

**COMMISSION REGULATION (EC) No 1581/2004****of 27 August 2004****amending Regulation (EC) No 1639/2001 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 data needed to conduct the common fisheries policy<sup>(1)</sup>, and in particular Articles 5(1) and 8(1) thereof,

Whereas:

- (1) Whenever an on-board sampling scheme is established within the respective national programmes, access to vessels should be guaranteed for sampling purposes. Therefore, on-board observers should be accepted on any vessel in order to avoid biased estimates.
- (2) There is a need to assure a better sampling of stocks under recovery plans and deep-sea species, to obtain a better knowledge of these particular stocks.
- (3) The analysis of Member States' reports on catch per unit of effort (hereinafter referred to as CPUE) data collected from 1995 to 2000, carried out together with the Scientific, Technical and Economic Committee for Fisheries (hereinafter referred to as the STECF), provides a basis on which to lay down the eligible CPUE data series to be collected in the future.
- (4) Based on the acquired experience during the first year of data collection in 2002 and taking into consideration the STECF advice, technical modifications are needed to the detailed guidelines for data collection laid down in Commission Regulation (EC) No 1639/2001<sup>(2)</sup>, and in particular to the names of the stocks and the sampling approach for length and age sampling strategies.
- (5) Regulation (EC) No 1639/2001 should therefore be amended accordingly.

- (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*

Regulation (EC) No 1639/2001 is amended as follows:

1. Article 3 is amended as follows:

- (a) in the first paragraph, point (c) is replaced by the following:

'(c) in the event of sampling, a detailed description of the strategies followed and the statistical estimates used making it possible to appreciate the levels of precision and relationship between the cost and precision; this description shall also include estimates of levels of precision of the estimated parameter; these estimates shall be included in the final report, in a format established by the Commission, after having consulted the STECF';

- (b) the second paragraph is deleted;

- (c) the following point is added:

'(e) in the event of sampling, the procedures set within the national programmes shall ensure the collection of the required data by duly appointed observers and the acceptance on board and cooperation with such observers by masters of fishing vessels, in accordance with Article 22(1)(d) of Council Regulation (EC) No 2371/2002 (\*).

(\*) OJ L 358, 31.12.2002, p. 59.'

2. The Annex is amended in accordance with Annex I to this Regulation.
3. The Appendices are amended in accordance with Annex II to this Regulation.

*Article 2*

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

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

<sup>(2)</sup> OJ L 222, 17.8.2001, p. 53.

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

Done at Brussels, 27 August 2004.

*For the Commission*  
Franz FISCHLER  
*Member of the Commission*

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## ANNEX I

The Annex to Regulation (EC) No 1639/2001 is amended as follows:

1. In Chapter I, Section B, the following point is added:

‘5. With regard to the data collection of stocks subject to a recovery plan pursuant to a Council Regulation, sampling requirements for the extended programme shall become mandatory under the minimum programme for the year following the Regulation’s adoption and during the applicable period of the recovery plan. The same shall apply to surveys where the main objective stock is subject to a recovery plan.’

2. In Chapter III, Section F is replaced by the following:

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

The following series are required:

1. At the minimum programme level, data shall only contain data series for catches and effort for:

- fleets which have been used at any time from 1995 onwards in stock assessments, either analytical and/or production models,
- stocks where there is no stock assessment and where CPUE data series were the only way to estimate trends in the stocks abundance at any time from 1995 onwards,
- fisheries for which there are regional fisheries organisation (hereinafter referred to as RFO) obligations.

Stock definitions shall correspond with the ones defined by RFOs, and the sampling strategies shall include, as a minimum, the corresponding strata.

Member States shall provide a thorough description of the way in which the abundance index for each stock has been calculated.

2. At the extended programme level, data series for catches and effort for:

- fleets which have not yet been used in stock assessments but where stock assessments are expected to be conducted in the future e.g. in the Mediterranean area and for deep-sea resources,
- fleets where data collection started in recent years and until these data series are used in stock assessments (such data series may be transferred to the minimum programmes only if they are used in the stock assessment procedures),
- fleets for which CPUE data series are collected but the data are presently only used for biological purposes (length and age composition, maturity data).

Stock definitions should follow the ones defined by RFOs, and the sampling strategies shall include, as a minimum, the respective strata.

Member States shall provide a thorough description of the way in which the abundance index for each stock has been calculated.’

3. In Chapter III, Section H is amended as follows:

(a) paragraph 1 is amended as follows:

(i) points (a) and (b) are replaced by the following:

‘(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 as mandatory in Appendix XV.

(b) Disaggregation and precision levels:

(i) for stocks under recovery plans Member States shall apply a sampling strategy, achieving a precision level 2 for the length and, where appropriate, age composition of landings;

(ii) for other stocks Member States shall apply a sampling strategy, achieving a precision level 1 for the length and, where appropriate, age composition of landings.

However, if this approach cannot be achieved, Member States may apply an alternative methodology for which the required disaggregation levels are specified in Appendix XV.'

(ii) in point (d), first indent, subparagraph 3 is replaced by the following:

'3. for the stocks in the Mediterranean area, the landings by weight of a Mediterranean Member State for a species corresponding to less than 10 % of the total EU landings of that species, taken in the Mediterranean area, or to less than 200 tonnes, are exempted. This derogation shall not apply for blue fin tuna.'

(iii) in point (d), second indent, subparagraph 3 is replaced by the following:

'3. for the stocks in the Mediterranean area, the landings by weight of a Mediterranean Member State for a species corresponding to less than 10 % of the total EU landings of that species, taken in the Mediterranean area, or to less than 200 tonnes, are exempted. This derogation shall not apply to blue fin tuna.'

(iv) point (e) is replaced by the following:

'(e) Discards:

Discards shall be the subject of an annual estimation of the distribution of the lengths by type of fishing technique when:

- discard data is used in stock assessment working groups,
- discards represent either more than 10 % of the total catches by weight, or more than 20 % of the catches in numbers for the stocks for which yearly discard data must be collected, as specified in Appendix XII.

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 shall take place in accordance with the rules set out in in Appendix XV.

However, if Member States cannot reach this level of precision or only at excessive cost, they may obtain a derogation from the Commission provided that this request is fully documented.'

(b) paragraph 2 is replaced by the following:

'2. Extended programme:

(a) Complementary parameters:

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

(b) Disaggregation and precision levels:

Member States shall apply a sampling strategy, achieving a precision level 1 for the length and, where appropriate, age composition of landings.

However, if this approach cannot be achieved, Member States may apply an alternative methodology for which the required disaggregation levels are specified in Appendix XV.

(c) Discards:

The sampling programme for the estimation of the annual composition in lengths of the discards for optional stocks specified in Appendix XV.'

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## ANNEX II

The Appendices to Regulation (EC) No 1639/2001 are amended as follows:

1. Appendix I is replaced by the following:

*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 Western	Subarea e.g. 48.1 Antarctic peninsula	FAO Subarea	FAO Subarea
Level 3	Division e.g. IVc	Division e.g. 21.2 H	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°	Subdivision	Rectangle 1° × 1°	Rectangle 1° × 1°	Rectangle 1° × 1°

2. Appendix II is replaced by the following:

*'Appendix II*

**Functional units (FUs) and statistical rectangles (*Nephrop norvegicus*)**

FU No	Name	ICES area	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 Deep	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	31-36 D5-D6; 32-35 D7-D8
17	Aran Grounds	VIIb	34-35 D9-E0
18	Ireland NW coast	VIIb	37D9-E1; 36D9
19	Ireland SW and SE coast	VIIg, j	31-33 D9-E0; 31E1; 32E1-E2; 33E2-E3
20	NW Labadie, Baltimore and Galley	VIIg, j	28-30 E1; 28-31 E2; 30-32 E3; 31 E4
21	Jones and Cockburn	VIIg, h, j	
22	Smalls	VIIg	
23	Bay of Biscay North	VIIIa	22-24 E6-E7; 23-24E5
24	Bay of Biscay South	VIIIb	20-21 E7-E8; 19E8
25	North Galicia	VIIIc	15E0-E1; 16E1
26	West Galicia	IXa	13-14 E0-E1
27	North Portugal (N of Cape Espichel)	IXa	6-12E0; 9-12E1
28	South-West Portugal (Alentejo)	IXa	3-5 E0-E1
29	South Portugal (Algarve)	IXa	2E0-E2
30	Gulf of Cadiz	IXa	2-3 E2-E3
31	Cantabrian Sea	VIIIc	16E4-E7
32	Norwegian Deep	IVa	44-52 F2-F6; 43F5-F7
33	Off Horn Reef	IVb	39-41E4; 39-41E5'

3. Appendix III is replaced by the following:

Appendix III (Section C)

Basic segmentation of vessels for capacities (MP)

Vessel length		< 12 m	12 ≤ 24 m	24 ≤ 40 m	≥ 40 m
Mobile gears	Type of fishing technique				
	Beam trawl	(1)			
	Demersal trawl and demersal seiner				
	Pelagic trawl and seiners				
	Dredges				
	Polyvalent				
Passive gears	Others (to be specified)				
	Gears using hooks				
	Drift and fixed nets				
	Pots and traps				
	Polyvalent				
	Others (to be specified)				
Polyvalent gears	Combining mobile and passive gears				
Vessels with no licence					

(1) This segment is aggregated for all passive gears.  
Note 1: If a gear category contains less 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 over all (LOA).

4. Appendix IV is replaced by the following:

‘Appendix IV (Section C)

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 seiner					
		Polyvalent					
	Dredges						
Passive gears	Polyvalent mobile gears						
	Others (to be specified)						
	Gears using hooks	Long-lines					
		Other gears using hooks					
	Drift nets and fixed nets						
	Pots and traps						
	Polyvalent passive gears						
	Others (to be specified)						
	Combining mobile and passive gears						
	Vessels with no licence'						



5. Appendix V is replaced by the following:

*'Appendix V (Section D)*

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

Fishing technique	Fishing capacity units
Towed gears	kW and GT
Static gears	kW and GT
Polyvalent vessels	kW and GT'

6. Appendix VI is replaced by the following:

*'Appendix VI (Section D)*

**Stocks related to specific effort**

Species and area	Threshold 1 <sup>(a)</sup>	Threshold 2 <sup>(b)</sup>
Salmon (Baltic Sea)	30 %	5 %
Cod (all areas, except Mediterranean)	30 %	5 %
Haddock (all areas, except Mediterranean)	30 %	5 %
Saithe (all areas, except Mediterranean)	30 %	5 %
Whiting (all areas, except Mediterranean)	30 %	5 %
Plaice (all areas, except Mediterranean)	30 %	5 %
Sole (all areas, except Mediterranean)	10 %	5 %
Sole (Mediterranean)	30 %	5 %
<i>Nephrops</i> (all areas)	30 %	5 %
Hake (all areas)	30 %	5 %
Anchovy (all areas)	30 %	5 %
Sardine (all areas)	50 %	5 %
Mackerel (all areas, except Mediterranean)	50 %	10 %
Horse mackerel (all areas, except Mediterranean)	50 %	10 %
Swordfish (all areas)	30 %	5 %
Bluefin tuna (all areas)	30 %	5 %
Bigeye tuna (all areas)	30 %	5 %
Albacore (all areas)	30 %	5 %
Yellow-fin tuna (all areas)	30 %	5 %
Herring (all areas, except Mediterranean)	50 %	10 %
Sprat (all areas, except Mediterranean)	50 %	10 %
Sand eel (all areas, except Mediterranean)	70 %	
Norway pout (all areas, except Mediterranean)	70 %	
European eel (all areas)	30 %	

<sup>(a)</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>(b)</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.'

7. Appendix XI is replaced by the following:

*'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 in Appendix 1, level 2.

2. Bluefin tuna (all areas):

Catch figures collected in weight and number by:

— annual basis,

— geographical area as defined in Appendix 1, level 2,

— distinguishing catch of fish below and above 10 kg.

3. Cod in areas III, IV, V, VI and VII:

Catch figures collected in weight by:

— geographical area as defined in Appendix 1, level 2.

The conclusions of these surveys must be forwarded to the Commission by 31 March 2007.'

8. Appendix XII is replaced by the following:

*'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
T	Triannual (one yearly over a period of three years) by type of technique (Appendix III)

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

*Important remarks:*

1. Stock definitions should follow those defined by regional fisheries organisations, and the sampling strategies should include at least the respective strata.
2. Data concerning areas separated by commas may be aggregated, while data concerning areas separated by slashes must not be aggregated.

Species	Area/Stock	Sampling Strata		Discards
		MP	EP	MP

**ICES areas I, II**

Glass eel	<i>Anguilla anguilla</i>	I, II	Q2	M1	
Yellow eel	<i>Anguilla anguilla</i>	I, II	Q2	M1	
Silver eel	<i>Anguilla anguilla</i>	I, II	Q2	M1	
Atlanto-scandian herring	<i>Clupea harengus</i>	IIa, V	Q2	M2	Y
Cod	<i>Gadus morhua</i>	I, II	Q2	M2	Y
Haddock	<i>Melanogrammus aeglefinus</i>	I, II	Q2	M2	Y
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	Q2	M1	T
Northern shrimp	<i>Pandalus borealis</i>	I, II	Y2	Q2	T
Saithe	<i>Pollachius virens</i>	I, II	Q2	M2	Y
Redfish	<i>Sebastes</i> spp.	I, II	Y3	Q2	T
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde	Q2	M1	T

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

Sand eel	<i>Ammodytidae</i>	IIIa N	Q2	M1	T
Glass eel	<i>Anguilla anguilla</i>	IIIa N	Q2	M1	
Yellow eel	<i>Anguilla anguilla</i>	IIIa N	Q2	M1	
Silver eel	<i>Anguilla anguilla</i>	IIIa N	Q2	M1	
Herring	<i>Clupea harengus</i>	IV, VIId, IIIa/22-24, IIIa	Q2	M1	Y
Cod	<i>Gadus morhua</i>	IV, VIId, IIIa	Q2	M2	Y
Haddock	<i>Melanogrammus aeglefinus</i>	IV, IIIa	Q2	M1	Y
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	Q2	M1	Y
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	Q2	M1	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Y
Northern shrimp	<i>Pandalus borealis</i>	IIIa, IVa east	R2	Q1	T
Plaice	<i>Pleuronectes platessa</i>	IIIa	Q2	M1	Y
Saithe	<i>Pollachius virens</i>	IV, IIIa, VI	Q2	M1	Y
Mackerel	<i>Scomber scombrus</i>	IIIa, IVbc, VIId	Q2	M1	T

Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Sole	<i>Solea solea</i>	IIIa	R2	Q1	Y
Sprat	<i>Sprattus sprattus</i>	IIIa	Q2	M1	T
Norway pout	<i>Trisopterus esmarki</i>	IV, IIIa	Q2	M1	T

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

Glass eel	<i>Anguilla anguilla</i>	All areas	Q2	M1	
Yellow eel	<i>Anguilla anguilla</i>	All areas	Q2	M1	
Silver eel	<i>Anguilla anguilla</i>	All areas	Q2	M1	
Herring	<i>Clupea harengus</i>	22-24/25-29, 32/30/31/Gulf of Riga	Q2	M1	T
Cod	<i>Gadus morhua</i>	IIIa S/22-24, 3d/25-32	Q2	M2	Y
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	Q2	M1	Y
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	Q2	M1	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Y
Flounder	<i>Platichthys flesus</i>	IIIa-d	Q2	M1	T
Plaice	<i>Pleuronectes platessa</i>	IIIa	Q2	M1	Y
Salmon	<i>Salmo salar</i>	IIIb-d, 22-31/32	R2	Q1	T
Sea trout	<i>Salmo trutta</i>	IIIb-d	R2	Q2	T
Sole	<i>Solea solea</i>	IIIa	R2	Q1	Y
Sprat	<i>Sprattus sprattus</i>	IIIa S/IIIb-d	Q2	M1	T

**North Sea and eastern Channel — ICES areas IV, VIId**

Sand eel	<i>Ammodytidae</i>	IV	Q1	M1	T
Glass eel	<i>Anguilla anguilla</i>	IV, VIId	Q2	M1	
Yellow eel	<i>Anguilla anguilla</i>	IV, VIId	Q2	M1	
Silver eel	<i>Anguilla anguilla</i>	IV, VIId	Q2	M1	
Argentine	<i>Argentina spp.</i>	IV	Z2	R2	T
Herring	<i>Clupea harengus</i>	IV, VIId, IIIa	Q2	M1	Y
Shrimp	<i>Crangon crangon</i>	IV, VIId	Q1	M1	T
Seabass	<i>Dicentrarchus labrax</i>	IV, VIId	Y3	Q3	T
Cod	<i>Gadus morhua</i>	IV, VIId, IIIa	Q2	M1	Y
Four-spot megrim	<i>Lepidorhombus boscii</i>	IV, VIId	Y2	Q2	T

Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Megrim	<i>Lepidorhombus whiffiagonis</i>	IV, VIIId	Y2	Q2	T
Black-bellied angler	<i>Lophius budegassa</i>	IV, VIIId	Y2	Q2	T
Anglerfish	<i>Lophius piscatorius</i>	IV, VI	Y2	Q2	T
Haddock	<i>Melanogrammus aeglefinus</i>	IV, IIIa	Q2	M1	Y
Whiting	<i>Merlangius merlangus</i>	IV, VIIId	Q2	M1	Y
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	Q2	M2	Y
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	Q2	M1	T
Lemon sole	<i>Microstomus kitt</i>	IV, VIIId	Z2	R2	T
Red mullet	<i>Mullus barbatus</i>	IV, VIIId	Z2	Q2	T
Striped red mullet	<i>Mullus surmuletus</i>	IV, VIIId	Z2	Q2	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Y
Northern shrimp	<i>Pandalus borealis</i>	IIIa, IVa east/IVa	R2	Q1	T
Plaice	<i>Pleuronectes platessa</i>	IV/VIIId	Q2	M1	Y
Saithe	<i>Pollachius virens</i>	IV, IIIa, VI	Q2	M1	Y
Turbot	<i>Psetta maxima</i>	IV, VIIId	Q2	M1	T
Thornback ray	<i>Raja clavata</i>	IV, VIIId	Z2	R2	T
Starry ray	<i>Raja radiata</i>	IV, VIIId	Z2	R2	T
Cuckoo ray	<i>Raja naevus</i>	IV, VIIId	Z2	R2	T
Spotted ray	<i>Raja montagui</i>	IV, VIIId	Z2	R2	T
Other rays and skates	<i>Rajidae</i>	IV, VIIId	Z2	R2	T
Mackerel	<i>Scomber scombrus</i>	IIIa, IVbc, VIIId	Q2	M1	T
Brill	<i>Scopthalmus rhombus</i>	IV, VIIId	Q2	M1	T
Sole	<i>Solea solea</i>	IV/VIIId	Q2	M1	Y
Sprat	<i>Sprattus sprattus</i>	IV	Q1	M1	T
Horse mackerel	<i>Trachurus</i> spp.	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde/IIIa, IVbc, VIIId	Z2	R2	T
Norway pout	<i>Trisopterus esmarki</i>	IV	Q1	M1	Y

## NE Atlantic and western Channel — ICES V, VI, VII (excluding d), VIII, IX, X, XII, XIV

Glass eel	<i>Anguilla anguilla</i>	all areas	Q2	M1	
Yellow eel	<i>Anguilla anguilla</i>	all areas	Q2	M1	

Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Silver eel	<i>Anguilla anguilla</i>	all areas	Q2	M1	
Scabbardfish	<i>Aphanopus</i> spp.	IXa, X	Q2	Q3	T
Argentine	<i>Argentina</i> spp.	all areas	Z2	R2	T
Alfonsinos	<i>Beryx</i> spp.	X	R2	Q2	T
Crab	<i>Cancer pagurus</i>	all areas	Z2	Y2	T
Gulper shark	<i>Centrophorus granulosus</i>	all areas	Y2	M4	T
Leafscale gulper shark	<i>Centrophorus squamosus</i>	all areas	Y2	M4	T
Portuguese dogfish	<i>Centroscyllium coelelepis</i>	all areas	Y2	M4	T
Herring	<i>Clupea harengus</i>	VIa/VIa N/VIaS, VIIbc/VIIa/VIIj	Q2	M1	Y
Conger	<i>Conger conger</i>	X	R2	Q2	T
Roundnose grenadier	<i>Coryphaenoides rupestris</i>	all areas	Y2	Q2	T
Seabass	<i>Dicentrarchus labrax</i>	all areas excluding IX	Y2	Q2	T
Anchovy	<i>Engraulis encrasicolus</i>	VIII	Q2	M1	T
Anchovy	<i>Engraulis encrasicolus</i>	IXa (only Cadiz)	Q2	M2	T
Cod	<i>Gadus morhua</i>	Vb, VI, XII, XIV	Y2	Q2	Y
Cod	<i>Gadus morhua</i>	Va/Vb/VIa/VIb/VIIa/VIIb-k/VIII	Q2	M2	T
Blue mouth rockfish	<i>Helicolenus dactylopterus</i>	IXa, X	Q2	M2	T
Lobsters	<i>Homarus gammarus</i>	all areas	Z2	Y2	T
Orange roughy	<i>Hoplostethus atlanticus</i>	all areas	Z2	Y2	T
Four-spot megrim	<i>Lepidorhombus boscii</i>	VIIIc, IXa	Q2	M2	T
Megrim	<i>Lepidorhombus whiffiagonis</i>	VI/VII, VIIIabd	Q2	M2	Y
Megrim	<i>Lepidorhombus whiffiagonis</i>	VIIIc, IXa	Q2	M2	T
Common squid	<i>Loligo vulgaris</i>	VIIIc, IXa	Y2	Q2	T
Black-bellied angler	<i>Lophius budegassa</i>	IV, VI/VIIe-k, VIIIabd/VIIIc, IXa	Q2	M2	T
Anglerfish	<i>Lophius piscatorius</i>	IV, VI/VIIb-k, VIIIabd/VIIIc, IXa	Q2	M2	T
Haddock	<i>Melanogrammus aeglefinus</i>	Va/Vb, VI, XII, XIV	Y2	Q2	Y
Haddock	<i>Melanogrammus aeglefinus</i>	VIa/VIb/VIIa/VIIb-k	Q2	M2	Y
Whiting	<i>Merlangius merlangus</i>	Vb/VIa/VIb/VIIa/VIIe-k	Q2	M2	Y
Whiting	<i>Merlangius merlangus</i>	VIII/IX, X	Y2	Q2	T

Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab/VIIIc, IXa	Q2	M2	Y
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	Q2	M1	T
Blue ling	<i>Molva dypterygia</i>	X	R2	Q2	T
Ling	<i>Molva molva</i>	all areas	Y2	Q2	T
Striped red mullet	<i>Mullus surmuletus</i>	all areas	Z2	Y2	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	Q0	M0	Y
Common octopus	<i>Octopus vulgaris</i>	VIIIc, IXa	Y2	Q2	T
White shrimp	<i>Parapenaeus longirostris</i>	IXa	Y2	Q2	T
Forkbeard	<i>Phycis phycis</i>	X	Q2	M2	T
Plaice	<i>Pleuronectes platessa</i>	VIIa/VIIe/VIIIfg	Q2	M2	Y
Saithe	<i>Pollachius virens</i>	Va/Vb/IV, IIIa, VI	Q2	M2	T
Saithe	<i>Pollachius virens</i>	VII, VIII, IX, X	Y2	Q2	T
Wreckfish	<i>Polyprius americanus</i>	X	Y2	Q2	T
Blond ray	<i>Raja brachyura</i>	all areas	Y2	Q2	T
Thornback ray	<i>Raja clavata</i>	all areas	Y2	Q2	T
Spotted ray	<i>Raja montagui</i>	all areas	Y2	Q2	T
Cuckoo ray	<i>Raja naevus</i>	all areas	Y2	Q2	T
Other rays and skates	<i>Rajidae</i>	all areas	Y2	Q2	T
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	V, VI, XII, XIV	Y2	Q2	T
Sardine	<i>Sardina pilchardus</i>	VIIIab/VIIIc, IXa	Q2	M1	T
Spanish mackerel	<i>Scomber japonicus</i>	VIII, IX	Y2	R2	T
Mackerel	<i>Scomber scombrus</i>	II, IIIa, IV, V, VI, VII, VIII, IX/VIIIc, IXa	Q2	M1	T
Redfish	<i>Sebastes spp.</i>	V, VI, XII, XIV	Q2	M2	T
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa	Y2	Q2	T
Sole	<i>Solea solea</i>	VIIa/VIIe/VIIIfg/VIIIab	Q2	M2	T
Sole	<i>Solea solea</i>	VIIbc/VIIhk/IXa	Y2	Q2	T
Sea bream	<i>Sparidae</i>	VIIIc, IXa, X	Y2	Q2	T
Blue jackmackerel	<i>Trachurus picturatus</i>	X	Q2	M2	T
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde/VIIIc, IXa/X	Q2	M1	T
Pouting	<i>Trisopterus luscus</i>	VIIIc, IXa	Y2	Q2	T



Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Mediterranean					
Glass eel	<i>Anguilla anguilla</i>	all areas	Q2	M1	
Yellow eel	<i>Anguilla anguilla</i>	all areas	Q2	M1	
Silver eel	<i>Anguilla anguilla</i>	all areas	Q2	M1	
Giant red shrimp	<i>Aristeomorpha foliacea</i>	1.3, 2.2, 3.1	Q6	M6	T
Red shrimp	<i>Aristeus antennatus</i>	1.1, 1.3, 2.2, 3.1	Q6	M6	T
Bogue	<i>Boops boops</i>	1.3, 2.1, 2.2, 3.1	Y6	Q6	T
Dolphinfish	<i>Coryphaena hippurus</i>	all areas	Y6	Q6	
Dolphinfish	<i>Coryphaena equiselis</i>	all areas	Z6	R6	
Seabass	<i>Dicentrarchus labrax</i>	1, 2	Y6	Q6	T
Horned octopus	<i>Eledone cirrosa</i>	all areas	Y6	Q6	T
Musky octopus	<i>Eledone moschata</i>	all areas	Y6	Q6	T
Anchovy	<i>Engraulis encrasicolus</i>	all areas	Q6	M6	T
Grey gurnard	<i>Eutrigla gurnardus</i>	1.3, 2.2, 3.1	Y6	Q6	T
Squid	<i>Illex</i> spp., <i>Todarodes</i> spp.	1.3, 2.1, 2.2, 3.1	Q6	M6	T
Billfish	<i>Istiophoridae</i>	all areas	Q5	Q4	T
Common squid	<i>Loligo vulgaris</i>	1.3, 2.2, 3.1	Y6	Q6	T
Black-bellied anglerfish	<i>Lophius budegassa</i>	1.1, 1.3, 2.2, 3.1	Q6	M6	T
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.3, 2.2, 3.1	Q6	M6	T
Hake	<i>Merluccius merluccius</i>	all areas	Q6	M6	T
Grey mullet	<i>Mugilidae</i>	1.3, 2.1, 2.2, 3.1	Q6	M6	T
Red mullet	<i>Mullus barbatus</i>	all areas	Q6	M6	T
Striped red mullet	<i>Mullus surmuletus</i>	all areas	Q6	M6	T
Norway lobster	<i>Nephrops norvegicus</i>	1.3, 2.1, 2.2, 3.1	Q6	M6	T
Common octopus	<i>Octopus vulgaris</i>	all areas	Q6	M6	T
Pandora	<i>Pagellus erythrinus</i>	1.1, 1.2, 2.1, 2.2, 3.1	Y6	Q6	T
White shrimp	<i>Parapenaeus longirostris</i>	1.1, 1.3, 2.2, 3.1	Q6	M6	T
Caramote prawn	<i>Penaeus kerathurus</i>	3.1	Y6	Q6	T
Thornback ray	<i>Raja clavata</i>	1.3, 2.1, 2.2, 3.1	Y6	Q6	T
Brown ray	<i>Raja miraletus</i>	1.3, 2.1, 2.2, 3.1	Y6	Q6	T

Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Atlantic bonito	<i>Sarda sarda</i>	all areas	Q5	Q4	T
Sardine	<i>Sardina pilchardus</i>	all areas	Q6	M6	T
Mackerel	<i>Scomber</i> spp.	1.3, 2.2, 3.1	Y6	Q6	T
Sharks	<i>Shark-like Selachii</i>	all areas	Q5	Q4	T
Cuttlefish	<i>Sepia officinalis</i>	1.3, 2.1, 3.1	Q6	M6	T
Sole	<i>Solea vulgaris</i>	1.2, 2.1, 3.1	Y6	Q6	T
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	Y6	Q6	T
Picarels	<i>Spicara</i> spp.	1.3, 2.1, 2.2, 3.1	Y6	Q6	T
Mantis shrimp	<i>Squilla mantis</i>	1.3, 2.1, 2.2	Q6	M6	T
Albacore	<i>Thunnus alalunga</i>	all areas	Q5	Q4	T
Bluefin tuna	<i>Thunnus thynnus</i>	all areas	Q5	Q4	T
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	1.1, 1.3, 3.1	Y6	Q6	T
Horse mackerel	<i>Trachurus trachurus</i>	1.1, 1.3, 3.1	Y6	Q6	T
Tub gurnard	<i>Trigla lucerna</i>	1.3, 2.2, 3.1	Y6	Q6	T
Clam	<i>Veneridae</i>	2.1, 2.2	Q6	M6	T
Swordfish	<i>Xiphias gladius</i>	all areas	Q5	Q4	T

## NAFO areas

Cod	<i>Gadus morhua</i>	2J3KL	Y2	Q2	Y
Cod	<i>Gadus morhua</i>	3M	Y2	Q2	Y
Cod	<i>Gadus morhua</i>	3NO	Y2	Q2	Y
Cod	<i>Gadus morhua</i>	3Ps	Y2	Q2	T
Cod	<i>Gadus morhua</i>	SA 1	Y2	Q2	Y
Witch flounder	<i>Glyptocephalus cynoglossus</i>	3NO	Y2	Q2	T
American plaice	<i>Hippoglossoides platessoides</i>	3LNO	Y2	Q2	T
American plaice	<i>Hippoglossoides platessoides</i>	3M	Y2	Q2	T
Yellowtail flounder	<i>Limanda ferruginea</i>	3LNO	Y2	Q2	T
Grenadiers	<i>Macrouridae</i>	SA 2 + 3	Y2	Q2	T
Pandalus shrimp	<i>Pandalus</i> spp.	3M	Q2	M2	Y
Skates	<i>Raja</i> spp.	SA 3	Y2	Q2	T
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	Y2	Q2	Y

Species		Area/Stock	Sampling Strata		Discards
			MP	EP	MP
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	SA 1	Y2	Q2	T
Redfish	<i>Sebastes</i> spp.	3M	Y2	Q2	Y
Redfish	<i>Sebastes</i> spp.	3LN	Y2	Q2	Y
Redfish	<i>Sebastes</i> spp.	3O	Y2	Q2	Y
Redfish	<i>Sebastes</i> spp.	SA 1	Y2	Q2	Y

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

Frigate tuna	<i>Auxis</i> spp.		Y	M4	Y
Atlantic back skipjack	<i>Euthynnus alleteratus</i>		Y	M4	Y
Billfish	<i>Istiophoridae</i>		Y	M4	Y
Short fin mako	<i>Isurus oxyrinchus</i>		Y	M4	T
Skipjack tuna	<i>Katsuwonus pelamis</i>		M5	M4	T
Porbeagle	<i>Lamna nasus</i>		Y	M4	T
Blue shark	<i>Prionace glauca</i>		Y	M4	T
Atlantic bonito	<i>Sarda sarda</i>		Y	M4	Y
Sharks	<i>Squalidae</i>		Y	M4	Y
Albacore	<i>Thunnus alalunga</i>		M5	M4	T
Yellowfin tuna	<i>Thunnus albacares</i>		M5	M4	Y
Bigeye tuna	<i>Thunnus obesus</i>		M5	M4	Y
Bluefin tuna	<i>Thunnus thynnus</i>		M5	M4	T
Swordfish	<i>Xiphias gladius</i>		M5	M4	T

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

**WECAF**

Red snapper	<i>Lutjanus purpureus</i>	French Guiana EEZ	Y6	Q7	T
Penaeus shrimp	<i>Penaeus subtilis</i>	French Guiana EEZ	M6	M7	T

9. Appendix XIII is replaced by the following:

'Appendix XIII

**List of optional species for EP**

Species		Area/Stock	Sampling strata
ICES areas I, II			
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	I, II	Y3
North Sea (Skagerrak) — ICES area IIIa (north)			
Dab	<i>Limanda limanda</i>	IIIa N	R2
Whiting	<i>Merlangius merlangus</i>	IIIa N	R2
Sharks	<i>Squalidae</i>	IIIa N	Z3
ICES area III (excluding Skagerrak), including Baltic			
Whitefish	<i>Coregonus lavaretus</i>	III d	R2
Pike	<i>Esox lucius</i>	III d	R2
Dab	<i>Limanda limanda</i>	IIIa S, IIIb-d	R2
Haddock	<i>Melanogrammus aeglefinus</i>	IIIa S	R2
Whiting	<i>Merlangius merlangus</i>	IIIa S	R2
Perch	<i>Perca fluviatilis</i>	III d	R2
Plaice	<i>Pleuronectes platessa</i>	IIIb-d	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
North Sea and eastern Channel — ICES areas IV, VII d			
Catfish	<i>Anarhichas</i> spp.	IV	Z3
Tusk	<i>Brosme brosme</i>	IV, IIIa	Z3
Witch flounder	<i>Glyptocephalus cynoglossus</i>	IV	Z3
Bluemouth rockfish	<i>Helicolenus dactylopterus</i>	IV	Z3
Dab	<i>Limanda limanda</i>	IV, VII d	Z2
Roughhead grenadier	<i>Macrourus berglax</i>	IV, IIIa	Z3
Blue ling	<i>Molva dypterygia</i>	IV, IIIa	Z3
Ling	<i>Molva molva</i>	IV, IIIa	Z3
Common scallop	<i>Pecten maximus</i>	VII d	Z2
Forkbeard	<i>Phycis phycis</i>	IV	Z3
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	IV	Z3
Salmon	<i>Salmo salar</i>	IV	Z0
Redfish	<i>Sebastes</i> spp.	IV	Z3
Deepwater sharks	Shark-like <i>Selachii</i>	IV	Z3
Small sharks	Shark-like <i>Selachii</i>	IV, VII d	Z3
Spurdogs	<i>Squalus acanthias</i>	IV, VII d	Z3

Species		Area/Stock	Sampling strata
<b>NE Atlantic and western Channel — ICES V, VI, VII (excluding d), VIII, IX, X, XII, XIV</b>			
Scabbardfish	<i>Aphanopus</i> spp.	all areas, excluding IXa, X	Z2
Meagre	<i>Argyrosoma regius</i>	all areas	Z2
Alfonsinos	<i>Beryx</i> spp.	all areas, excluding X	Z2
Whelks	<i>Busycon</i> spp.	all areas	Y2
Conger	<i>Conger conger</i>	all areas, excluding X	Y2
Seabass	<i>Dicentrarchus labrax</i>	IX	Y2
Witch	<i>Glyptocephalus cynoglossus</i>	VI, VII	Y2
Bluemouth 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
Pandalid shrimp	<i>Pandalus</i> spp.	all areas	Z2
Forkbeard	<i>Phycis phycis</i>	all areas, excluding X	Z2
Plaice	<i>Pleuronectes platessa</i>	VIIbc/VIIhk/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 clams	<i>Solen</i> spp.	all areas	Z2
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>	VIIIc, IXa	Y2
Pouting	<i>Trisopterus</i> spp.	all areas, excluding VIIIc, IXa	Z2
Other deepwater species	<i>Other deepwater species</i>	all areas	Z2
<b>Mediterranean</b>			
Blue whiting	<i>Micromesistius poutassou</i>	1.1, 3.1	Y6
<b>NAFO areas</b>			
Pandalus shrimp	<i>Pandalus</i> spp.	3LN	Y2
<b>CECAF FAO 34</b>			
Anchovy	<i>Engraulis encrasicolus</i>		Y7
Silver scabbardfish	<i>Lepidopus caudatus</i>	Mauritania	Y7
Common squid	<i>Loligo vulgaris</i>	Atlantic EC	Y7
Bonito	<i>Sarda sarda</i>	Mauritania	Q7
Round sardinella	<i>Sardinella aurita</i>	Mauritania, Atlantic EC	Y7
Short-body sardinella	<i>Sardinella maderensis</i>	Mauritania, Atlantic EC	Y7

	Species	Area/Stock	Sampling strata
Chub mackerel	<i>Scomber japonicus</i>	Mauritania	Y7
Cuttlefish	<i>Sepia hierredda</i>	Atlantic EC	Y7
Finfish	<i>Sparidae, Serranidae, Haemulidae</i>	Atlantic EC	Y7
Horse mackerel	<i>Trachurus trachurus</i>	Mauritania	Y7
Cunene horse mackerel	<i>Trachurus trecae</i>	Mauritania	Y7
Scabbardfish	<i>Trichiuridae</i>		Y7

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Antarctic icefish	<i>Champscephalus gunnari</i>	Kerguelen	Y6
Antarctic toothfish	<i>Dissostichus eleginoides</i>	Kerguelen	Y6
Grenadiers	<i>Macrouridae</i>	Kerguelen, Crozet	Y6
Grey rock cod	<i>Notothenia squamifrons</i>	Kerguelen	Y6
Skates	<i>Raja</i> spp.	Kerguelen, Crozet	Y6

## South-west Atlantic FAO 41

Antarctic 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
Grenadiers	<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
Argentinian hake	<i>Merluccius hubbsi</i>	Argentina/UK	Q7
Southern blue whiting	<i>Micromesistius australis</i>	Argentina/UK	Y7
Patagonian rock cod	<i>Notothenia</i> spp., <i>Patagonotothen</i> spp.	Argentina/UK	Y7
Red cod	<i>Salilota australis</i>	Argentina/UK	Y7

## Angola FAO 47

Red striped shrimp	<i>Aristeus varidens</i>	Angola	Q7
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Angola	Q7
Penaeid shrimp	<i>Penaeus</i> spp.	Angola	Q7'

10. Appendix XIV is replaced by the following:

*'Appendix XIV (Section G)*

**List of surveys (MP, EP)**

Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				days	hauls	

**ICES area III including Baltic**

BITS first/fourth quarter	IIIaS, IIIb-d	First and fourth quarters	Cod and other demersal species	129-157	510	1
IBTS first/third quarter	IIIa	First and third quarters	Haddock, cod, saithe, herring, sprat, whiting, mackerel, Norway pout	22-26	95	1
Herring acoustic survey	IIIa and IIIb-d	Third and fourth quarters	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

**North Sea and eastern Channel and Area II**

IBTS first quarter	IV, IIIa	First quarter	Haddock, cod, saithe, herring, sprat, whiting, mackerel, Norway pout	117-143	360	1
Atlan/Scand. herring survey	IIa	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

Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				days	hauls	
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 quarters	Plaice, sole, brown shrimp	117-143	1 000	1
Herring larvae survey	IV, VIId	First, fourth quarters	Herring, sprat larvae	37-45	390	2
Greenland halibut survey	IIb slopes	October since 1997	Greenland halibut	27-33	120 from 300-750 m water depth	2
Nephrops TV survey	IVa, IVb	First, fourth quarters	Nephrops	17-21	90	2
Channel ground fish survey	VIId	Fourth quarter	Whiting, cod, pout, plaice, red gurnard, black bream, red mullet	27-33	100	2
German cod survey	German Bight	First, fourth quarters	Cod, whiting, plaice and dab	14-18	70	2
Mackerel egg survey	IV	May-July (triennial)	Mackerel egg production	14	130	1

#### NE Atlantic area and western Channel

Western IBTS fourth quarter	VIa, VII, VIII, IXa	October-November	Groundfish survey (gadoids and pelagics) abundance indices	149-182	580	1
ISCBTS	VIIa f g	September	Sole, plaice	22-26	120	1
Mackerel/horse mackerel egg survey	VIa, 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	VIa, 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



Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				days	hauls	
Redfish survey	Irminger Sea	June (every two years)	Redfish abundance, age	24-30	20	1
Sardine DEPM	VIIIc, IXa	Spring (VIII), winter (IX), Triennial	Sardine SSB and use of CUFES to improve estimates	108-132	1 200	1
WCBTS	VIIe	October	Sole, plaice, anglerfish, lemon sole	7-9	55	1
Blue whiting survey	VI, VII	March-April	Blue whiting	40	80	1
RESSGASC	VIIIa, b	May and October	Abundance indices, discards for hake, sole	22-26	70	2
Nephrops TV survey	VIa		Nephrops (from burrow counts)	28-34	200	2
Egg production survey	VIIa	January-May (five-yearly)	Egg production (demersal)	58-70	800	2
DARD groundfish	VIIa	March	Groundfish survey (gadoids and 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 and August	Distribution and biology: Nephrops	14-18	80	2
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

Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				days	hauls	
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, sea breams	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 sharks	27-33	25	2
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, VIIla	March	Groundfish survey (gadoids and pelagics)	27-33	80	2
Scottish west coast, young fish survey	Vla, VIIa	March	Gadoids, herring, mackerel	19-23	60	2
Rockall survey	VIb	September (biennial)	Haddock	12-14	40	2
Deepwater survey	Vla	September (biennial)	Deepwater species abundance	14	35	2
Porcupine groundfish survey	VIIb, c, j, k	Third quarter	Hake, monk, megrim	30	90	2

## Mediterranean

Medit	37(1, 2, 3.1)	Second quarter	30 species	320-391	1 100	1
Pelmed	37(2)	June-July	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

## NAFO area

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
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Name of the survey	Area	Period	Main objectives (Species etc.)	Survey effort		Priority
				days	hauls	
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

**Indian and Atlantic Oceans, Mediterranean Sea**

Tuna tagging (only for assessment purposes)	Indian and Atlantic Oceans, Mediterranean		Bigeye, bluefin, swordfish			1
Tuna tagging (only for assessment purposes)	Indian and Atlantic Oceans, Mediterranean		Yellow fin, skipjack, albacore			2'

11. Appendix XV is replaced by the following:

*'Appendix XV (Section H)*

**Age-length sampling scheme (MP, EP)**

LEGEND:

(a) M: Mandatory species which should be sampled within the minimum programme

O: Optional species which could be sampled within extended programme

N/A: not applicable

(b) Market sampling effort defined as the numbers of samples taken per average tonne of landings of the last three years, on an annual basis:

A	1/20
B	1/50
C	1/100
D	1/200
E	1/500
F	1/1 000
G	1/2 000

(c) Length 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

(d) 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/Stock	M/O	Length	Age	
ICES areas I, II					
Eel	<i>Anguilla anguilla</i>	I, II	M	A2	A2
Atlanto-Scandian herring	<i>Clupea harengus</i>	IIa, V	M	F3	F4
Cod	<i>Gadus morhua</i>	I, II	M	D3	E4
Haddock	<i>Melanogrammus aeglefinus</i>	I, II	M	D3	E4
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	M	F3	F3
Northern shrimp	<i>Pandalus borealis</i>	I, II	M	D2	N/A
Saithe	<i>Pollachius virens</i>	I, II	M	D2	E3
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	I, II	O	F3	F3
Redfish	<i>Sebastes</i> spp.	I, II	M	E2	E2
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde	M	F3	F4
North Sea (Skagerrak) — ICES area IIIa (north)					
Sand eel	<i>Ammodytidae</i>	IIIa N	M	F3	F3
Eel	<i>Anguilla anguilla</i>	IIIa N	M	A2	A2
Herring	<i>Clupea harengus</i>	IV, VIIId, IIIa/22-24, IIIa	M	F2	F2
Cod	<i>Gadus morhua</i>	IV, VIIId, IIIa	M	C3	C4
Dab	<i>Limanda limanda</i>	IIIa N	O	C3	C3
Haddock	<i>Melanogrammus aeglefinus</i>	IV, IIIa	M	C3	C3
Whiting	<i>Merlangius merlangus</i>	IIIa N	O	C3	C3
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	M	C3	C3
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	M	F3	F3
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	M	C1	N/A
Pandalid shrimp	<i>Pandalus borealis</i>	IIIa, IVa east	M	C0	N/A
Plaice	<i>Pleuronectes platessa</i>	IIIa	M	C3	C3
Saithe	<i>Pollachius virens</i>	IV, IIIa, VI	M	C3	C3
Mackerel	<i>Scomber scombrus</i>	IIIa, IVbc, VIIId	M	E3	E3
Sole	<i>Solea solea</i>	IIIa	P	B3	B3
Sprat	<i>Sprattus sprattus</i>	IIIa	M	F2	F2
Sharks	<i>Squalidae</i>	IIIa N	O	C4	N/A
Norway pout	<i>Trisopterus esmarki</i>	IV, IIIa	M	F3	F3
ICES area III (excluding Skagerrak) including Baltic					
Eel	<i>Anguilla anguilla</i>	IIIa (excluding a N)	M	A2	A2

Species		Area/Stock	M/O	Length	Age
Herring	<i>Clupea harengus</i>	22-24/25-29, 32/30/31/ Gulf of Riga	M	F2	F2
Whitefish	<i>Coregonus lavaretus</i>	III d	O	C3	C3
Pike	<i>Esox lucius</i>	III d	O	C3	C3
Cod	<i>Gadus morhua</i>	III a S	M	C3	C3
Cod	<i>Gadus morhua</i>	III b-d	M	D3	D4
Dab	<i>Limanda limanda</i>	III a S, III b-d	O	D3	D3
Haddock	<i>Melanogrammus aeglefinus</i>	III a S	O	C3	C3
Whiting	<i>Merlangius merlangus</i>	III a S	O	C3	C3
Hake	<i>Merluccius merluccius</i>	III a, IV, VI, VII, VIII ab	M	C3	C3
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	M	F3	F3
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	M	C1	N/A
Perch	<i>Perca fluviatilis</i>	III d	O	C3	C3
Flounder	<i>Platichthys flesus</i>	III b-d	M	C3	C3
Plaice	<i>Pleuronectes platessa</i>	III a S	M	C3	C3
Plaice	<i>Pleuronectes platessa</i>	III b-d	O	D3	D3
Saithe	<i>Pollachius virens</i>	III a S	O	C3	C3
Turbot	<i>Psetta maxima</i>	III b-d	O	C3	C3
Salmon	<i>Salmo salar</i>	III b-d, 22-31/32	M	C3	C3
Sea trout	<i>Salmo trutta</i>	III b-d	M	C3	C3
Sole	<i>Solea solea</i>	III a	M	B3	B3
Sprat	<i>Sprattus sprattus</i>	III a S	M	F2	F3
Sprat	<i>Sprattus sprattus</i>	III b-d	M	G2	G3
Pike-perch	<i>Stizostedion lucioperca</i>	III d	O	C3	C3

**North Sea and eastern Channel — ICES areas IV, VII d**

Sand eel	<i>Ammodytidae</i>	IV	M	G3	G3
Eel	<i>Anguilla anguilla</i>	IV, VII d	M	A2	A2
Catfish	<i>Anarhichas</i> spp.	IV	O	C4	C4
Argentine	<i>Argentina</i> spp.	IV	M	F1	F2
Tusk	<i>Brosme brosme</i>	IV, III a	O	C4	C4
Herring	<i>Clupea harengus</i>	IV, VII d, III a	M	F3	F4
Shrimp	<i>Crangon crangon</i>	IV, VII d	M	E2	N/A
Sea bass	<i>Dicentrarchus labrax</i>	IV, VII d	M	D3	D3
Cod	<i>Gadus morhua</i>	IV, VII d, III a	M	D3	D4

Species		Area/Stock	M/O	Length	Age
Witch flounder	<i>Glyptocephalus cynoglossus</i>	IV	O	C4	C4
Blue-mouth rockfish	<i>Helicolenus dactylopterus</i>	IV	O	C4	C4
Four-spot megrim	<i>Lepidorhombus boscii</i>	IV, VIIId	M	E3	E4
Megrim	<i>Lepidorhombus whiffiagonis</i>	IV, VIIId	M	E3	E4
Dab	<i>Limanda limanda</i>	IV, VIIId	O	C4	C4
Black-bellied angler	<i>Lophius budegassa</i>	IV, VIIId	M	D4	D4
Anglerfish	<i>Lophius piscatorius</i>	IV, VI	M	D4	D4
Roughhead grenadier	<i>Macrourus berglax</i>	IV, IIIa	O	C4	C4
Haddock	<i>Melanogrammus aeglefinus</i>	IV, IIIa	M	D3	D4
Whiting	<i>Merlangius merlangus</i>	IV, VIIId	M	E4	D4
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	M	C4	C4
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	M	F3	F3
Lemon sole	<i>Microstomus kitt</i>	IV, VIIId	M	D4	D4
Blue ling	<i>Molva dypterygia</i>	IV, IIIa	O	C4	C4
Ling	<i>Molva molva</i>	IV, IIIa	O	C4	C4
Red mullet	<i>Mullus barbatus</i>	IV, VIIId	M	D3	D3
Striped red mullet	<i>Mullus surmuletus</i>	IV, VIIId	M	D3	D3
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	M	B0	N/A
Northern shrimp	<i>Pandalus borealis</i>	IIIa, IVa east/IVa	M	E2	N/A
Common scallop	<i>Pecten maximus</i>	VIIId	M	D3	N/A
Forkbeard	<i>Phycis phycis</i>	IV	O	C4	C4
Plaice	<i>Pleuronectes platessa</i>	IV	M	E3	E4
Plaice	<i>Pleuronectes platessa</i>	VIIId	M	C1	C3
Saithe	<i>Pollachius virens</i>	IV, IIIa, VI	M	D3	D4
Turbot	<i>Psetta maxima</i>	IV, VIIId	M	D4	D4
Thornback ray	<i>Raja clavata</i>	IV, VIIId	M	E4	N/A
Spotted ray	<i>Raja montagui</i>	IV, VIIId	M	E4	N/A
Cuckoo ray	<i>Raja naevus</i>	IV, VIIId	M	E4	N/A
Starry ray	<i>Raja radiata</i>	IV, VIIId	M	E4	N/A
Other rays and skates	<i>Rajidae</i>	IV, VIIId	M	E4	N/A
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	IV	O	C4	C4
Salmon	<i>Salmo salar</i>	IV	O	C4	C4
Mackerel	<i>Scomber scombrus</i>	IIIa, IVbc, VIIId	M	F3	F4

	Species	Area/Stock	M/O	Length	Age
Brill	<i>Scophthalmus rhombus</i>	IV, VIIId	M	D4	D4
Redfish	<i>Sebastes</i> spp.	IV	O	C4	C4
Deepwater shark	Shark-like <i>Selachii</i>	IV	O	C4	N/A
Small shark	Shark-like <i>Selachii</i>	IV, VIIId	O	C4	N/A
Sole	<i>Solea solea</i>	IV	M	D3	D4
Sole	<i>Solea solea</i>	VIIId	M	C1	C3
Sprat	<i>Sprattus sprattus</i>	IV/VIIId	M	G3	G3
Spurdog	<i>Squalus acanthias</i>	IV, VIIId	O	C4	N/A
Horse mackerel	<i>Trachurus</i> spp.	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde/IIIa, IVbc, VIIId	M	F2	F4
Norway pout	<i>Trisopterus esmarki</i>	IV	M	G3	G3

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

Eel	<i>Anguilla anguilla</i>	all areas	M	A2	A2
Scabbardfish	<i>Aphanopus</i> spp.	all areas, excluding IXa, X	V	F3	F3
Scabbardfish	<i>Aphanopus</i> spp.	IXa, X	M	B2	B4
Argentine	<i>Argentina</i> spp.	all areas	M	F1	F2
Meagre	<i>Argyrosoma regius</i>	all areas	O	F3	F3
Alfonsinos	<i>Beryx</i> spp.	all areas, excluding X	O	F3	F3
Alfonsinos	<i>Beryx</i> spp.	X	M	A3	A4
Whelk	<i>Busycon</i> spp.	all areas	O	F3	F3
Edible crab	<i>Cancer pagurus</i>	all areas	M	D3	N/A
Gulper shark	<i>Centrophorus granulosus</i>	all areas	M	B4	N/A
Leafscale gulper shark	<i>Centrophorus squamosus</i>	all areas	M	B4	N/A
Portuguese dogfish	<i>Centroscymnus coelolepis</i>	all areas	M	B4	N/A
Herring	<i>Clupea harengus</i>	VIa/VIaN/VIaS, VIIbc/VIIa/VIIj	O	F3	F4
Conger	<i>Conger conger</i>	all areas, excluding X	O	F3	F4
Conger	<i>Conger conger</i>	X	M	B4	B4
Roundnose grenadier	<i>Coryphaenoides rupestris</i>	all areas	M	F3	C2
Sea bass	<i>Dicentrarchus labrax</i>	all areas, excluding IX	M	D3	E4
Sea bass	<i>Dicentrarchus labrax</i>	IX	O	F3	F4
Anchovy	<i>Engraulis encrasicolus</i>	IXa (only Cádiz)	M	E2	F3
Anchovy	<i>Engraulis encrasicolus</i>	VIII	M	D3	E4



Species		Area/Stock	M/O	Length	Age
Cod	<i>Gadus morhua</i>	Va/Vb/Vla/Vlb/VIIa/VIIe-k	M	D3	E4
Witch	<i>Glyptocephalus cynoglossus</i>	VI, VII	O	F3	F3
Bluemouth rockfish	<i>Helicolenus dactylopterus</i>	all areas, excluding IXa, X	O	F3	F2
Bluemouth rockfish	<i>Helicolenus dactylopterus</i>	IXa, X	M	B3	B4
Lobster	<i>Homarus gammarus</i>	all areas	M	F3	N/A
Orange roughy	<i>Hoplostethus atlanticus</i>	all areas	M	F3	F3
Four-spot megrim	<i>Lepidorhombus boscii</i>	VIIIc, IXa	M	C3	E3
Megrim	<i>Lepidorhombus whiffiagonis</i>	VII, VIIIabd/VIIIc, IXa	M	C3	E3
Common squid	<i>Loligo vulgaris</i>	all areas, excluding VIIIc, IXa	O	F3	N/A
Common squid	<i>Loligo vulgaris</i>	VIIIc, IXa	M	B2	N/A
Black-bellied angler	<i>Lophius budegassa</i>	IV, VI/VIIb-k, VIIIabd	M	C3	D4
Black-bellied angler	<i>Lophius budegassa</i>	VIIIc, IXa	M	B3	E3
Anglerfish	<i>Lophius piscatorius</i>	IV, VI/VIIb-k, VIIIabd	M	C3	D4
Anglerfish	<i>Lophius piscatorius</i>	VIIIc, IXa	M	B3	E3
Capelin	<i>Mallotus villosus</i>	XIV	O	F3	F3
Haddock	<i>Melanogrammus aeglefinus</i>	Va/Vb	M	F4	F4
Haddock	<i>Melanogrammus aeglefinus</i>	Vla/Vlb/VIIa/VIIb-k	M	E4	E3
Whiting	<i>Merlangius merlangus</i>	VIII/IX, X	M	F3	F4
Whiting	<i>Merlangius merlangus</i>	Vb/Vla/Vlb/VIIa/VIIe-k	M	C3	E3
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab/VIIIc, IXa	M	C3	E3
Wedge sole	<i>Microchirus variegatus</i>	all areas	O	F3	F3
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	M	F3	F4
Lemon sole	<i>Microstomus kitt</i>	all areas	O	F3	F3
Blue ling	<i>Molva dypterygia</i>	all areas, excluding X	O	F3	F4
Blue ling	<i>Molva dypterygia</i>	X	M	A4	A4
Ling	<i>Molva molva</i>	all areas	M	F3	F4
Striped red mullet	<i>Mullus surmuletus</i>	all areas	M	F3	F3
Norway lobster	<i>Nephrops norvegicus</i>	VI Fuctional unit	M	B0	N/A

Species		Area/Stock	M/O	Length	Age
Norway lobster	<i>Nephrops norvegicus</i>	VII Functional unit	M	B1	N/A
Norway lobster	<i>Nephrops norvegicus</i>	VIII, IX Functional unit	M	A1	N/A
Common octopus	<i>Octopus vulgaris</i>	all areas, excluding VIIIc, IXa	O	F3	N/A
Common octopus	<i>Octopus vulgaris</i>	VIIIc, IXa	M	B3	N/A
Pandalid shrimps	<i>Pandalus</i> spp.	all areas	O	F3	N/A
White shrimp	<i>Parapenaeus longirostris</i>	IXa	M	B1	N/A
Forkbeard	<i>Phycis phycis</i>	all areas, excluding X	O	F3	F3
Forkbeard	<i>Phycis phycis</i>	X	M	B3	B4
Plaice	<i>Pleuronectes platessa</i>	VIIa/VIIe/VIIIfg	M	B1	B3
Plaice	<i>Pleuronectes platessa</i>	VIIbc/VIIh-k/VIII, IX, X	O	F3	F4
Pollack	<i>Pollachius pollachius</i>	all areas	O	F3	F4
Saithe	<i>Pollachius virens</i>	Va/Vb/IV, IIIa, VI	M	C3	E3
Saithe	<i>Pollachius virens</i>	VII, VIII	M	F3	F4
Wreckfish	<i>Polyprion americanus</i>	X	M	A4	A4
Blond ray	<i>Raja brachyura</i>	all areas	M	F4	N/A
Thornback ray	<i>Raja clavata</i>	all areas	M	F4	N/A
Spotted ray	<i>Raja montagui</i>	all areas	M	F4	N/A
Cuckoo ray	<i>Raja naevus</i>	all areas	M	E4	N/A
Other rays and skates	<i>Rajidae</i>	all areas	M	F4	N/A
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	V, XIV/VI	M	A2	E3
Salmon	<i>Salmo salar</i>	all areas	O	F3	F3
Sardine	<i>Sardina pilchardus</i>	VIIIabd/VIIIc, IXa	M	C3	E3
Spanish mackerel	<i>Scomber japonicus</i>	VIII, IX	M	D3	F4
Mackerel	<i>Scomber scombrus</i>	II, IIIa, IV, V, VI, VII, VIII, IX (excluding VIIIc, IXa)	M	F3	F4
Mackerel	<i>Scomber scombrus</i>	VIIIc, IXa	M	D4	D4
Redfishes	<i>Sebastes</i> spp.	V, VI, XII, XIV	M	C2	E3
Cuttlefish	<i>Sepia officinalis</i>	Mackerel, excluding VIIIc, IXa	O	F3	N/A
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa	M	B3	N/A
Sole	<i>Solea solea</i>	VIIa/VIIIfg	M	B1	B3
Sole	<i>Solea solea</i>	VIIbc/VIIhjk/IXa	M	F3	F4
Sole	<i>Solea solea</i>	VIIe	M	C3	D4

Species		Area/Stock	M/O	Length	Age
Sole	<i>Solea solea</i>	VIIIab	M	B1	C3
Razor clams	<i>Solen</i> spp.	all areas	V	F3	N/A
Sea bream	<i>Sparidae</i>	all areas, excluding VIIIc, IXa, X	O	F3	F3
Sea bream	<i>Sparidae</i>	VIIIc, IXa, X	M	B3	B4
Spurdog	<i>Squalus acanthias</i>	all areas	O	F3	N/A
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	VIII, IX	V	F3	F4
Blue jack mackerel	<i>Trachurus picturatus</i>	X	M	B3	C4
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde/X	M	F3	F4
Horse mackerel	<i>Trachurus trachurus</i>	VIIIc, IXa	M	D3	E2
Pouting	<i>Trisopterus luscus</i>	VIIIc, IXa	M	B4	B4
Pouting	<i>Trisopterus</i> spp.	all areas, excluding VIIIc, IXa	O	F3	F3
Other deepwater species	Other deepwater species	all areas	O	F3	F3

#### Mediterranean

Eel	<i>Anguilla anguilla</i>	all areas	M	A2	A2
Giant red shrimp	<i>Aristeomorpha foliacea</i>	1.3, 2.2, 3.1	M	B3	N/A
Red shrimp	<i>Aristeus antennatus</i>	1.1, 1.3, 2.2, 3.1	M	B3	N/A
Bogue	<i>Boops boops</i>	1.3, 2.1, 2.2, 3.1	M	E3	E4
Dolphinfish	<i>Coryphaena hippurus</i>	all areas	M	B3	B3
Dolphinfish	<i>Coryphaena equiselis</i>	all areas	M	B3	B3
Sea bass	<i>Dicentrarchus labrax</i>	1.2	M	E3	E3
Horned octopus	<i>Eledone cirrosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	M	E4	N/A
Musky octopus	<i>Eledone moschata</i>	1.3, 2.1, 2.2, 3.1	M	E4	N/A
Anchovy	<i>Engraulis encrasicolus</i>	all areas	M	D3	E4
Grey gurnard	<i>Eutrigla gurnardus</i>	1.3, 2.2, 3.1	M	D3	D3
Squid	<i>Illex</i> spp., <i>Todarodes</i> spp.	1.3, 2.1, 2.2, 3.1	M	D3	N/A
Billfish	<i>Istiophoridae</i>	all areas	M	D2	D2
Common squid	<i>Loligo vulgaris</i>	1.3, 2.2, 3.1	M	D3	N/A
Black-bellied angler	<i>Lophius budegassa</i>	1.1, 1.3, 2.2, 3.1	M	C2	D4
Anglerfish	<i>Lophius piscatorius</i>	1.1, 1.3, 2.2, 3.1	M	C2	D4
Hake	<i>Merluccius merluccius</i>	all areas	M	C3	D4
Blue whiting	<i>Micromesistius poutassou</i>	1.1, 3.1	V	D3	D3
Grey mullets	<i>Mugilidae</i>	1.3, 2.1, 2.2, 3.1	M	D3	D3
Red mullet	<i>Mullus barbatus</i>	all areas	M	C3	D4

Species		Area/Stock	M/O	Length	Age
Striped red mullet	<i>Mullus surmuletus</i>	all areas	M	C3	D4
Norway lobster	<i>Nephrops norvegicus</i>	1.3, 2.1, 2.2, 3.1	M	B3	N/A
Common octopus	<i>Octopus vulgaris</i>	all areas	M	E4	N/A
Pandora	<i>Pagellus erythrinus</i>	1.1, 1.2, 2.1, 2.2, 3.1	M	D3	E4
White shrimp	<i>Parapenaeus longirostris</i>	1.1, 1.3, 2.2, 3.1	M	C3	N/A
Caramote prawn	<i>Penaeus kerathurus</i>	3.1	M	E3	N/A
Thornback ray	<i>Raja clavata</i>	1.3, 2.1, 2.2, 3.1	M	D3	N/A
Brown ray	<i>Raja miraletus</i>	1.3, 2.1, 2.2, 3.1	M	D3	N/A
Atlantic bonito	<i>Sarda sarda</i>	all areas	M	E4	E4
Sardine	<i>Sardina pilchardus</i>	all areas	M	D3	E4
Mackerel	<i>Scomber</i> spp.	1.3, 2.2, 3.1	M	E4	E4
Cuttlefish	<i>Sepia officinalis</i>	1.3, 2.1, 3.1	M	E3	N/A
Sharks	Shark-like <i>Selachii</i>	all areas	M	D2	N/A
Sole	<i>Solea vulgaris</i>	1.2, 2.1, 3.1	M	E3	E3
Gilthead sea bream	<i>Sparus aurata</i>	1.2, 3.1	M	E3	E3
Picarels	<i>Spicara</i> spp.	1.3, 2.1, 2.2, 3.1	M	E3	E3
Mantis shrimp	<i>Squilla mantis</i>	1.3, 2.1, 2.2	M	E4	N/A
Albacore	<i>Thunnus alalunga</i>	all areas	M	C2	C2
Bluefin tuna	<i>Thunnus thynnus</i>	all areas	M	C2	C2
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	1.1, 1.3, 3.1	M	E3	E4
Horse mackerel	<i>Trachurus trachurus</i>	1.1, 1.3, 3.1	M	E3	E4
Tub gurnard	<i>Trigla lucerna</i>	1.3, 2.2, 3.1	M	D3	D3
Clam	<i>Veneridae</i>	2.1, 2.2	M	F3	EI
Swordfish	<i>Xiphias gladius</i>	all areas	M	C2	C2

## NAFO areas

Cod	<i>Gadus morhua</i>	2J 3KL	M	A2	E3
Cod	<i>Gadus morhua</i>	3M	M	A2	E3
Cod	<i>Gadus morhua</i>	3NO	M	A2	E3
Cod	<i>Gadus morhua</i>	3Ps	M	F4	F4
Cod	<i>Gadus morhua</i>	SA 1	M	F4	F4
Witch flounder	<i>Glyptocephalus cynoglossus</i>	3NO	M	A2	A2
American plaice	<i>Hippoglossoides platessoides</i>	3LNO	M	A2	E3
American plaice	<i>Hippoglossoides platessoides</i>	3M	M	A2	E3
Yellowtail flounder	<i>Limanda ferruginea</i>	3LNO	M	A2	A2

Species		Area/Stock	M/O	Length	Age
Grenadier	<i>Macrouridae</i>	SA 2 + 3	M	A2	E3
Pandalid shrimp	<i>Pandalus</i> spp.	3LN	O	F3	N/A
Pandalid shrimp	<i>Pandalus</i> spp.	3M	M	D2	N/A
Rays and skates	<i>Raja</i> spp.	SA 3	M	D2	N/A
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	M	A2	E3
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	SA 1	M	A2	E3
Redfish	<i>Sebastes</i> spp.	3LN	M	A2	A2
Redfish	<i>Sebastes</i> spp.	3M	M	A2	F3
Redfish	<i>Sebastes</i> spp.	3O	M	C2	C2
Redfish	<i>Sebastes</i> spp.	SA 1	M	A2	A2

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

Frigate tuna	<i>Auxis</i> spp.		M	E4	
Atlantic back skipjack	<i>Euthynnus alleteratus</i>		M	E4	
Billfish	<i>Istiophoridae</i>		M	D2	
Shortfin mako	<i>Isurus oxyrinchus</i>		M	A4	
Skipjack tuna	<i>Katsuwonus pelamis</i>		M	C2	
Porbeagle	<i>Lamna nasus</i>		M	A4	
Blue shark	<i>Prionace glauca</i>		M	A4	
Atlantic bonito	<i>Sarda sarda</i>		M	E4	
Shark	<i>Squalidae</i>		M	D2	
Albacore	<i>Thunnus alalunga</i>		M	C2	
Yellowfin tuna	<i>Thunnus albacares</i>		M	C2	
Bigeye tuna	<i>Thunnus obesus</i>		M	C2	
Bluefin tuna	<i>Thunnus thynnus</i>		M	C2	
Swordfish	<i>Xiphias gladius</i>		M	C2	

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Black scabbardfish	<i>Aphanopus carbo</i>	Madeira	M	D3	
Anchovy	<i>Engraulis encrasicolus</i>		O	E3	
Silver scabbardfish	<i>Lepidopus caudatus</i>	Mauritania	O	D2	
Common squid	<i>Loligo vulgaris</i>	Atlantic EC	O	D2	
Hake	<i>Merluccius</i> spp.	Atlantic EC	M	C2	
Common octopus	<i>Octopus vulgaris</i>	Atlantic EC	M	C2	
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Atlantic EC	M	C2	
Southern pink shrimp	<i>Penaeus notialis</i>	Atlantic EC	M	C2	
Bonito	<i>Sarda sarda</i>	Mauritania	O	F2	

Species		Area/Stock	M/O	Length	Age
Sardine	<i>Sardina pilchardus</i>	Atlantic EC	M	E3	
Round sardinella	<i>Sardinella aurita</i>	Mauritania, Atlantic EC	O	F3	
Short-body sardinella	<i>Sardinella maderensis</i>	Mauritania, Atlantic EC	O	F3	
Chub mackerel	<i>Scomber japonicus</i>	Madeira	M	D2	
Chub mackerel	<i>Scomber japonicus</i>	Mauritania	O	D2	
Cuttlefish	<i>Sepia hierredda</i>	Atlantic EC	O	D2	
Finfish	<i>Sparidae, Serranidae, Haemulidae</i>	Atlantic EC	O	D2	
Horse mackerel	<i>Trachurus</i> spp.	Madeira	O	D3	
Atlantic horse mackerel	<i>Trachurus trachurus</i>	Mauritania	O	D2	
Cunene horse mackerel	<i>Trachurus trecae</i>	Mauritania	O	D2	
Scabbardfish	<i>Trichiuridae</i>		O	D2	

**WECAF**

Red snapper	<i>Lutjanus purpureus</i>	French Guiana EEZ	M	C2	
Penaeus shrimp	<i>Penaeus subtilis</i>	French Guiana EEZ	M	C2	

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Antarctic icefish	<i>Champscephalus gunnari</i>	Kerguelen	O	C2	
Antarctic toothfish	<i>Dissostichus eleginoides</i>	Kerguelen	O	C2	D3
Grenadier	<i>Macrouridae</i>	Kerguelen Crozet	O	C2	
Grey rock cod	<i>Nototothenia squamifrons</i>	Kerguelen	O	C2	
Rays and skates	<i>Raja</i> spp.	Kerguelen Crozet	O	C2	

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Antarctic toothfish	<i>Dissostichus eleginoides</i>	Argentina/UK	O	D2	D2
Cusk eel	<i>Genypterus blacodes</i>	Argentina/UK	O	D2	D2
Argentine short-finned squid	<i>Illex argentinus</i>	Argentina/UK	O	D2	N/A
Patagonian squid	<i>Loligo gahi</i>	Argentina/UK	O	D2	N/A
Grenadier	<i>Macrourus</i> spp.	Argentina/UK	O	D2	D2
Patagonian grenadier	<i>Macruronus magellanicus</i>	Argentina/UK	O	D2	D2
Southern hake	<i>Merluccius australis</i>	Argentina/UK	O	D2	D2

Species		Area/Stock	M/O	Length	Age
Argentinian hake	<i>Merluccius hubbsi</i>	Argentina/UK	O	D2	C2
Southern blue whiting	<i>Micromesistius australis</i>	Argentina/UK	O	D2	D2
Patagonian rock cod	<i>Notothenia</i> spp., <i>Patagonotothen</i> spp.	Argentina/UK	O	D2	D2
Red cod	<i>Salilota australis</i>	Argentina/UK	O	D2	D2
<b>Angola FAO 47</b>					
Red striped shrimp	<i>Aristeus varidens</i>	Angola	O	B2	N/A
Deepwater rose shrimp	<i>Parapenaeus longirostris</i>	Angola	O	B2	N/A
Penaeid shrimps	<i>Penaeus</i> spp.	Angola	O	B2	N/A'

12. Appendix XVI is replaced by the following:

'Appendix XVI (Section I)

#### Other biological samplings

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

Species	Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
		Length	Weight	Length	Age	Length	Age	Length	Age

#### ICES areas I, II

Eel	<i>Anguilla anguilla</i>	I, II	T	T					
Atlanto-Scandian herring	<i>Clupea harengus</i>	IIa, 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
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	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.( <sup>1</sup> )	I, II	T	T	T	T		T	T
Horse mackerel	<i>Trachurus trachurus</i>	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde	T	T	T	T		T	T

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

Sand eel	<i>Ammodytidae</i>	IIIa N	T	T	T	T		T	T
Eel	<i>Anguilla anguilla</i>	IIIa N	T	T					
Herring	<i>Clupea harengus</i>	IV, VIId, IIIa/22-24, IIIa	T	T	T	T		T	T
Cod	<i>Gadus morhua</i>	IV, VIId, IIIa	T	T	T	T		T	T

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Haddock	<i>Melanogrammus aeglefinus</i>	IV, IIIa	T	T	T	T			T	T
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	T	T	T	T			T	T
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	S	S	S				T	
Northern shrimp	<i>Pandalus borealis</i>	IIIa, IVa east	T	T	T				T	
Plaice	<i>Pleuronectes platessa</i>	IIIa	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	IV, IIIa, VI	T	T	T	T			T	T
Mackerel	<i>Scomber scombrus</i>	IIIa, IVbc, VIId	T	T	T	T			T	T
Sole	<i>Solea solea</i>	IIIa	T	T	T	T			T	T
Sprat	<i>Sprattus sprattus</i>	IIIa	T	T	T	T			T	T
Norway pout	<i>Trisopterus esmarki</i>	IV, IIIa	T	T	T	T			T	T

## ICES area III (excluding Skagerrak) including Baltic

Eel	<i>Anguilla anguilla</i>	IIIa (excluding a N)	T	T						
Herring	<i>Clupea harengus</i>	22-24/25-29, 32/30/31/Gulf of Riga	T	T	T	T			T	T
Flounder	<i>Platichthys flesus</i>	IIIb-d	T	T	T	T			T	T
Cod	<i>Gadus morhua</i>	IIIa S/22-24, 3d/25-32	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	Functional unit	S	S	S				T	
Plaice	<i>Pleuronectes platessa</i>	IIIa S	T	T	T	T			T	T
Salmon	<i>Salmo salar</i>	IIIb-d, 22-31/32	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>	IIIa S/IIIb-d	T	T	T	T			T	T

## North Sea and eastern Channel — ICES areas IV, VIId

Sand eel	<i>Ammodytidae</i>	IV	T	T	T	T			T	T
Eel	<i>Anguilla anguilla</i>	IV, VIId	T	T						
Argentine	<i>Argentina spp.</i> ( <sup>1</sup> )	IV	T	T	T	T			T	T
Herring	<i>Clupea harengus</i>	IV, VIId, IIIa	T	T	T	T			T	T
Shrimp	<i>Crangon crangon</i>	IV, VIId	T	T	T				T	
Seabass	<i>Dicentrarchus labrax</i>	IV, VIId	T	T	T	T			T	T



Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Cod	<i>Gadus morhua</i>	IV, VIIId, IIIa	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, VI	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	IV, IIIa	T	T	T	T			T	T
Whiting	<i>Merlangius merlangus</i>	IV, VIIId	T	T	T	T			T	T
Hake	<i>Merluccius merluccius</i>	IIIa, IV, VI, VII, VIIIab	T	T	T	T			T	T
Blue whiting	<i>Micromesistius poutassou</i>	I-IX, XII, XIV	T	T	T	T			T	T
Lemon sole	<i>Microstomus kitt</i>	IV, VIIId	T	T	T	T			T	T
Red mullet	<i>Mullus barbatus</i>	IV, VIIId	T	T	T	T			T	T
Striped 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 shrimp	<i>Pandalus borealis</i>	IIIa, IVa east/IVa	T	T	T				T	
Plaice	<i>Pleuronectes platessa</i>	IV/VIIId	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	IV, IIIa, VI	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	
Starry ray	<i>Raja radiata</i>	IV, VIIId	T	T	T				T	
Cuckoo ray	<i>Raja naevus</i>	IV, VIIId	T	T	T				T	
Spotted ray	<i>Raja montagui</i>	IV, VIIId	T	T	T				T	
Other rays and skates	<i>Rajidae</i> (*)	IV, VIIId	T	T	T				T	
Mackerel	<i>Scomber scombrus</i>	IIIa, IVbc, VIIId	T	T	T	T	T	T	T	T
Brill	<i>Scophthalmus rhombus</i>	IV, VIIId	T	T	T	T			T	T

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Sole	<i>Solea solea</i>	IV/VIIId	T	T	T	T			T	T
Sprat	<i>Sprattus sprattus</i>	IV	T	T	T	T			T	T
Horse mackerel	<i>Trachurus</i> spp. (°)	IIa, IVa, Vb, VIa, VIIa-c, e-k, VIIIabde/IIIa, IVbc, VIId	T	T	T	T	T	T	T	T
Norway pout	<i>Trisopterus esmarki</i>	IV	T	T	T	T			T	T

NE Atlantic and western Channel — ICES areas V, VI, VII (excluding d), VIII, IX, X, XII, XIV

Eel	<i>Anguilla anguilla</i>	all areas	T	T						
Scabbardfish	<i>Aphanopus</i> spp. (°)	IXa, X	T	T	T	T			T	T
Argentine	<i>Argentina</i> spp. (°)	all areas	T	T	T	T			T	T
Alfonsinos	<i>Beryx</i> spp. (°)	X	T	T	T	T			T	T
Edible crab	<i>Cancer pagurus</i>	all areas	T	T	T				T	
Gulper shark	<i>Centrophorus granulosus</i>	all areas	T	T	T	N/A			T	N/A
Leafscale gulper shark	<i>Centrophorus squamosus</i>	all areas	T	T	T	N/A			T	N/A
Portuguese dogfish	<i>Centroscyllium coelelepis</i>	all areas	T	T	T	N/A			T	N/A
Herring	<i>Clupea harengus</i>	VIa/VIa N/VIaS, VIIbc/VIIa/VIIj	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
Seabass	<i>Dicentrarchus labrax</i>	all areas, excluding IX	T	T	T	T			T	T
Anchovy	<i>Engraulis encrasicolus</i>	IXa, only Cádiz	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>	Va/Vb/VIa/VIb/VIIa/VIIe-k	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	

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Orange roughy	<i>Hoplostethus atlanticus</i>	all areas	T	T	T	T			T	T
Four-spot Megrim	<i>Lepidorhombus boscii</i>	VIIIc, IXa	T	T	T	T			T	T
Megrim	<i>Lepidorhombus whiffiagonis</i>	VI/VII, VIIIabd/VIIIc, IXa	T	T	T	T			T	T
Common squid	<i>Loligo vulgaris</i>	VIIIc, IXa	T	T	T				T	
Black-bellied angler	<i>Lophius budegassa</i>	IV, VI/VIIb-k, VIIIabd/VIIIc, IXa	T	T	T	T			T	T
Anglerfish	<i>Lophius piscatorius</i>	IV, VI/VIIb-k, VIII abd/VIIIc, IXa	T	T	T	T			T	T
Haddock	<i>Melanogrammus aeglefinus</i>	Va/Vb, VI, XII, XIV/VIa/VIb/VIIa/VIIb-k	T	T	T	T			T	T
Whiting	<i>Merlangius merlangus</i>	VIII/IX, X	T	T					T	
Whiting	<i>Merlangius merlangus</i>	Vb/VIa/VIb/VIIa/VIIe-k	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	
White shrimp	<i>Parapenaeus longirostris</i>	IXa	T	T	T				T	
Forkbeard	<i>Phycis phycis</i>	X	T	T	T	T			T	T
Plaice	<i>Pleuronectes platessa</i>	VIIa/VIIe/VIIIfg	T	T	T	T			T	T
Saithe	<i>Pollachius virens</i>	Va/Vb/IV, IIIa, VI/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	

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Spotted Ray	<i>Raja montagui</i>	all areas	T	T	T				T	
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>	V, XIV/VI	T	T	T	T			T	T
Sardine	<i>Sardina pilchardus</i>	VIIIab/VIIIc, IXa	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
Mackerel	<i>Scomber scombrus</i>	VIIIc, IXa	T	T	T	T	T	T	T	T
Redfish	<i>Sebastes</i> spp. (*)	V, VI, 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/VIIbc/VIIe/VIIfg/VIIhk/VIIIab/IXa	T	T	T	T			T	T
Sea bream	<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, Vb, VIa, VIIa-c, e-k, VIIIabde/VIIIc, IXa/X	T	T	T	T	T	T	T	T
Pouting	<i>Trisopterus luscus</i>	VIIIc, IXa	T	T	T	T			T	T

## Mediterranean

Eel	<i>Anguilla anguilla</i>	all areas	T	T						
Giant red shrimp	<i>Aristeomorpha foliacea</i>	1.3, 2.2, 3.1	T	T	T				T	
Red shrimp	<i>Aristeus antennatus</i>	1.1, 1.3, 2.2, 3.1	T	T	T				T	
Bogue	<i>Boops boops</i>	1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Dolphinfish	<i>Coryphaena</i> spp. (*)	all areas	T	T	T	T			T	T
Seabass	<i>Dicentrarchus labrax</i>	1.2	T	T	T	T			T	T
Horned octopus	<i>Eledone cirrhosa</i>	1.1, 1.3, 2.1, 2.2, 3.1	T	T	T				T	
Musky octopus	<i>Eledone moschata</i>	1.3, 2.1, 2.2, 3.1	T	T	T				T	

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Anchovy	<i>Engraulis encrasicolus</i>	all areas	T	T	T	T			T	T
Grey gurnard	<i>Eutrigla gurnardus</i>	1.3, 2.2, 3.1	T	T	T	T			T	T
Squid	<i>Illex</i> spp. (°), <i>Todarodes</i> spp. (°)	1.3, 2.1, 2.2, 3.1	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	
Black-bellied angler	<i>Lophius budegassa</i>	1.1, 1.3, 2.2, 3.1	T	T	T	T			T	T
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
Grey mullet	<i>Mugilidae</i> (°)	1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Red mullet	<i>Mullus barbatus</i>	all areas	T	T	T	T			T	T
Striped red mullet	<i>Mullus surmuletus</i>	all areas	T	T	T	T			T	T
Norway lobster	<i>Nephrops norvegicus</i>	1.3, 2.1, 2.2, 3.1	S	S	S				T	
Common octopus	<i>Octopus vulgaris</i>	all areas	T	T	T				T	
Pandora	<i>Pagellus erythrinus</i>	1.1, 1.2, 2.1, 2.2, 3.1	T	T	T	T			T	T
White 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	
Picarels	<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	
Brown 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>	all areas	T	T	T	T			T	T
Mackerel	<i>Scomber</i> spp.	1.3, 2.2, 3.1	T	T	T	T			T	T
Sharks	Shark-like <i>Selachii</i> (°)	all areas	T	T	T	T			T	T

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
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
Picarels	<i>Spicara</i> spp.(*)	1.3, 2.1, 2.2, 3.1	T	T	T	T			T	T
Mantis shrimp	<i>Squilla mantis</i>	1.3, 2.1, 2.2	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
Mediterranean horse mackerel	<i>Trachurus mediterraneus</i>	1.1, 1.3, 3.1	T	T	T	T			T	T
Horse mackerel	<i>Trachurus trachurus</i>	1.1, 1.3, 3.1	T	T	T	T			T	T
Tub gurnard	<i>Trigla lucerna</i>	1.3, 2.2, 3.1	T	T	T	T			T	T
Clams	<i>Veneridae</i> (*)	2.1, 2.2	T	T	T				T	
Swordfish	<i>Xiphias gladius</i>	all areas	T	T	T	T			T	T

## NAFO areas

Cod	<i>Gadus morhua</i>	2J 3KL	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
Cod	<i>Gadus morhua</i>	SA I	T	T	T	T			T	T
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	
Grenadiers	<i>Macrouridae</i> (*)	SA 2 + 3	T	T	T	T			T	T
Pandalid shrimp	<i>Pandalus</i> spp.(*)	3M	T	T	T				T	
Skates	<i>Raja</i> spp.(*)	SA 3	T	T					T	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	T	T	T	T			T	T

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
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						
Redfish	<i>Sebastes</i> spp. (°)	SA I	T	T						

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

Frigate tunas	<i>Auxis</i> spp. (°)		T	T	T	T			T	T
Atlantic back skipjack	<i>Euthynnus alleteratus</i>		T	T	T	T			T	T
Billfish	<i>Istiophoridae</i> (°)		T	T	T	T			T	T
Short-fin mako	<i>Isurus oxyrinchus</i>		T	T	T				T	
Skipjack tuna	<i>Katsuwonus pelamis</i>		T	T	T	T			T	T
Porbeagle	<i>Lamna nasus</i>		T	T	T				T	
Blue shark	<i>Prionace glauca</i>		T	T	T				T	
Atlantic bonito	<i>Sarda sarda</i>		T	T	T	T			T	T
Sharks	<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
Anchovy	<i>Engraulis encrasicolus</i>		T	T	T	T			T	T
Common squid	<i>Loligo vulgaris</i>	Atlantic EC	T	T	T				T	
Hake	<i>Merluccius</i> spp. (°)	Atlantic EC	T	T	T	T			T	T
Common octopus	<i>Octopus vulgaris</i>	Atlantic EC	T	T	T				T	
Deepwater rose shrimp	<i>Parapeneus longirostris</i>	Atlantic EC	T	T	T				T	

Species		Area/Stock	Growth Data		Maturity Data		Fecundity		Sex ratio	
			Length	Weight	Length	Age	Length	Age	Length	Age
Southern pink shrimp	<i>Penaeus notialis</i>	Atlantic EC	T	T	T				T	
Sardine	<i>Sardina pilchardus</i>	Atlantic EC	T	T	T	T			T	T
Bonito	<i>Sarda sarda</i>	Mauritania	T	T	T	T			T	T
Round sardinella	<i>Sardinella aurita</i>	Mauritania, Atlantic EC	T	T	T	T			T	T
Short-body sardinella	<i>Sardinella maderensis</i>	Mauritania, Atlantic EC	T	T	T	T			T	T
Chub mackerel	<i>Scomber japonicus</i>	Madeira, Mauritania	T	T	T	T			T	T
Cuttlefish	<i>Sepia hierredda</i>	Atlantic EC	T	T	T				T	
Horse mackerel	<i>Trachurus</i> spp. (*)	Madeira	T	T	T	T			T	T

## WECAF

Red snapper	<i>Lutjanus purpureus</i>	French Guiana EEZ	T	T	T	T			T	T
Penaeus shrimp	<i>Penaeus subtilis</i>	French Guiana EEZ	T	T	T				T	

(\*) Each present species in a particular area should be considered separately.'