cuttlefish	<i>Sepia officinalis</i>	All areas (excluding VIIIc, IXa)		F3		
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa	B3	B2		
Sole	<i>Solea solea</i>	VIIe	C3	B2	D4	D2
Sole	<i>Solea solea</i>	VIIa / VIIIf, g	B1	B0	B3	B2
Sole	<i>Solea solea</i>	VIIIa, b	B1	B0	C3	C2
Sole	<i>Solea solea</i>	VIIIb, c, VIIIf, j, k, IXa	F3	E3	F4	E4
Razor clam	<i>Solen</i> spp.	All areas		F3		
Sea bream	<i>Sparidae</i>	All areas (excluding VIIIc, IXa, X)		F3		
Sea bream	<i>Sparidae</i>	VIIIc, IXa, X	B3	B2	B4	B3
Spurdog	<i>Squalus acanthias</i>	All areas		F3		
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	VIII, IX		F3		F4
Blue jack mackerel	<i>Trachurus picturatus</i>	X	B3	B3	C4	B3
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, V, VI, VII, VIII, IX (excluding VIIIc, IXa)	F3	E3	F4	E4
Horse mackerel	<i>Trachurus trachurus</i>	VIIIc, IXa	D3	D2	E2	E4
Pouting	<i>Trisopterus</i> spp.	All areas (excluding VIIIc, IXa)		F3		
Pouting	<i>Trisopterus luscus</i>	VIIIc, IXa	B4	B3	B4	B3
Other deepwater species	<i>Other deepwater species</i>	All areas		F3		



Species	Area	Landings sampling				
		Length		Age		
		MP	EP	MP	EP	
<b>Mediterranean</b>						
Blue-and-red shrimp	<i>Aristeus antennatus</i>	1.1, 1.3, 2.2, 3.1	B3	A2		
Giant red shrimp	<i>Aristeomorpha foliacea</i>	1.1, 1.3, 2.2, 3.1	B3	A2		
Bogue	<i>Boops boops</i>	3,1	E3	D3	E4	E3
Sea bass	<i>Dicentrarchus labrax</i>	1,2	E3	D3		
Curled octopus	<i>Eledone cirrosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	E4	D4		
White octopus	<i>Eledone moschata</i>	1.1, 1.3, 2.1, 2.2, 3.1	E4	D4		
Anchovy	<i>Engraulis encrasicolus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	D3	C2	E4	D3
Grey gurnard	<i>Eutrigla gurnardus</i>	1.3, 2.2, 3.1	D3	C3		
Billfish	<i>Istiophoridae</i>	All areas	D2	B2		
Common squid	<i>Loligo vulgaris</i>	1.3, 2.2, 3.1	D3	C3		
Black-bellied angler	<i>Lophius budegassa</i>	1.1, 1.3, 2.2, 3.1	C2	B2	D4	C3
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.3, 2.2, 3.1	C2	B2	D4	C3
Hake	<i>Merluccius merluccius</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	C3	B2	D4	C3
Blue whiting	<i>Micromesistius poutassou</i>	1.1, 3.1		D3		
Mullet	<i>Mullus barbatus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	C3	B2	D4	C3
Red mullet	<i>Mullus surmuletus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	C3	B2	D4	C3
Norway lobster	<i>Nephrops norvegicus</i>	1.3, 2.1, 2.2, 3.1	B3	A2		
Pandora	<i>Pagellus erythrinus</i>	1.1, 1.2, 2.1, 2.2, 3.1	D3	C3	E4	E3
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	1.1, 1.3, 2.2, 3.1	C3	B2		
Caramote prawn	<i>Penaeus kerathurus</i>	1.3, 2, 3.1	E3	D3		
Picarel	<i>Spicara maris</i>	1.3, 2.2, 3.1	E3	D3		
Thornback ray	<i>Raja clavata</i>	1.3, 2.1, 2.2, 3.1	D3	C3		
Mediterranean ray	<i>Raja miraletus</i>	1.3, 2.1, 2.2, 3.1	D3	C3		
Atlantic bonito	<i>Sarda sarda</i>	All areas	E4	B2		
Sardine	<i>Sardina pilchardus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	D3	C2	E4	D3
Mackerel	<i>Scomber scombrus</i>	1.3, 2.2, 3.1	E4	D4	E4	E3
Sharks	<i>Selachii</i>	All areas	D2	C2		
Cuttlefish	<i>Sepia officinalis</i>	1.3, 2.1, 3.1	E3	D2		
Sole	<i>Solea vulgaris</i>	1.2, 2.1, 3.1	E3	D3		
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	E3	D3		
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	1.1, 1.3, 3.1	E3	D3	E4	E3
Albacore	<i>Thunnus alalunga</i>	All areas	C2	B2		

Species	Area	Landings sampling				
		Length		Age		
		MP	EP	MP	EP	
Bluefin tuna	<i>Thunnus thynnus</i>	All areas	C2	B2		
Horse mackerel	<i>Trachurus trachurus</i>	1.1, 1.3, 3.1	E3	D3	E4	E3
Tub gurnard	<i>Trigla lucerna</i>	1.3, 2.2, 3.1	D3	C3		
Clam	<i>Veneridae</i>	2.1, 2.2		F3		
Swordfish	<i>Xiphias gladius</i>	All areas	C2	B2		

## NAFO areas

Cod	<i>Gadus morhua</i>	2J3KL	A2	A1	E3	D3
Cod	<i>Gadus morhua</i>	3M	A2	A1	E3	D3
Cod	<i>Gadus morhua</i>	3NO	A2	A1	E3	D3
Cod	<i>Gadus morhua</i>	3Ps	F4	E4	F4	E4
Witch flounder	<i>Glyptocephalus cynoglossus</i>	3NO	A2	A1		
American plaice	<i>Hippoglossoides platessoides</i>	3LNO	A2	A1	E3	D3
American plaice	<i>Hippoglossoides platessoides</i>	3M	A2	A1	E3	D3
Yellowtail flounder	<i>Limanda ferruginea</i>	3LNO	A2	A1		
Grenadier	<i>Macrouridae</i>	SA 2 + 3	A2	A1	E3	D3
Pandalid shrimp	<i>Pandalus</i> spp.	3M	D2	C2		
Pandalid shrimp	<i>Pandalus</i> spp.	3LN		F3		
Skate	<i>Raja</i> spp.	SA 3	D2	C2		
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	A2	A1	E3	D3
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	1D		F3		F3
Redfish	<i>Sebastes</i> spp.	3M	A2	A1	F3	E4
Redfish	<i>Sebastes</i> spp.	3LN	A2	A1		E4
Redfish	<i>Sebastes</i> spp.	3O	B2	C2		
Redfish	<i>Sebastes</i> spp.	SA 1		F3		F3

## Highly migratory species, Atlantic, Indian, Pacific Oceans

Frigate tuna	<i>Auxis</i> spp.		E4	D2		
Atlantic back skipjack	<i>Euthynnus alleteratus</i>		E4	D2		
Skipjack tuna	<i>Katsuwonus pelamis</i>		C2	B2		
Billfish	<i>Istiophoridae</i>		D2	B2		
Atlantic bonito	<i>Sarda sarda</i>		E4	D2		
Shark	<i>Squalidae</i>		D2	C2		
Albacore	<i>Thunnus alalunga</i>		C2	B2		
Yellowfin tuna	<i>Thunnus albacares</i>		C2	B2		

Species	Area	Landings sampling			
		Length		Age	
		MP	EP	MP	EP
Bigeye tuna	<i>Thunnus obesus</i>				
Bluefin tuna	<i>Thunnus thynnus</i>				
Swordfish	<i>Xiphias gladius</i>				

## CECAF FAO 34

Black scabbardfish	<i>Aphanopus carbo</i>	Madeira	D3	B3		
Anchovy	<i>Engraulis encrasicolus</i>		E3	D2		
Silver scabbardfish	<i>Lepidopus caudatus</i>	Mauritania		D2		
Common squid	<i>Loligo vulgaris</i>	Atlantic CE	D2	C2		
Hake	<i>Merluccius spp.</i>	Atlantic CE	C2	B2		D3
Common octopus	<i>Octopus vulgaris</i>	Atlantic CE	C2	B2		
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Atlantic CE	C2	B2		
Southern pink shrimp	<i>Penaeus notialis</i>	Atlantic CE	C2	B2		
Sardine	<i>Sardina pilchardus</i>	Atlantic CE	E3	D2		D3
Bonito	<i>Sarda sarda</i>	Mauritania	F2	D2		
Round sardinella	<i>Sardinella aurita</i>	Mauritania, Atlantic CE	F3	D2		
Short-body sardinella	<i>Sardinella maderensis</i>	Mauritania, Atlantic CE	F3	D2		
Chub Mackerel	<i>Scomber japonicus</i>	Madeira	D2	C2		
Chub Mackerel	<i>Scomber japonicus</i>	Mauritania	D2	C2		
Cuttlefish	<i>Sepia hierredda</i>	Atlantic CE	D2	B2		
Finfish	<i>Sparidae, Serranidae, Haemulidae</i>	Atlantic CE		D2		
Horse mackerel	<i>Trachurus spp.</i>	Madeira	D3	B3		
Atlantic horse mackerel	<i>Trachurus trachurus</i>	Mauritania		D2		
Cunene Horse mackerel	<i>Trachurus trecae</i>	Mauritania		D2		
Scabbardfish	<i>Trichiuridae</i>			D2		

## WECAF

Red snapper	<i>Lutjanus purpureus</i>	French Guiana ZEE	C2	B2		
Shrimp	<i>Penaeus subtilis</i>	French Guiana ZEE	C2	B2		

## CCAMLR FAO 58

Antarctic icefish	<i>Chamsocephalus gunnari</i>	Kerguelen FAO 58		C2		
Antarctic toothfish	<i>Dissostichus eleginoides</i>	Kerguelen FAO 58		C2		D3
Grenadier	<i>Macrouridae</i>	Kerguelen, Crozet, FAO 58		C2		

Species	Area	Landings sampling					
		Length		Age			
		MP	EP	MP	EP		
Grey rockcod	<i>Notothenia squamifrons</i>	Kerguelen FAO 58			C2		
Skate	<i>Raja</i> spp.	Kerguelen, Crozet, FAO 58			C2		

**South-west Atlantic FAO 41**

Antarctic toothfish	<i>Dissostichus eleginoides</i>	Argentina/UK			D2		D2
Cusk-eel	<i>Genypterus blacodes</i>	Argentina/UK			D2		D2
Argentine short-finned squid	<i>Illex argentinus</i>	Argentina/UK			D2		C2
Patagonian squid	<i>Loligo gahi</i>	Argentina/UK			D2		C2
Grenadier	<i>Macrourus</i> spp.	Argentina/UK			D2		D2
Patagonian grenadier	<i>Macruronus magellanicus</i>	Argentina/UK			D2		D2
Southern hake	<i>Merluccius australis</i>	Argentina/UK			D2		D2
Argentinean hake	<i>Merluccius hubbsi</i>	Argentina/UK			D2		C2
Southern blue-whiting	<i>Micromesistius australis</i>	Argentina/UK			D2		D2
Rockcod	<i>Notothenia</i>	Argentina/UK			D2		D2
Codling	<i>Salilota australis</i>	Argentina/UK			D2		D2

**Angola FAO 47**

Red-striped shrimp	<i>Aristeus varidens</i>	Angola			B2		
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Angola			B2		
Shrimps	<i>Penaeus</i> spp.	Angola			B2		

## Appendix XVI (section I)

## Other biological samplings

Y = yearly; T = every three years; S = every six years

Species	Area	Growth		Maturity		Fecundity		Sex Ratio	
		Data		Data		Length	Age	Length	Age
		Length	Weight	Length	Age				

## Baltic ICES area III (excluding Skagerrak)

Herring	<i>Clupea harengus</i>	IIIb-c	T	T	T	T			T	T
Herring	<i>Clupea harengus</i>	III d	T	T	T	T			T	T
Herring	<i>Clupea harengus</i>	IIIa S	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	IIIa S	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	IIIb-d	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	S	S	S				T	
Plaice	<i>Pleuronectes platessa</i>	IIIa	T	T	T	T			T	T
Plaice	<i>Pleuronectes platessa</i>	IIIb-d	T	T	T	T			T	T
Salmon	<i>Salmo salar</i>	IIIb-d	T	T	T	T			T	T
Sea trout	<i>Salmo trutta</i>	IIIb-d	T	T	T	T			T	T
Sole	<i>Solea solea</i>	IIIa	T	T	T	T			T	T
Sprat	<i>Sprattus sprattus</i>	IIIb-d	T	T	T	T			T	T
Sprat	<i>Sprattus sprattus</i>	IIIa S	T	T	T	T			T	T

## North Sea (Skagerrak) ICES area IIIa (north)

Sandeel	<i>Ammodytidae</i>	IIIa N	T	T	T	T			T	T
Herring	<i>Clupea harengus</i>	IIIa N	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	IIIa N	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	IIIa N	T	T	T	T			T	T
Hake	<i>Merluccius merluccius</i>	IIIa N	T	T	T	T			T	T
Blue whiting	<i>Micromesistius poutassou</i>	IIIa N	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	S	S	S				T	
Northern prawn	<i>Pandalus spp.</i>	IIIa N	T	T	T				T	
Plaice	<i>Pleuronectes platessa</i>	IIIa N	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	IIIa N	T	T	T	T			T	T
Mackerel	<i>Scomber scombrus</i>	IIIa N	T	T	T	T			T	T
Sole	<i>Solea solea</i>	IIIa N	T	T	T	T			T	T
Sprat	<i>Sprattus sprattus</i>	IIIa N	T	T	T	T			T	T
Norway pout	<i>Trisopterus esmarki</i>	IIIa N	T	T	T	T			T	T

Species	Area	Growth		Maturity		Fecundity		Sex Ratio	
		Data		Data		Length	Age	Length	Age
		Length	Weight	Length	Age				

## ICES area I, II

Atlanto-Scandian herring	<i>Clupea harengus</i>	Ila, V	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	I, II	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	I, II	T	T	T	T			T	T
Northern prawn	<i>Pandalus borealis</i>	I, II	T	T	T				T	
Saithe	<i>Pollachius virens</i>	I, II	T	T	T	T			T	T
Redfish	<i>Sebastes</i> spp.	I, II	T	T	T	T			T	T

## North Sea and Eastern Channel ICES areas IV, VIIId

Sandeel	<i>Ammodytidae</i>	IV	T	T	T	T			T	T
Herring	<i>Clupea harengus</i>	IV, VIIId	T	T	T	T			T	T
Sea bass	<i>Dicentrarchus labrax</i>	IV, VIIId	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	IV, VIIId	T	T	T	T			T	T
Four-spot megrim	<i>Lepidorhombus boscii</i>	IV, VIIId	T	T	T	T			T	T
Megrim	<i>Lepidorhombus whiffiagonis</i>	IV, VIIId	T	T	T	T			T	T
Black-bellied angler	<i>Lophius budegassa</i>	IV, VIIId	T	T	T	T			T	T
Anglerfish	<i>Lophius piscatorius</i>	IV, VIIId	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	IV, VIIId	T	T	T	T			T	T
Whiting	<i>Merlangius merlangus</i>	IV, VIIId	T	T	T	T			T	T
Blue whiting	<i>Micromesistius poutassou</i>	IV, VIIId	T	T	T	T			T	T
Lemon sole	<i>Microstomus kitt</i>	IV, VIIId	T	T	T	T			T	T
Mullet	<i>Mullus barbatus</i>	IV, VIIId	T	T	T	T			T	T
Red mullet	<i>Mullus surmuletus</i>	IV, VIIId	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	S	S	S				T	
Northern prawn	<i>Pandalus borealis</i>	IV	T	T	T				T	
Scallops	<i>Pecten</i> spp.	VIIId	T	T	T				T	
Plaice	<i>Pleuronectes platessa</i>	IV	T	T	T	T			T	T
Plaice	<i>Pleuronectes platessa</i>	VIIId	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	IV, VIIId	T	T	T	T			T	T
Turbot	<i>Psetta maxima</i>	IV, VIIId	T	T	T	T			T	T
Thornback ray	<i>Raja clavata</i>	IV, VIIId	T	T	T				T	

Species	Area	Growth		Maturity		Fecundity		Sex Ratio	
		Data		Data		Length	Age	Length	Age
		Length	Weight	Length	Age				
Starry ray	<i>Raja radiata</i>	IV, VIId	T	T	T			T	
Cuckoo ray	<i>Raja naevus</i>	IV, VIId	T	T	T			T	
Spotted ray	<i>Raja montagui</i>	IV, VIId	T	T	T			T	
Other rays and skates	<i>Rajidae</i>	IV, VIId	T	T	T			T	
Mackerel	<i>Scomber scombrus</i>	IV, VIId	T	T	T	T	T	T	T
Brill	<i>Scophthalmus rhombus</i>	IV, VIId	T	T	T	T		T	T
Sole	<i>Solea solea</i>	IV	T	T	T	T		T	T
Sole	<i>Solea solea</i>	VIId	T	T	T	T		T	T
Sprat	<i>Sprattus sprattus</i>	IV, VIId	T	T	T	T		T	T
Horse mackerel	<i>Trachurus spp.</i>	IV, VIId	T	T	T	T	T	T	T
Norway pout	<i>Trisopterus esmarki</i>	IV	T	T	T	T		T	T

**North-east Atlantic and Western Channel ICES areas II, V, VI, VII (excluding d) VIII, IX, X, XII, XIV**

Scabbardfish	<i>Aphanopus spp.</i>	IXa, X	T	T	T	T			T	T
Alfonsinos	<i>Beryx spp.</i>	X	T	T	T	T			T	T
Edible crab	<i>Cancer pagurus</i>	All areas	T	T	T				T	
Herring	<i>Clupea harengus</i>	VIa, VIIabcj	T	T	T	T			T	T
Conger	<i>Conger conger</i>	X	T	T	T	T			T	T
Roundnose grenadier	<i>Coryphaenoides rupestris</i>	All areas	T	T	T	T			T	T
Sea bass	<i>Dicentrarchus labrax</i>	All areas excluding IX	T	T	T	T			T	T
Anchovy	<i>Engraulis encrasicolus</i>	IXa, only Cadiz	T	T	T	T	T	T	T	T
Anchovy	<i>Engraulis encrasicolus</i>	VIII	T	T	T	T	Y	Y	Y	Y
Cod	<i>Gadus morhua</i>	VIa, VIb, VIIa, VIIb-k, VIII, XII, XIV	T	T	T	T			T	T
Bluemouth rockfish	<i>Helicolenus dactylopterus</i>	IXa, X	T	T	T	T			T	T
Lobster	<i>Homarus gammarus</i>	All areas	T	T	T				T	
Orange roughy	<i>Hoplostethus atlanticus</i>	All areas	T	T	T	T			T	T
Four-spot megrim	<i>Lepidorhombus boscii</i>	Vb, VI, XII, XIV, VII, VIIIa-e, IX, X	T	T	T	T			T	T
Megrim	<i>Lepidorhombus whiffiagonis</i>	Vb, VI, XII, XIV, VII, VIIIa-e, IX, X	T	T	T	T			T	T

Species		Area	Growth		Maturity		Fecundity		Sex Ratio	
			Data		Data					
			Length	Weight	Length	Age	Length	Age	Length	Age
Common squid	<i>Loligo vulgaris</i>	VIIIc, IXa	T	T	T				T	
Anglerfish	<i>Lophius budegassa</i>	Vb, VI, XII, XIV, VII, VIIIabde	T	T	T	T			T	T
Black-bellied angler	<i>Lophius budegassa</i>	VIIIc, IX	T	T	T	T			T	T
Black-bellied angler	<i>Lophius piscatorius</i>	Vb, VI, XII, XIV, VII, VIIIabde	T	T	T	T			T	T
Anglerfish	<i>Lophius piscatorius</i>	VIIIc, IX	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	Vb, VI, XII, XIV	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	Vla, Vlb, VIIa, VII, VIII, XII, XIV	T	T	T	T			T	T
Whiting	<i>Merlangius merlangus</i>	IX	T	T					T	
Whiting	<i>Merlangius merlangus</i>	Vb, VI, XII, XIV, VIIa, VIIb-k, VIII	T	T	T	T			T	T
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab, VIIIc, IXa	T	T	T	T			T	T
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	T	T	T	T			T	T
Blue ling	<i>Molva dypterygia</i>	X	T	T	T	T			T	T
Ling	<i>Molva molva</i>	All areas	T	T	T	T			T	T
Red mullet	<i>Mullus surmuletus</i>	All areas	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	S	S	S				T	
Common octopus	<i>Octopus vulgaris</i>	VIIIc, IXa	T	T	T				T	
Shrimps	<i>Parapenaeus longirostris</i> , <i>Aristeus antennatus</i>	VIIIc, IXa	T	T	T				T	
Common scallop	<i>Pecten maximus</i>	VIIId	T	T	T				T	
Forkbeard	<i>Phycis phycis</i>	X	T	T	T	T			T	T
Plaice	<i>Pleuronectes platessa</i>	VIIa, VIIe-g	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	Vb, VI, XII, XIV	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	VII, VIII	T	T	T	T			T	T
Wreckfish	<i>Polyprion americanus</i>	X	T	T	T	T			T	T
Blond ray	<i>Raja brachyura</i>	All areas	T	T	T				T	
Thornback ray	<i>Raja clavata</i>	All areas	T	T	T				T	
Spotted ray	<i>Raja montagui</i>	All areas	T	T	T				T	



Species	Area	Growth		Maturity		Fecundity		Sex Ratio		
		Data		Data		Length	Age	Length	Age	
		Length	Weight	Length	Age					
Cuckoo ray	<i>Raja naevus</i>	All areas	T	T	T				T	
Other rays and skates	<i>Rajidae</i>	All areas	T	T	T				T	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	Va, XII, XIV	T	T	T	T			T	T
Sardine	<i>Sardina pilchardus</i>	VIII, IX	T	T	T	T	T	T	T	T
Spanish mackerel	<i>Scomber japonicus</i>	VIII, IX	T	T	T	T			T	T
Mackerel	<i>Scomber scombrus</i>	II, IIIa, IV, V, VI, VII, VIII, IX	T	T	T	T	T	T	T	T
Redfishes	<i>Sebastes</i> spp.	Va, XII, XIV	T	T	T	T			T	T
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa	T	T	T				T	
Sole	<i>Solea solea</i>	VIIa/VIIe VIIfg/ VIIIab	T	T	T	T			T	T
Sole	<i>Solea solea</i>	VIIIbc, VIIIhjk, IXa	T	T	T	T			T	T
Seabreams	<i>Sparidae</i>	VIIIc, IXa, X	T	T	T	T			T	T
Blue jack mackerel	<i>Trachurus picturatus</i>	X	T	T	T	T			T	T
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, V, VI, VII, VIII, IX	T	T	T	T	T	T	T	T
Pouting	<i>Trisopterus luscus</i>	IXa, VIIIc	T	T	T	T			T	T

#### Mediterranean

Blue-and-red shrimp	<i>Aristeus antennatus</i>	1.1, 1.3, 2.2, 3.1	T	T	T				T	
Giant red shrimp	<i>Aristeomorpha foliacea</i>	1.1, 1.3, 2.2, 3.1	T	T	T				T	
Bogue	<i>Boops boops</i>	3,1	T	T	T	T			T	T
Sea bass	<i>Dicentrarchus labrax</i>	1,2	T	T	T	T			T	T
Curled octopus	<i>Eledone cirrosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	T	T	T				T	
White octopus	<i>Eledone moschata</i>	1.1, 1.3, 2.1, 2.2, 3.1	T	T	T				T	
Anchovy	<i>Engraulis encrasicolus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Grey gurnard	<i>Eutrigla gurnardus</i>	1.3, 2.2, 3.1	T	T	T	T			T	T
Billfish	<i>Istiophoridae</i>	All areas	T	T	T	T			T	T
Common squid	<i>Loligo vulgaris</i>	1.3, 2.2, 3.1	T	T	T	T			T	T
Black-bellied angler	<i>Lophius budegassa</i>	1.1, 1.3, 2.2, 3.1	T	T	T	T			T	T

Species	Area	Growth		Maturity		Fecundity		Sex Ratio		
		Data		Data		Length	Age	Length	Age	
		Length	Weight	Length	Age					
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.3, 2.2, 3.1	T	T	T	T			T	T
Hake	<i>Merluccius merluccius</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Mullet	<i>Mullus barbatus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Red mullet	<i>Mullus surmuletus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	1.3, 2.1, 2.2, 3.1	S	S	S				T	
Pandora	<i>Pagellus erythrinus</i>	1.1, 1.2, 2.1, 2.2, 3.1	T	T	T	T			T	T
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	1.1, 1.3, 2.2, 3.1	T	T	T				T	
Caramote prawn	<i>Penaeus kerathurus</i>	3,1	T	T	T				T	
Picarel	<i>Spicara maris</i>	3,1	T	T	T	T			T	T
Thornback ray	<i>Raja clavata</i>	1.3, 2.1, 2.2, 3.1	T	T	T				T	
Mediterranean ray	<i>Raja miraletus</i>	1.3, 2.1, 2.2, 3.1	T	T	T				T	
Atlantic bonito	<i>Sarda sarda</i>	All areas	T	T	T	T			T	T
Sardine	<i>Sardina pilchardus</i>	1.1, 1.2, 1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Mackerel	<i>Scomber scombrus</i>	1.3, 2.2, 3.1	T	T	T	T			T	T
Shark	<i>Selachii</i>	All areas	T	T	T	T			T	T
Cuttlefish	<i>Sepia officinalis</i>	1.3, 2.1, 3.1	T	T	T				T	
Sole	<i>Solea vulgaris</i>	1.2, 2.1, 3.1	T	T	T	T			T	T
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	T	T	T	T			T	T
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	1.1, 1.3, 3.1	T	T	T	T			T	T
Albacore	<i>Thunnus alalunga</i>	All areas	T	T	T	T			T	T
Bluefin tuna	<i>Thunnus thynnus</i>	All areas	T	T	T	T			T	T
Horse mackerel	<i>Trachurus trachurus</i>	1.1, 1.3, 3.1	T	T	T	T			T	T
Grey gurnard	<i>Trigla lucerna</i>	1.3, 2.2, 3.1	T	T	T	T			T	T
Swordfish	<i>Xiphias gladius</i>	All areas	T	T	T	T			T	T

## NAFO areas

Cod	<i>Gadus morhua</i>	2J3KL	T	T					T	
Cod	<i>Gadus morhua</i>	3M	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	3NO	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	3Ps	T	T	T	T			T	T

Species	Area	Growth		Maturity		Fecundity		Sex Ratio		
		Data		Data		Length	Age	Length	Age	
		Length	Weight	Length	Age					
Witch flounder	<i>Glyptocephalus cynoglossus</i>	3NO	T	T					T	
American plaice	<i>Hippoglossoides platessoides</i>	3LNO	T	T	T	T			T	T
American plaice	<i>Hippoglossoides platessoides</i>	3M	T	T	T	T			T	T
Yellowtail flounder	<i>Limanda ferruginea</i>	3LNO	T	T					T	
Grenadier	<i>Macrouridae</i>	SA 2 + 3	T	T	T	T			T	T
Shrimp	<i>Pandalus</i> spp.	3M	T	T	T				T	
Skate	<i>Raja</i> spp.	SA 3	T	T					T	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	T	T	T	T			T	T
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	1D	T	T	T	T			T	T
Redfish	<i>Sebastes</i> spp.	3M	T	T					T	
Redfish	<i>Sebastes</i> spp.	3LN	T	T						
Redfish	<i>Sebastes</i> spp.	3O	T	T						

**Highly migratory species, Atlantic, Indian, Pacific Ocean**

Frigate tuna	<i>Auxis</i> spp.		T	T	T	T			T	T
Atlantic back skipjack	<i>Euthynnus alleteratus</i>		T	T	T	T			T	T
Billfishes	<i>Istiophoridae</i>		T	T	T	T			T	T
Skipjack tuna	<i>Katsuwonus pelamis</i>		T	T	T	T			T	T
Atlantic bonito	<i>Sarda sarda</i>		T	T	T	T			T	T
Shark	<i>Squalidae</i>		T	T	T				T	
Albacore	<i>Thunnus alalunga</i>		T	T	T	T			T	T
Yellowfin tuna	<i>Thunnus albacares</i>		T	T	T	T			T	T
Bigeye tuna	<i>Thunnus obesus</i>		T	T	T	T			T	T
Bluefin tuna	<i>Thunnus thynnus</i>		T	T	T	T			T	T
Swordfish	<i>Xiphias gladius</i>		T	T	T	T			T	T

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Black scabbardfish	<i>Aphanopus carbo</i>	Madeira	T	T	T	T			T	T
Hake	<i>Merluccius</i> spp.	Atlantic CE	T	T	T	T			T	T
Common octopus	<i>Octopus vulgaris</i>	Atlantic CE	T	T	T				T	

Species		Area	Growth		Maturity		Fecundity		Sex Ratio	
			Data		Data					
			Length	Weight	Length	Age	Length	Age	Length	Age
Deepwater rose shrimp	<i>Parapeneus longirostris</i>	Atlantic CE	T	T	T				T	
Southern pink shrimp	<i>Penaeus notialis</i>	Atlantic CE	T	T	T				T	
Sardine	<i>Sardina pilchardus</i>	Atlantic CE	T	T	T	T			T	T
Chub mackerel	<i>Scomber japonicus</i>	Madeira	T	T	T	T			T	T
Horse mackerel	<i>Trachurus spp.</i>	Madeira	T	T	T	T			T	T

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Red snapper	<i>Lutjanus purpureus</i>	French Guiana ZEE	T	T	T	T			T	T
Shrimp	<i>Penaeus subtilis</i>	French Guiana ZEE	T	T	T				T	

## Appendix XVII (section J)

**Economic information per fleet segment as defined in Appendix III (MP)**

General description	Extended programme First priority (annual)
Income (turnover)	Total and per species
Production costs: — crew (include social cost) — fuel — repair and maintenance — other operational costs	Total and per production cost category
Fixed costs	Average cost, calculated from investment
Financial position	Share of own/foreign capital
Investment (asset)	
Prices/species (*)	Value, tonne
Employment	Full time/part time/FTE
Fleet	<ul style="list-style-type: none"> <li>— No</li> <li>— gt</li> <li>— kW</li> <li>— age</li> <li>— gear used</li> </ul>
Effort	Relevant unit accounting for technology and time

(\*) Quarterly basis everywhere. Aggregated on a regional level 3 in Mediterranean in Appendix I.

## Appendix XVIII (section J)

**Data needs for basic economic evaluation per fleet segment (EP)**

General description	Extended programme Second priority
Landings per species	Seasonal (monthly) Stock (by ICES areas) Market category Regional differentiation (level 3, Appendix I)
Income (turnover)	Subsidies (annually) Regional differentiation (level 3, Appendix I)
Production costs: — crew — fuel — repair and maintenance — other operational costs	Further subdivision of operational costs Regional differentiation (level 3, Appendix I) Differentiation of remuneration to crew according to position
Fixed costs	Regional differentiation (level 3, Appendix I)
Financial position	Rents to external institutions Regional differentiation (level 3, Appendix I)
Investment (asset)	By type of investment: hull of vessel, various engines and refrigeration/freezing, storage and lifting equipment
Prices/species	Monthly By market category Regional differentiation (level 3, Appendix I)
Employment	Skill/education Distinction per vessel size, regional differentiation
Fleet	Size categories of fleet segments regional differentiation (level 3, Appendix I)
Effort	Regional differentiation (level 3, Appendix I)

## Appendix XIX (Section K)

**Economic information per primary and secondary industry (sectors) (MP)**

General description	Minimum programme First priority (annual)
Raw material	Total and per species (tonnes)
Income (turnover)	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