



**DATA COLLECTION AND
MANAGEMENT PROGRAMME
FOR SPAIN FOR THE PERIOD
2002 – 2006

YEAR 2006**

Madrid, 31 May 2005



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1. Introduction

This document describes the Spanish Data Collection and Management Programme in the fisheries sector. It was drafted in accordance with the provisions of article 6.1 of Council Regulation (EC) 1543/2000 *“Each Member State shall draw up for six-year periods a national programme of collection and management of data. The first programming period shall cover the years 2002 to 2006 inclusive”*.

Moreover, article 4 of Commission Regulation (EC) No 1639/2001, along with its amendments laid down in Commission Regulation No 1581/2004 (hereinafter referred to as the Commission Regulation) sets 31 May 2005 as the submission deadline for the 2006 programme for those Member States which would like to obtain financial support from the Community. Both Regulations call for the submission in detail of the Minimum and Extended Programme.

This document meets both requirements, including the National Data Collection and Management Programme for 2006 (hereinafter referred to as the Programme), and the expenditure budget for that year and is designed to comply with the Minimum Community Programme as defined in Regulation 1543/2000 and in the Commission Regulation with the exception of the four Scientific Surveys of the Extended Programme.

The structure of the Programme is based on the different sections of the Commission Regulation. For each of the planned actions information is provided regarding:

- How data were obtained.
- Data aggregation procedures.

Two main sources will generally be used for data collection:

- The data on file at the centralised database under the control of the Secretariat-General of Sea Fisheries (Spanish acronym SGPM used hereinafter).
- Data from biological and/or economic sampling.



These data will be kept for at least five years in databases created for that purpose with the level of aggregation required by the Regulation.

Spain guarantees the reliability and stability of the procedures established for the compilation of basic data.

The rules laid down in articles 10, 11 and 12 of the Commission Regulation concerning access of authorised users to the aggregated data bases and confidentiality shall apply.



2. Participating Institutions.

2.1. National Authority.

The National Authority responsible for the implementation of the National Data Collection Programme will be the Secretary-General of Sea Fisheries with headquarters in Madrid, c/ José Ortega y Gasset, 57; Telephone 91 402 50 00; Fax 91 402 02 12; Telex 47457 SECRETARIA GENERAL DE PESCA MARÍTIMA; e-mail: asucompm@mapya.es.

2.2. Participating Institutes:

Spanish Oceanographic Institute, with headquarters at Avda. de Brasil, 31, 28020 Madrid; Tel: +34 91 597 44 43 and the **Unidad de Corazón de María**, Corazón de María, 8, 28002 Madrid; Tel: +34 91 347 36 00. The biological data will be compiled at the Spanish Oceanographic Institute (Spanish acronym IEO used hereinafter) which will process and make them available to the responsible body at the national level, the Secretariat-General of Sea Fisheries (SGPM).

Coastal Oceanographic Centres of the IEO participating in the programme:

Spanish Oceanographic Institute of the Balearic Islands (C.O.) (Muelle de Poniente, s/n, 07015 Palma de Mallorca (Balears); Tel: +34 971 40 15 61)

Spanish Oceanographic Institute of the Canary Islands (C.O.) (Ctra. De San Andrés, s/n, 38001 Santa Cruz de Tenerife (Tenerife); Tel: +34 922 54 94 00/01)

Spanish Oceanographic Institute of A Coruña (C.O.) (Muelle de las Ánimas, d/n, apartado 130, 15001 A Coruña; Tel: +34 981 20 53 43)

Spanish Oceanographic Institute of Malaga (C.O.) (Puerto pesquero, s/n, Apartado 285, 29640 Fuengirola (Málaga); Tel: +34 952 47 49 07)

Cadiz Unit (Puerto pesquero Muelle de Levante, s/n, Apartado 2609, 11006 Cádiz; Tel: +34 956 26 13 33)



Spanish Oceanographic Institute of Murcia (C.O.) (Varadero,1 Lo Pagán, 30740 san Pedro del Pinatar (Murcia); Tel: +34 968 18 04 09)

Spanish Oceanographic Institute of Santander (C.O.) (Promontorio de San Martín, s/n, Apartado 240, 39004 Santander; Tel: +34 942 29 10 66)

Spanish Oceanographic Institute of Vigo (C.O.) (Cabo Estay-Canido, Apartado 1552, 36200 Vigo (Pontevedra); tel: +34 986 49 21 11)

Spanish Oceanographic Institute of Gijon (C.O.) (Avda. Príncipe de Asturias, 70 bis, 33212 Gijón (Asturias); Tel: +34 985 30 86 72/82 68)

The IEO will coordinate the collection of these data working jointly with the following scientific organisations, with which it has concluded collaboration agreements:

Technological, Fishery and Food Institute (AZTI Foundation) (Txatxarramendi ugarteaz/g, E-48395 Sukarrieta-Bizcaia (Spain): Tel: +34 94 602 94 00): Collaboration Agreement 23/03. Collaborates in the collection of fishery data, biological sampling and fishery assessment in which the fleet stationed in the Basque Country takes part; implements the Bay of Biscay BIOMAN Campaign; collaborates in the FLEMISH CAP Campaigns in the tagging of tuna (bluefin tuna) in the Cantabrian Sea.

Marine Research Institute (IIM-CSIC) of VIGO (Eduardo Cabello 6, 36280-Vigo (Spain); Tel: +34 986 214466): Collaboration Agreement 5/03. Collaborates by providing personnel for implementation of the FLEMISH CAP fishery assessment campaign and ensuing research regarding data collected.

These Agreements are available for consultation at IEO Central Services (Madrid). Collaboration has been established with other countries such as France (IRD) in sampling tropical tuna and Portugal (IPIMAR) in the case of the Flemish CAP Campaign in addition to extensive collaboration in multiple joint research activities between the two institutions.



2.3. Personnel expenses

The per-day cost of scientific personnel working for the IEO was calculated on the basis of the salaries actually paid out in each category during 2003, which were increased by 3% for 2004 and a further 3% for 2005. Two categories were established, Scientific and Technical, the former with three different levels and the latter with two. The average monthly and daily cost for each category was calculated on the basis of 220 working days per year.

	2005		2006= 2005+3%	
	Monthly rate	Daily rate	Monthly rate	Daily rate
SCIENTIFIC				
Researcher Specialised	4623	231	4365	238
Technical Graduate	3828	191	3614	197
TECHNICAL				
Middle-level Technician	2739	154	2822	154
Preparator	2261	127	2329	127
Auxiliary	1651	93	1700	93

The collaborating organisations have their own personnel pay scales. In the case of AZTI, the following rates were applied in 2005:

Category	Internal grading	Hourly rate	Daily rate	Monthly rate
G1	Project Head	35.00 €	245.00 €	4,900.00 €
G2	Senior Researcher	27.00 €	189.00 €	3,780.00 €
G3	Junior Researcher, Skipper, Senior Technician	27.00 €	189.00 €	3,780.00 €
G4	Junior Technician, Observer, Sampler	20.00 €	140.00 €	2,800.00 €
G5	Granter	8.00 €	56.00 €	1,120.00 €



2.4. Other personnel

In addition to the scientific team mentioned in the foregoing paragraphs, module J corresponding to Economic Data was developed by the Deputy Directorate-General of Agri-Food Statistics of the Ministry of Agriculture, Fisheries and Food.

The Area Head of the aforementioned Unit is responsible for the design and coordination of this work, and the personnel listed in the following table were also engaged through the public company Tragsatec for the purpose of data collection and recording:

No.	University degree	Hourly salary	Daily salary	Monthly salary
6	University Graduate	27.35	218.80	4,430.07
4	Vocational Training (level 2)	15.62	124.96	2,530.44
5	Data Recorder	11.08	88.64	1,794.96



3. Precision levels

Information regarding landings by species, areas of catches, fishing effort and capacity will be provided with the highest possible precision level.

The information regarding total landings or catches (tonnes per species) used to calculate the number of length, age and other biological samplings to be carried out is collected from 100% of Spain's catches according to the SGPM report. The data used in this Programme cover the period 2002-2004.

As regards new developments for 2006, it is proposed to implement the application of necessary analytical methods to determine the precision and reliability of the data collected. Two different methods were used to estimate the Coefficient of Variation (CV) of the catches by age (CV_a):

Analytical method, based on the delta method (Flatman, 1990; Thompson, 1992; Jardim et al., 2001). This is a parametric method where the CV_a is defined in relation to the number of individuals per age class, which is based on the breakdown of total variation of individuals by age class into two variation-defined components: one due to variation of ages through lengths (CV_{af}) and the other due to variation of lengths through ages (CV_{lf}).

Numerical method based on bootstrap simulations (Efron and Tibshirani, 1993; Jardim et al., 2001). This is a non-parametric procedure whereby the CVs are defined in relation to the median (this being the most robust centralisation statistic, which can also give us an initial idea of bias in the estimates). To obtain the breakdown of the corresponding CV_{af} and CV_{lf}, each of the components was in turn fixed (sampling of length or age), and bootstrap replicates of components whose variation was to be determined were generated. The number of individuals per age class was derived from 1,000 bootstrap replicas.



A non-parametric bootstrap was applied in the estimation of the uncertainty of the biological parameters. This technique consists in generating 1000 bootstrap samples through re-sampling with replacement of the original data. In each case, the parameters for each bootstrap sample are calculated and from the bootstrap distribution of parameters an estimation is made of the coefficient of variation, defined as the error divided by the mean.

The models used and adjustments made were as follows:

- Growth in length and weight: von Bertalanffy, non-linear estimate by means of least-squares.
- Maturity in terms of length and age: Generalised Linear Model (GLM) with link function logistics and binomial errors. Adjustment of the maximum log-likelihood.
- Length-weight ratio: non-linear estimate by means of least-squares.
- Sex ratio in terms of length and age: no model; percentage by length and age.

Data concerning estimates of discards for stocks referred to in Appendix XII must be of precision level 1. Precision level 1 is defined as “the level allowing for the estimate of a parameter with a precision of between 25% and 95%”, which corresponds to a $CV = 12\%$.

In accordance with the conclusions reached at the Workshop on Discard Sampling and Calculation Procedures (Charlottenlund, 2003), the Analytical Method is used to calculate the precision level.

Work on the development of precision levels will continue through the year 2006 according to the indications given at the January 2005 Workshop on Sampling and Calculation Methodology for Fisheries Data held in Sukarrieta (Vizcaya, Spain).



4. Data Transmission

The Spanish Oceanographic Institute (Spanish acronym IEO) organises its fishing grounds in five programmes based on the geographic scope of the different regional fishery commissions or organisations which cover all of the zones and species of interest for Spanish fleets:

- ICES area fishing grounds (Northeast Atlantic).
- Mediterranean fishing grounds (GFCM area)
- Eastern Central Atlantic fishing grounds (CECAF area).
- Fishing grounds for large pelagics, tuna and similar species (ICCAT, IOTC, IATTC areas).
- Deep sea grounds (NAFO, ICES, CCAMLR and ATSW areas).

Spain is committed to furnishing information, obtained using standard scientific methodology, concerning the location of the fishery resources it exploits to the Regional Fishery Management Organisations. This allows for assessment within a multilateral framework, while the IEO fishery research projects, in collaboration with the Vigo-based AZTI and IIM under agreements, serve as the basis for compliance with the said commitment. The annual information obtained is used to keep up the historical data series, some of which contain data from over 30 years of continued observation undertaken by the IEO Sampling and Information Network, which operates nationally.

4.1. Data series

The following temporary series are maintained to monitor the evolution of fishery populations:

- Landings by weight and gear type, geographical zone and month. This information is supplemented with an analysis of discards and accompanying species.



- Total catch and discards by weight according to geographical zone and month (deep sea grounds).
- Makeup of lengths and ages (when possible) of landings according to technique, geographical zone and month.
- Production per unit effort or Catch per Unit Effort (CPUE) expressed as one day's catch or in terms of haul or 1000 hooks, etc., for certain techniques and for different geographical areas and months, obtained via scientific surveys, log-books, etc.
- Abundance indices obtained from scientific data provided by commercial fleets or scientific surveys whose methodology and design depend on the species in question.

The series are habitually used in international working groups, consultation committees, expert groups, etc.

Approximately 80 CPUE series were compiled and can be broken down as follows depending on the ORP or Commission to which they are submitted:

AREA:	No of series
ICES	49
CECAF	11
ICCAT	6
CFCM	14

Of these, roughly 28 series are used for the calibration of analytical fishing ground models, 17 for production models and 39 for trend analyses in their respective fishing grounds. Details are provided in annex I.



5. Module C – Fishing Capacity.

The minimum programme laid down in the Commission Regulation will be implemented in order to take stock of the number of vessels in each segment of the fleet and their mean parameters.

The data will be taken from the Community Fleet Register and the centralised SGPM database and will be updated once yearly. Data regarding gear type will be obtained from the national censuses containing information on vessels or, failing that, from the data on fishing permits issued.

Individual data (number of vessels, GT, power in kW, age) will be grouped by means of a computer programme according to the following disaggregation levels:

Total length: < 12 metres, between 12 and 24 metres, between 24 and 40 metres, over 40 metres.

Gear types:

- Mobile gears: (demersal trawl, seines, dredges, polyvalent).
- Passive gears: (gears using hooks, gill nets, fish pots, polyvalent).
- Polyvalent gears (combining mobile and passive gears).

6. Module D – Fishing effort.

The data called for in the minimum programme laid down in the Commission Regulation will be collected and processed with the exception of the fuel consumption parameter, which will only be collected in the case of two Autonomous Communities via surveys as part of the pilot project on economic data collection. Fishing effort data will be collected and organised in accordance with required parameters and disaggregation levels.



Disaggregated data will be obtained in two ways:

For vessels larger than 10 metres, the information will come from log-books and from the Community fleet register concerning:

- Fishing days in each zone.
- Fishing power measured in terms of kW and/or GT as required.

For vessels under 10 metres in length, the effort is calculated from the data obtained from the sales notes while bearing in mind that each note corresponds to a fishing day at the fishing ground to which the vessel is assigned.

The data thus obtained will be included in the database with the minimum aggregation level required by the Regulation, which is as follows:

- Global fishing effort per gear type in accordance with the gear types globally defined in Appendix VIII of the Commission Regulation.
- Individual fishing effort by segment: Global fishing effort is divided while bearing in mind the length categories in Appendix III of the Commission Regulation.

For specific fishing efforts, those days on which the catches of species listed in Appendix VI of the Commission Regulation surpass the levels indicated therein are aggregated.

In any case the level of geographic aggregation will be level 3 of Appendix I of the Commission Regulation.

Data collection will be exhaustive in the case of vessels over 10 metres. In the case of surveys (fuel consumption) and sampling (vessels < 10 m), precision levels are set at level 2, except for specific effort where level 1 is the norm.



7. Module E – Catches and Landings

Landings

Spanish fleet catch and landing data is gathered and processed globally and disaggregated in accordance with the parameters laid down in the minimum programme. Furthermore, data concerning discards will be obtained for the stocks listed in Appendix XII, and likewise data concerning catches of recreational fisheries referred to in Appendix XI.

Basic data are obtained in several ways:

* For vessels over 10 metres, data are taken from entries in the log-book, landing declarations and sales notes.

These data are collected by personnel specifically engaged by the SGPM for that purpose from the public company TRAGSATEC. Log sheets and landing declarations are collected and recorded on a daily basis from the vessels entering port, thereby assuring collection of 100% of the catch and landing information in this sector.

These data are recorded in a computer application and the information is uploaded daily to the centralised database at the SGPM.

* A very high percentage of vessels under 10 metres sell at the fish market and their catches are recorded in the sales notes of each fishermen's association. These sales notes are compiled by the regional governments and periodically remitted to the central administration where they are likewise added to the centralised database. The sales notes provide details concerning the specific makeup of each vessel's catch but not the place of origin or gear type employed. However, these latter data may be obtained from the database by cross-referencing the information on the sales note with the fleet census tables containing information on the fishing grounds and gear types of each vessel.



Tuna Farming

Activities have centred around research into bluefin tuna (BFT) reproduction within the framework of a European research project and on participation in the International Working Group CGPM/ICCAT on Sustainable Tuna Farming in the Mediterranean.

With respect to the former, the IEO is the coordinating body of the REPRODOTT Project (Q5RS-2002-01355): “Reproduction of the Bluefin Tuna in Captivity – A feasibility study for the domestication of *Thunnus thynnus*”. Nine institutions from 7 Mediterranean countries participate in the said project, including a bluefin tuna farming company located in Murcia (SE Spain). The aim of the project is to broaden the knowledge base of the reproductive physiology of the bluefin tuna, both wild and in captivity, and to develop methods by which to successfully reproduce this species in captivity.

The SGPM undertakes monitoring and specific control of bluefin tuna catches. In this connection, control of catches and transformation begins with the Atlantic tuna traps, is followed by Mediterranean seiner and longline activity and concludes with transformation operations involving the fattening of tuna at Mediterranean farms at the end of the year. These data are obtained from logbooks, landing sheets, data remitted by the Autonomous Communities, sales notes and export documents.

Discards

Discards will be assessed by means of on board sampling systems for those species included in Appendix XII of the Commission Regulation and listed below.

Annual discard estimate needs by zone and species are as follows:

	SPECIES	AREA: ICES
Haddock	<i>Melanogrammus aeglefinus</i>	I, II
Haddock	<i>Melanogrammus aeglefinus</i>	VI
Haddock	<i>Melanogrammus aeglefinus</i>	VII, VIII



Pollock	<i>Pollachius virens</i>	I, II
Whiting	<i>Merlangius merlangus</i>	VI, VIIb-k, VIII
Hake	<i>Melluccius merluccius</i>	VI, VII, VIIIa,b,c, IXa
Plaice	<i>Pleuronectes platessa</i>	VIIIe-g
Cod	<i>Gadus morhua</i>	I, II
Norway lobster	<i>Nephrops norvegicus</i>	FU 30

	SPECIES	AREA: NAFO
Cod (1)	<i>Gadus morhua</i>	2J3KL
Cod (1)	<i>Gadus morhua</i>	3M
Cod (1)	<i>Gadus morhua</i>	3NO
Shrimp	<i>Pandalus spp.</i>	3M
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO
Redfish	<i>Sebastes spp.</i>	3M
Redfish	<i>Sebastes spp.</i>	3LN
Redfish	<i>Sebastes spp.</i>	3O

SPECIES	AREA: Highly migratory species
<i>Auxis thazard</i>	All
<i>Euthynnus alletteratus</i>	All
<i>Istiophoridae</i>	All
<i>Sarda sarda</i>	All
<i>Sharks</i>	All
<i>Thunnus albacares</i>	All
<i>Thunnus obesus</i>	All

Having regard to the other populations listed in Annex XII of the Commission Regulation, stock is taken of all of the fishing grounds sampled, covering the most important Spanish fishing fleets, and estimates are declared every three years.

In the first two fishing grounds (ICES and DEEP SEA (ICES, NAFO)), sampling focuses on trawling techniques. In the case of large pelagic fisheries, observations will target large seiners and surface longliners.



In the case of vessels from other countries landing catches in Spain, obligatory sampling of CECAF area catches (Mauritanian waters) is rescinded starting in 2006. Notwithstanding the above, sampling will be carried out according to initial plans in the case of Spain. Sampling of the Community fleet landing catches in Gran Canaria will proceed as planned. This sampling of catches will be carried out by the IEO in port without any specific collaboration agreement between the states involved (Spain-Netherlands), as this was not deemed necessary by either party.

Estimation of discard volume will require the boarding of observers, which will entail a number of observer-months per fishing area. This is explained in summary form in the table below:

FISHING GROUND	AREA	Months of observation	
		2005	2006
ICES	VI, VII	8	8
	VIII a,b	3	3
	VIIIc, IXa	4	4
	IXa south	1	1
DEEP SEA	NAFO (3LM, NO)	28	28
	Hatton Bank (ICES XII, VIb)	8	8
	ICES I, II (Cod, shrimp)	9	9
	ICES XII, XIV (Redfish)	Together with length	Together with length
LARGE PELAGICS	Seiners (all areas)	20	20
	Longliners (all areas)	20	20
CECAF	Trawlers	8	8
MEDITERRANEAN	Trawlers and Seiners	4	4



Most of these work-months are undertaken by observers engaged for that specific purpose by the IEO (91 months), while a smaller proportion (22 months) is carried out by AZTI observers in accordance with the Collaboration Agreement concluded by the two bodies.

A total of 113 months is envisaged for 2006 as compared with 88 months in 2004. This increase is justified by the considerable increase in 2005 vis-à-vis earlier proposals both in terms of techniques and fishing grounds, leading to a substantial shift in the number of observation-months and an increase in the budget for on board observers and personnel carrying out scientific monitoring.

Justification of the envisaged observation-months is broken down as follows:

ICES:

The fishing grounds corresponding to ICES sub-areas VI, VII, VIII and IX are the most difficult to monitor given that most of the Spanish fleet fishes those waters using a wide array of techniques. Five different areas can be identified: Sub-areas ICES VI and VII and ICES divisions VIIIa,b, VIIIc and IXa.

Three different trawling techniques are employed in ICES sub-areas VI and VII: baca trawl for hake and black-bellied angler, baca trawl for flatfish and twin trawlers. Vessels make trips of between 10 and 15 days. A sample of 4 fishing trips per quarter would cover stationarity and would entail **8 months** of observation per year.

Two different trawling techniques are employed in Division VIIIa,b: baca and twin trawl. Vessels normally make trips lasting between a week and 10 days. A proposal could be made to cover a number of trips similar to the foregoing sub-areas, which would mean a total of **3 observation months** per year.

In divisions VIIIc and IXa, vessels tend to make 1- or 2-day trips, and therefore 2 observation-months per year as has been the norm over the last several years is insufficient. An increase of 2 is proposed, which would bring the total to **4 months** in 2006.



In division IXa south, *1 observation-month* (30 days) is undertaken per year to estimate annual Norway lobster discards. Since this is a mixed fishing ground, this observation time will be used for the triennial estimate of the species listed in the Regulation.

DEEP SEA FISHING GROUNDS:

ICES

- Area XII and XIV Redfish fishing grounds do discards at the same time as lengths and age, and work-months are included in that section.
- Two types of vessels work ICES sub-areas I and II: twin trawlers for cod and freezer trawlers for shrimp.

Currently, 8 twin bottom trawls target cod fisheries (mainly *Gadus morhua*) and the following non-target species: haddock (*Melanogrammus aeglefinus*), American plaice, Greenland halibut, etc. Shrimp fishery is conducted by freezer trawlers, whose activity is discontinuous and is undertaken in an area limited to the NW of Svalbard (ICES IIb) on seabeds at 200-500 m. The technique used at this fishing ground employs a shrimp net (40 mm) and separator grid to minimise the by-catch of other fish species. This activity is regulated in terms of the number of fishing days and number of vessels and 90% of the catch is by the Russian and Norwegian fleets.

Given that this fleet is not very large, monitoring of 3 trips (3 months per trip) would suffice. This would entail 9 observation-months per year.

- The Spanish Hatton Bank commercial fishery is a mixed bottom trawl fishery carried out by freezer trawlers in international waters of the Northeast Atlantic under NEAFC control (sub-area XII and ICES division VIb). 1994 marked Spain's first exploratory fishing in the area with commercial fishing commencing in 1996.

This fishery, with an IEO observer programme in place from the outset, operates at depths of between 800-1600 m, the principal catches being the roundnose grenadier (*Coryphaenoides*



rupestris) and Baird's smooth-head (*Alepocephalus bairdii*) accompanied by the Portuguese dogfish (*Centroscymnus coelolepis*) and other sharks, blue ling (*Molva dypterygia*), Greenland halibut (*Reinhardtius hippoglossoides*) and, to a lesser degree, other deep water species such as the black scabbardfish (*Aphanopus carbo*), etc. It should be mentioned that most of the landings of Baird's smooth-head in the ICES area are accounted for by Spain given that other countries discard this species.

Most vessels fish this ground intermittently as a supplementary activity depending on their fishing possibilities at other North-Atlantic fishing grounds, mainly NAFO and the Irminger-Reykjanes Sea. In contrast, for a small number of vessels, the Hatton bank is the main fishing ground. Beginning in 2004, 8 sampling months were envisaged for the Hatton Bank fishery fleet (ICES XII, VIb) with a view to complying with the sampling regulation for deep sea species, and this policy will continue in 2006.

NAFO

- The Spanish fishery in the NAFO Regulatory Area mainly targets Greenland halibut (*Reinhardtius hippoglossoides*), mostly in the 3LM division and alternating with ray fishing during the second half of the year in the 3 NO division, shrimp fishing in the 3LM division and other species in the 3 NO division. These commercial fisheries are operated by freezer trawlers in international waters, and in each one the fleet must use a different mesh size.

The main effort is at depths of over 600 metres using 135 mm mesh size. During the second quarter of the year a small part of the effort targets northern shrimp (*Pandalus borealis*) at division 3M using 40 mm mesh size. Thorny skate fishing (*Amblyraja radiata*) is mostly carried out in division 3N during the second half of the year using 280 mm mesh size. Species such as American plaice (*Hippoglossoides platessoides*), witch flounder (*Glyptocephalus cynoglossus*), yellowtail flounder (*Limanda ferruginea*) and redfish (*Sebastes* spp.) are caught as by-catches of the different fisheries.



On-board observers collect catch data by species, effort and haul to haul positions, sampling of length and total catch and discard and biological samples (otolith, gonads, etc.). In order to assure minimum coverage of techniques and divisions, 28 observation months per year must be covered.

LARGE PELAGICS:

There are two fleets targeting large pelagics which have an impact on the species and whose discards must be estimated as part of the minimum programme: large tropical seiners and surface longliners. The seiner fleet may, in turn, work a “target” or “free bank”. Both the seiner fleet and the surface longliners work the 3 oceans: Atlantic, Indian and Pacific. Bearing in mind that the estimates of catches and discards of the Pacific seiner fleet are conducted by the IATTC, meaning that no provisions need be made in this regard, estimates of discards must be made for the Atlantic and Indian seiner fleets for two fishing techniques. At least **20 observation months** need to be covered.

The longliners work 5 areas: North Atlantic, South Atlantic, Indian, Pacific and Mediterranean. Sampling of Mediterranean fisheries is carried out on a regular basis by IEO observers, as the aim of these on-board observers is to take biological samples for reproductive studies of bluefin tuna and swordfish. To properly cover these five areas a minimum of **20 observation months** are required.

CECAF:

The proposal is for **8 months** of on-board observation in 2006, broken down as follows:

- Four 20-day trips for the hake fleet, equivalent to 80 observation days.
- Four 20-day trips for the shellfish fleet, equivalent to 80 observation days.
- Four 20-day trips for the cephalopod fleet, equivalent to 80 observation days.

MEDITERRANEAN:

120 boardings will be made to monitor trawler and seiner fleets. Duration of the trips is one day, meaning that **4 work months** are needed.

In addition to physically recording on-board data, the responsible body must also allocate human resources for sampling design, contact with producer associations, shipowners and skippers to facilitate boarding of observers, sampling control, training of observers, drafting of manuals,



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analysis of biological samples taken on-board, processing of data collected on-board and drafting of reports. For this purpose, a total of **35 *scientist work months*** and **20 *technician work months*** are needed.



Conversion factors

The following table represents the conversion factors used to transform the landings processed into live weight landings for each species and type of process:

CONVERSION FACTOR CODES USED

21	Whole fish
15	Head off
19	Head off, gutted
13	Head off, gutted, tail off, with skin
14	Head off, gutted, tail off, skinned
18	head off, gutted, tail on and with skin (head off, gutted, frozen)
40	Head off, gutted, salted
17	Head off, skinned, gills off
22	Gutted
41	Body with tail (INICIO)
42	Body tail off (INICIO)
43	Body (gutted, skinless, tail off, fins off, ventral region removed)
1	Open, salted (salted, head off, gutted)
10	Tails
31	Skinless, boneless fillet
27	Machine fillet skin on
30	Skinless machine fillet
29	Skinless hand fillet
26	Hand fillet skin on
6	Fins and tails (sharks)
7	Wings with skin
4	Skinless wings
5	Loins
9	Skinless tubes
46	Skinless sheaths
47	Sheaths with skin
48	Liver
32	Roe
49	Heads

List of conversion factors

The following table presents the conversion indices updated for 2006 by species and according to type of processing.



8. Module F – Catches per unit effort of commercial fleets

In March 2003 the STECF established the CPUE series to be included in countries' Minimum Programmes, defining a total of 120 for Spain. However, the number of series included in the minimum programme for Spain has been revised in line with the SGRN December 2003 recommendation and can be found in Annex I of this proposal.

The expenses arising from this activity are not eligible for 2006 and therefore, despite the fact that the work was indeed undertaken, do not figure as expenditure attributable to the National Plan on the corresponding economic sheet.

9. Module G – Scientific evaluation surveys

Scientific Surveys of the Minimum Programme

The scientific surveys included in the minimum programme will be carried out. The continuity of previous surveys is assured.

Summary of the surveys envisaged for 2006:

- IBTS (VIIIc IXa)
- Sardine, Anchovy, H. mackerel acoustic survey
- BIOMAN
- MEDITS
- Flemish Cap
- Tuna Tagging (bluefin tuna)

Here are the details of each of the surveys assessed as priority 1 by the Commission Regulation in Appendix XIV. These surveys comply with minimum programme requirements and are as follows:



IBTS

The aim of the International Bottom Trawl Survey (IBTS) is to estimate the abundance of the main commercial and non-commercial demersal species, their geographical distribution patterns and hydrological data pertaining to the peninsular shelf in each area.

Two surveys were carried out: one in the northern zone, *Cantabrian Sea and Galicia* (ICES sub-area VIIIc and IXa north at depths of between 30 and 800 metres) and another in the southern zone, *Gulf of Cadiz* (ICES sub-area IXa at depths of between 30 and 800 metres).

The ship used for the surveys in Spanish waters was the oceanographic vessel “CORNIDE DE SAAVEDRA”, a 67 m stern trawler. A boca type (44/60) bottom trawl technique was used with a mean vertical opening of 2 m. Fishing was done only during the day in line with standard protocol established for IBTS surveys.

Sampling procedure and precision levels are defined in the International Bottom Trawl Survey handbook ICES CM 2000/D:07.

The data obtained are used for VPA calibration of demersal species of the ICES Southern Shelf.

The survey of the southern Gulf of Cadiz area was conducted in October and November and lasted for 20 days while that of the northern Cantabrian Sea area was conducted in September and October and lasted for 30 days.

Sardine, anchovy, h. mackerel acoustic survey

The campaign, known as PELACUS 0406, will be conducted on board the B/O Thalassa. The aim of this project is to assess the anchovy and sardine stocks in the ICES area in order to gain a clearer understanding of the dynamics of these populations and to improve upon analytical evaluations.

Within the framework of this project, the IEO and the IPIMAR will coordinate surveys where the register (the taking) of acoustic and egg data will be combined to provide synoptic coverage.



***Moreover, this study also includes the collection of data, continuously and at permanent stations, on auxiliary variables (T, S, fluorimetry, egg, plankton) the most important of which will be the distribution and abundance of sardine eggs. The Spanish and French shelves will be surveyed by the same vessel (Thalassa), while the Portuguese shelf will be surveyed by the N/I Noruega.

The IEO commenced its sardine acoustic surveys in 1983. Since 1986 these surveys have been conducted in the spring (March to May) on board the B/O "Cornide de Saavedra" except in 1990 and 1995. Moreover, in 1994 and from 1995 to 2003, Portugal also conducted a survey at the same time as Spain's in its territorial waters and in the Gulf of Cadiz. The two series of surveys are used as independent indices of stock abundance for VPA calibration in analytical estimation of stock size.

Objectives: To obtain abundance indices of the main small pelagic species of commercial interest, the geographic distribution patterns of eggs, adults and plankton components and hydrological data for the area.

Survey area: The area to be surveyed is the water layer over the continental shelf of Galicia and the Cantabrian Sea between the northern border with Portugal and the French border. Northern Portuguese waters (41°27' N – 09°13' W ; 41°51' N – 08°56' W). Spanish coast (41°59' N – 08°55' W ; 43°20' N – 01°56' W). French coast (43°24' N – 01°45' W ; 44°05' N – 01°24' W).

Dates: March – April 2006

Methodology: Daytime acoustic sampling at a speed of 10 knots using 60 parallel transects perpendicular to the coastline at 8 nautical miles from one another.

Vessel: B/O "Nuevo Thalassa"

Gear type: for identification fishing a large-mesh (72/70) pelagic trawl is employed with Morgere-type v-shaped doors and a purse line.

Hydrographic sampling: Using a CTD Seabird-25 system.



BIOMAN (AZTI Agreement)

The aim of the BIOMAN survey is to estimate the spawning stock biomass of the Bay of Biscay anchovy using the daily egg production method. Throughout the survey, deep sea fishing of anchovy is undertaken to determine fecundity and other biological parameters, and plankton fishing to determine the egg production of this population.

The survey was conducted by two vessels from 1987 to 2003: one concentrating on the collection of plankton samples and the other, a commercial purse seiner hired for this purpose, focusing on the catch of adult anchovy. In 2005 the survey will be conducted on board the B/O Vizconde de Eza. This vessel is able to perform both duties (fishing of adults and plankton). During the first survey on board the said vessel in 2004, which had a planned duration of 20 days, it was found that performing both activities on board the same vessel required more survey days. Therefore, 25 days at sea are envisaged for the 2006 survey. The plan is to collect approximately 500 plankton samples and 30 adult samples using a pelagic trawl.

This survey is conducted in coordination with the PELGAS acoustic survey carried out by IFREMER on board the B/O Thalassa, supplying adult anchovy samples caught at the appropriate time and area. Likewise, commercial fleet vessels provide samples as needed.

An estimate in tonnes of anchovy egg biomass is made from the survey results, and the number of anchovies by age is obtained. These data are used as an absolute index in the assessment of the state of this population, which is carried out on an annual basis by the ICES Working Group on Mackerel, Horse Mackerel, Sardine and Anchovy (WGMHMSA).

The survey budget includes sample processing and analysis (sifting of anchovy eggs from plankton samples, biological processing of adult samples, preparation and reading of otoliths). Processing of anchovy gonads to estimate population fecundity is envisaged in Module I (other biological sampling). Assessment activities over and above survey results themselves are not included.

Survey stipends include direct salary costs for the 25 days of the survey and take into account the specificities of work at sea (holiday working and longer working hours).



MEDITS

The aim of the MEDITS survey is to estimate relative abundance indices (in terms of number and biomass) of the main demersal species.

The work consists in identifying the distribution by length of fish, crustaceans and molluscs of fishery interest and likewise gathering biological data concerning main commercial species.

Objectives: To obtain abundance indices for the main demersal species of commercial interest, geographical distribution patterns and hydrological data of the peninsular shelf and the Spanish Mediterranean shelf.

Survey area: The survey area is the Spanish peninsular continental shelf and slope between the Strait of Gibraltar and Cape Creus at depths of between 30 and 800 m.

Dates: May and June 2006;

Duration: 36 days

Methodology: Random stratified bottom trawl sampling.

Vessel: B/O "CORNIDE DE SAAVEDRA"

Gear type: GOC 73 with large vertical (3.5 m) and horizontal 21.5 openings; 40 m groundrope and 32.2 m footrope with floaters and 20 mm mesh size at the top.

Hydrographic sampling: Using a CTD Seabird-25 system at the end of each haul, supplemented by extra stations during the night to achieve greater coverage.

Flemish Cap Groundfish survey

The 2006 Flemish Cap Survey is designed as a stratified random bottom trawl prospection following the methodological specifications laid down by the NAFO. The aim is to estimate the biomass and



abundance of demersal populations and to analyse the demographic structure and different biological parameters of the most important species, and likewise the oceanographic conditions of the Bank.

The area to be studied is the Flemish Cap Bank (NAFO division 3M) up to a depth of 1400 metres, and the swept-area method will be used to calculate biomass as in previous years.

This survey is the eighteenth in the series initiated by the EU in 1988 and the fourth within the framework of the national data collection and management programme necessary for the operation of the Common Fisheries Policy. The participating institutions since the commencement of the series are the Instituto Español de Oceanografía (IEO), the Instituto de Investigaciones Marinas (CSIC), the Instituto de Investigaç o das Pescas e do Mar (IPIMAR) and the Instituto Tecnol gico Pesquero y Alimentario (AZTI).

The reason for the change in the survey vessel two years ago (the B/O Vizconde de Eza replaced the B/O Cornide de Saavedra) was the enlargement of the survey area to include strata at depths of up to 1400 m. This led to an improvement in the Greenland halibut index, which today is the area's most important commercial species.

This year 53 days are programmed on-board (Vizconde de Eza), 35 of which are effective fishing days while 18 days are used for round trip travel (St. Johns and Vigo).

The gear employed will be the same as has been used throughout the history of the series (Lofoten). 195 hauls are envisaged, 120 of which will be undertaken at depths of less than 730 m and 75 at greater depths up to a maximum of 1400 m.

Tuna tagging (bluefin tuna) (Idem 2005)

In this project the tagging of bluefin tuna juveniles is proposed at several points in the Atlantic and Mediterranean. The plan is to carry out large-scale conventional tagging, 4 annual surveys, with the aim of studying the tropical migrations to the Bay of Biscay, quantifying mobility between different areas and estimating fidelity to the birthing area in the Mediterranean. The idea is also to use a reduced number of electronic tags. This project will aid in improving the assessment and



management of this fishery resource, for which it is necessary to ascertain whether the Bay of Biscay's relative abundance index is a representative index of stock recruitment (this juvenile index is the only one currently in use in the calibration of the model employed in the assessment of Eastern and Mediterranean stock), to quantify movements between the different areas and to estimate growth and mortality by natural causes. This project is in line with the resolutions and recommendations of the Commission and the Standing Committee for Research and Statistics of ICCAT. Tagging will be carried out by hired professional live bait vessels, which is one of the few fishing techniques suited to efficient tagging, the Spanish fleet being the only one still active in Europe.

A commercial vessel from the Hondarribia Port, traditionally fishing bluefin tuna, will be hired for 30 days for the bluefin tuna tagging survey in the Bay of Biscay. The general characteristics of these types of vessels are set out in the cost table. Given that this is a hired vessel, it does not appear relevant to list the daily costs called for in the table (fuel, oil, salaries, food, maintenance, etc.) since the vessel covers all of these costs. The established price (5000 EUR/day) is a standard one commonly used for the hire of these types of vessels.

The Commission organised a coordination meeting for the tagging of Mediterranean and Atlantic tuna from 4 to 6 April 2005 in Bari (Italy) for representatives from Ireland, Portugal, Spain, Italy, Greece, Cyprus, and the EU. The results of this meeting will be used as a guide for the work undertaken in 2005 and 2006.

Having regard to the requirements of future tagging surveys laid down by the SGRN, these should be discussed and established at the European coordination meetings in Bari in 2005 and planned for Malta in 2006. In any case, the appropriateness of the bluefin tuna assessment was already justified in the Spanish proposal, and its usefulness in terms of assessment and management in the past is clear in a number of fields: migrations – migratory behaviour – stock definition; growth – estimate of catches by age; and mortality (Rodríguez-Roda, 1964; Mather et al., 1974; Cort, 1990; Turner and Restrepo, 1994; Mather et al., 1995; Rodríguez-Marín et al., 2004).

Scientific Surveys of the Extended Programme



Below are the priority-2 surveys set out in the same appendix, whose aim is to study species subjected to recuperation plans. It is requested that the requirements of the Extended Programme for these surveys be included as part of the Minimum Programme.

These are as follows:

ARSA, for estimation of abundance indices of demersal species in the Gulf of Cadiz affecting the recuperation plans of southern stocks of hake and Norway lobster.

IBTS "PORCUPINE 2006", justified by virtue of having the northern stock of hake among its target species.

3NO Groundfish survey ("PLATUXA) for the estimation of abundance indices of stocks of Greenland halibut and other species. This year it is planned to enlarge the survey to include area 3L.

ECOMED. Assessment survey of anchovy and sardine using acoustic methods in the Spanish Mediterranean.

ARSA

The aim of the ARSA series of Bottom Trawl Surveys is to estimate the abundance of the main commercial and non-commercial demersal species, their geographical distribution patterns and hydrological data pertaining to the peninsular shelf of the Gulf of Cadiz. These are undertaken in the southern area, Gulf of Cadiz (ICES sub-area IXa at depths of between 30 and 800 metres).

The vessel used is the oceanographic ship "CORNIDE DE SAAVEDRA", a 67 m stern trawler. BAKA bottom trawl gear is used, working during the day with trawls of one hour.

The area to be surveyed (7,224 km²) corresponds to the continental shelf and slope (30 - 800 m) in Spanish waters of the Gulf of Cadiz (ICES sub-area IXa). Sampling procedure and precision levels are defined in the International Bottom Trawl Survey handbook ICES CM 2000/D:07. The survey is carried on during the month of March with an average duration of 12 days.

PORCUPINE 2006

The aim of the International Bottom Trawl Survey (IBTS) is to estimate the abundance of the main commercial and non-commercial demersal species, their geographical distribution patterns and



hydrological data pertaining to the peninsular shelf in each area. The “*PORCUPINE 2006*” survey is conducted in Irish waters (ICES sub-areas VIIbk at depths of between 200 and 800 metres).

The Porcupine survey is conducted on board the “*VIZCONDE DE EZA*”, a 53 m stern trawler. Fishing is carried on only in daytime in line with standard protocol established for IBTS surveys. Sampling procedure and precision levels are defined in the International Bottom Trawl Survey handbook ICES CM 2000/D:07. This survey is conducted in September and lasts 30 days.

3NO Groundfish survey (PLATUXA 2006)

This survey is the 12th of the series initiated in 1995 and the first within the framework of the national data collection and management programme necessary for the operation of the Common Fisheries Policy. The IEO is responsible for survey planning. Twenty-five effective fishing days are programmed this year (B/O Vizconde de Eza), travel days being included in the Flemish Cap survey given that the same vessel will be employed. Methodology is described in Paz et. al. 2002 covering a depth range of between 50 and 1500 metres. The gear used is the so-called “Campelen”. The survey includes hydrographic sampling performed with an SBE 25 SEALOGGER CTD. Provisions are made for 120 hauls. Personnel expenses include organisation and logistics, work at sea, sample processing and analysis, biological processing of samples and drafting of the survey report. IEO personnel take part in the survey (3 researchers and 2 preparators) plus 9 expert observers with experience in surveys of this nature.

The “Platuxa” 2006 survey is designed as a continuation of the series initiated in 1995 with the commercial vessel B/C Playa Menduiña which was replaced, subsequent to calibration in 2001, by the B/O Vizconde de Eza. The aim is to calculate abundance indices and gain insight into the structure of commercial species populations in the area under NAFO regulation, particularly divisions 3N and 3W. To date the survey has been fully funded by the Spanish government and is rated priority-2 under Commission Regulation 1639/2001.

This survey will be performed using the same protocol and means as in former years in the area under NAFO regulation: divisions 3NW in line with the survey plan an outline of which is presented below.



Objectives:

Estimate abundance indices and biomass of the area's main species: American plaice (*Hippoglossoides platessoides*), yellowtail flounder (*Limanda ferruginea*), Greenland halibut (*Reinhardtius hippoglossoides*), thorny skate (*Amblyraja radiata*), cod (*Gadus morhua*) and redfish (*Sebastes spp.*).

Ascertain the population structure of the main commercial species some of which are under moratorium or are subject to a recovery plan.

Study the diets and trophic relationships of the main species.

Enlargement to 3L.

This year it is proposed to enlarge the Platuxa survey to include division 3L, since that is where the fisheries produce their maximum yield.

Prospection in this area commenced in 2003 subsequent to the Flemish Cap survey on board the B/C Vizconde de Eza and proceeded for 6 days and 40 hauls. The survey continued in 2004 with 58 hauls over 9 days.

Objectives. Prospection in the division 3L regulation area has enabled the extension of the spatial coverage of the research carried out to date by the IEO in the NAFO area, taking in an area of special interest for the Spanish Greenland halibut fishery. The aims of this new research project are as follows:

- a. Calculate the abundance indices, biomass and population structure of Greenland halibut and its main commercial accompanying species.
- b. Obtain biological information regarding main species.
- c. Continue trophic studies initiated during earlier surveys.
- d. Obtain oceanographic data concerning temperature and salinity.

Material and Methods

The methodology is the same as that employed in the Platuxa series surveys; i.e. stratified random sampling with effective 30-minute bottom trawls, following standard NAFO stratification



and calculating abundance indices and biomass using the swept-area method. The same vessel (B/O Vizconde de Eza) and same gear (bottom trawl with Campelen 1800-type doors) and the same cables, bridles, doors and top mesh will be employed.

Scientific personnel:

The scientific personnel taking part in this survey consist of 13 graduates in addition to the survey chief.

ECOMED 2006

The ECOMED acoustic assessment surveys have been undertaken in a standardised manner from 1990 to 1993 and from 1995 to 2001 and again in 2003. Up until 1996 they focused on biomass and abundance assessment of sardine and anchovy. As of that year an important shift occurred in the quantitative makeup of the populations of small pelagics: in tandem with a decrease in the abundance of the target species, others increased such as the round sardinella *Sardinella aurita*, the bogue *Boops boops* and the Mediterranean horse mackerel *Trachurus mediterraneus*. These species are of little or no commercial value but are nonetheless important from a biological standpoint given that they coexist in the same area and interspecific competition among them could become a factor. In the year 2000 the estimated biomass of these species was three times greater than that of the more commercial species. In 2003 an increase in the biomass of the mackerel tuna *Scomber japonicus* was detected and this species was thus also included among those evaluated.

The ECOMED surveys are performed during the last quarter of the year (November-December) coinciding with the period of anchovy recruitment and the beginning of the sardine egg-laying period in the Mediterranean.

Objective: Obtain abundance indices of the main small pelagic species of commercial interest.

Survey area: The continental shelf along the entire Spanish Mediterranean coast from the border with France to the Strait of Gibraltar between isobaths of 30 and 200 m.

Dates: November-December 2006



Methodology: Daytime acoustic sampling by means of parallel transects perpendicular to the coast separated by a distance of 8 nautical miles. Sampling performed between 06:00 and 18:00 h (official time GMT +1) at a speed of approximately 10 knots. In areas where the shelf is very narrow, the separation between transects is 4 nautical miles and their minimum length is 5 nautical miles. The transects cover the area between isobaths of 30 and 200 m. A total of 1267 miles distributed in 128 transects is surveyed.

Vessel: B/O "Cornide de Saavedra"

Gear type: Pelagic gear with a vertical opening of 24 m (sailing at 4 knots) and equipped with an FR-3000 probe will be used to catch the target species.

The ECOMED 2006 survey will be undertaken on board the B/O Cornide de Saavedra. The aim of this survey is the assessment of anchovy and sardine stocks in the Spanish Mediterranean.



Summary table: Minimum Programme Surveys

Country: SPAIN

Reference year: 2006

Name of survey	Aim of survey	Area covered	Period	Days at sea Planned	Sampling activities Type	Planned
IBTS (VIIIc IXa)	Estimate of abundance indices of different species	VIIIc, IX a (ICES)	Sep-Oct	30	Bottom trawl	120
					Hydrographic sampling	120
IBTS (IXa)	Estimate of abundance indices of different species	Ixa (ICES)	Oct-Nov	20	Bottom trawl	40
					Hydrographic sampling	40
					Acoustic sampling	60
Sardine, Anchovy, H. mackerel acoustic survey "PELACUS"	Assessment of anchovy and sardine stock. Abundance indices	Continental shelf of Galicia and the Cantabrian Sea.	Mar-Apr	27	Pelagic trawl	75
					Hydrographic sampling	
BIOMAN	Estimate the spawning biomass of the anchovy	Bay of Biscay		25	Plankton fishery	500
					Pelagic fishery	30
MEDITS	Estimate of abundance indices of different species	Continental shelf and slope of the Spanish Mediterranean	May-Jun	36	Bottom trawl	120
					Hydrographic sampling	120
Flemish Cap Groundfish survey	Estimate of biomass and abundance of different species	3M (NAFO)	Jul-Aug	53	Bottom trawl	195
					Hydrographic sampling	150



Tuna tagging (bluefin tuna)	Tagging of bluefin tuna juveniles	Atlantic and Mediterranean	65	Tagging	4160
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Summary table: Extended Programme Surveys

Country: SPAIN
Reference year: 2006

Name of survey	Aim of survey	Area covered	Period	Days at sea		Sampling activities	
				Planned		Type	Planned
ARSA 2006 (IXa)	Estimate of abundance indices of different species	IX a (ICES)	Mar	12		Bottom trawl	40
						Hydrographic sampling	40
PORCUPINE 2006 (VIIbk)	Estimate of abundance indices of different species	VIIbk (ICES)	Sep	30		Bottom trawl	120
						Hydrographic sampling	120
3NO Ground fish survey PLATUXA 2006 + 3L	Estimate of abundance indices	3NO (NAFO) + 3L	May-Jun; Aug	25+26		Bottom trawl	120+70
						Hydrographic sampling	120+70
ECOMED 2006	Acoustic assessment	Mediterranean 1.1 FAO	Nov-Dec	33		Pelagic trawl	65
						Transects	128



10. Module H – Length and age sampling.

Calculation of sampling numbers by species and division was based on official landing data in each statistical division for the period 2002-2004 (Source SGPM). The number of samplings per tonne landed and the number of individuals per sampling, as recorded in Appendix XV of the Commission Regulation for both length and age, were applied to these data. The results for each zone are shown in Annex V of this Programme.

The number and dispersion of ports of landing and the different unloading schedules depending upon the gear employed makes it very difficult for IEO personnel to undertake this sort of sampling and therefore, ever since the mid 80's, the IEO has offered public service contracts for periods of 1 or 2 years to perform size sampling duties at the different ports.

In the case of deep sea fisheries, length sampling must be performed by scientific observers on board one of the commercial fleet's vessels given that these vessels undertake long trips (several months) during which they visit different statistical divisions, and therefore the catches corresponding to different months and divisions are mixed together in their holds. Moreover, during the trip the catch is processed on-board (it is gutted, filleted, salted or frozen, etc.). This makes it impossible to separate the catch according to place of origin or perform length sampling at ports of landing.

The following clarifications should be made for each area:

ICES:

- *Raja spp*: Exemption is requested given that this species is already processed at the time of landing (wings and skinless) and is not accessible for sampling.
- *Pagellus bogaraveo* + *sea breams*: In light of the significant variations in sampling levels during the period that this Regulation has been in force - 32 samplings with 1579 individuals in 2002 in contrast with zero in 2003 and 2 samplings with 119 individuals



envisaged for 2006, which could indicate a large degree of uncertainty in respect of official catches given that this is the last year under this Regulation - before new criteria are applied for the selection of the sampling level and with a view to upholding a certain degree of stability in sampling levels: the sampling requested for the 2006 estimate is an average of the years where sampling was actually done including that envisaged for 2006. According to this criterion, 18 samplings with 50 individuals each should be done in 2006 (2002:32; 2004:29; 2005:9; 2006:2).

- White shrimp (*Parapenaeus longirostris*): In light of the significant variations in sampling levels during the period that this Regulation has been in force - 76 samplings with 15226 individuals in 2002 compared with 22 with 4334 individuals envisaged for 2006, which could indicate a large degree of uncertainty in respect of official catches given that this is the last year under this Regulation - before new criteria are applied for the selection of the sampling level and with a view to upholding a certain degree of stability in sampling levels: the sampling requested for the 2006 estimate is an average of the 2 previous years together with the number that would be required for 2006 in accordance with official catches. In accordance with this criterion, 40 samplings with 200 individuals each should be done in 2006 (2004:41; 2005:59; 2006:22).
- Squid (*Loligo spp*): In light of the significant variations in sampling levels during the period that this Regulation has been in force - 23 samplings with 4666 individuals in 2003 in contrast with zero in 2006 given that there are no catches, which could indicate a large degree of uncertainty in respect of official catches given that this is the last year under this Regulation - before new criteria are applied for the selection of the sampling level and with a view to upholding a certain degree of stability in sampling levels: the sampling requested for the 2006 estimate is an average of the 3 previous years. According to this criterion, 20 samplings with 200 individuals each should be performed in 2006 (2003: 23 samplings; 2004:23; 2005:14).
- Anchovy (VIII): Given the current situation (2005) of the stock at VIII and what a 60% reduction in the sampling levels of this species could mean for the quality of the monitoring of this species and the coverage of sampling, it is requested that 2005



sampling levels be maintained, i.e. 76 and 3813 individuals instead of 29 samplings and 1474 individuals, which would be called for in accordance with catches.

Two further samplings will be added to the month to take in hake, black-bellied angler, megrim and Norway lobster landed by foreign fleets from other Member States. Sampling of these fleets will be coordinated within the framework of the regional Working Groups organised by the Commission.

AGES

- Hake: Reading of this number is not feasible (6270 otoliths). The high number of otoliths for 2005 is due to the application of the extended programme (D2:1 sampling of 100 individuals for every 200 t) given that this species is under a recovery plan. Maintenance of the minimum programme in respect of age sampling is requested (E3:1 sampling of 50 individuals for each 500 t) for this species and stock because the number of otoliths obtained is deemed sufficient for a good representation of age allocation of a large portion of the catch. The precision levels of the catches by age of this stock during 2004 were ???. This figure was derived from approximately 2700 otoliths thus justifying staying with the minimum programme.
- In 2006 an international exchange on Northeast Atlantic mackerel otolith reading is planned as per the recommendation by the Working Group assessing the stocks of mackerel, horse mackerel, sardine and anchovy (ICES, 2005). The IEO and AZTI will participate in the said exchange and two people from each organisation will be involved (1 university graduate and 1 technical assistant for each organisation). Each individual from each organisation will spend 7 days on this exchange.
- As concerns length and age sampling requirements of *Trachurus trachurus*, areas VIIIc and IXa have been considered jointly because in the regulation these areas are listed as belonging to the southern stock of the said species because this stock was so



defined up until 2004. Stock units have now been changed (ICES, 2005) and division VIIIc belongs to the western stock and only division IXa belongs to the current southern stock.

DEEP SEA:

ICES

- As regards arctic cod (*Gadus morhua*), sampling methodology does not include length sampling by sex because there are no significant differences between sexes and consequently sex ratio studies cannot be included as part of biological sampling.
- For the species *Coryphaenoides rupestris* (ICES areas V, VI, VII, VIII, IX, X, XII and XIV), an inconsistency has been noted in the Commission Regulation regarding the number of tonnes and individuals of ages to be sampled (Length = F3 and ages = C2), and therefore a balance is requested in terms of age and length sampling.
- The species *Alepocephalus bairdii* does not appear on the species list (Appendix XII) of the Commission Regulation's minimum programme.
In Council Regulation (EC) No 2347/2002 establishing the requirements applicable to the fishing of deep sea stocks, *Alepocephalus bairdii* is included as a deep sea species.
Given that the Hatton Bank fishing ground is at a depth of between 800-1600 m and that the principal species caught there are the roundnose grenadier (*Coryphaenoides rupestris*) and Baird's smooth-head (*Alepocephalus bairdii*), we included Baird's smooth-head with the same length samplings as the roundnose grenadier.
- The previously mentioned redfish fishery of ICES divisions XII and XIV was not addressed in that section, and length sampling should be organised for this stock. This is a seasonal fishery and Spanish vessels make trips lasting four months.

Over the last several years redfish have been fished in two very different areas in terms of location and time: ICES area XIV in the second quarter and ICES area XII both inside



and outside the Greenland EEZ, and likewise in NAFO divisions 1F and 2J. It is believed that two on-board scientific observers for a period of three months each would be sufficient to ascertain the length makeup of the Spanish catch.

In the case of the species *Sebastes mentella* (ICES areas V, VI, VII, VIII, IX, X, XII and XIV), the Commission Regulation calls for age sampling (E3). Otoliths are currently gathered in this fishery but are not read because the working group (NWWG) does not use age in the evaluation, due largely to the fact that no key was found acceptable by all members of this group.

NAFO

The number of samplings and individuals called for in the regulation for the NAFO area in respect of many species (American plaice [3M], witch flounder, yellowtail flounder, the roundnose grenadier, redfish [3LN] and skates) may not be met as in previous years due to:

- Official catches declared (underestimated)
- Species under moratorium and all catches are by-catch

CECAF:

Community fleet landings at the port of Las Palmas will be sampled by Spain in coordination with the authorities of the countries of origin. A sampling proposal is presented in Annex IX.

Sardina pilchardus: Exemption is requested for landings of the Spanish fleet due to the fact that no agreement has been reached with Morocco.

A number of these fisheries are contemplated in the section addressing estimates of discards, which as well as estimating discards (see Module E, Discards) provides data on length samplings of the different species retained and very precise information regarding CPUE.



MEDITERRANEAN:

In light of amendments to Appendix XV of the Commission Regulation (set forth in Regulation (EC) No 1581/2004) for the Mediterranean, particularly in respect of division 1.1, there have been significant modifications, such as:

- Compulsory determination of the length and age makeup of the catches of new species which are:

SPECIES	
Glass eel	<i>Anguilla anguilla</i>
Dolphinfish	<i>Coryphaena hippurus</i>
Dolphinfish	<i>Coryphaena equiselis</i>
Common octopus	<i>Octopus vulgaris</i>

- Other species such as *Eledone moschata* are not listed.

Prior to analysing the number of samplings to be conducted and likewise the number of individuals based on application of the sampling requirements laid down in Appendix XV of the Commission Regulation to the average of the catches for the period 2002-2004, we would note the following:

- *A. anguilla*. There are no landing data available in the division
- *C. hippurus*. There are no landing data available in the division
- *C. equiselis*. There are no landing data available in the division

- *Eledone cirrhosa* and *Octopus vulgaris*: The catches of these two species are presented together in the official statistics, meaning that the sampling requirement was calculated from these aggregate catch data.
- *Lophius piscatorius* and *L. budegassa*. As in the previous example, there are no catch data available on each species individually and therefore the number of samplings



and the number of individuals for length and age were calculated from these aggregate data.

- *Mullus surmuletus* and *M. barbatus*. Catch data concerning these two species are also presented jointly.
- *Trachurus mediterraneus* and *T. trachurus*. The same goes for these species.

In general terms, the mean calculation of catches during the period considered (2002-2004) has declined significantly vis-à-vis the mean catches considered for calculation of the 2005 requirements (1998-2000). This difference is particularly noticeable for certain species such as black-bellied angler (230 t), horse mackerel (154 t) and mullet (27 t). The decline is so excessive that we would be excused from continuing with the sampling of these species based on the exemptions to sampling rules laid down in the Commission Regulation (letter H, section d). We believe that a mistake has been made in the entry or processing of the said catch data and therefore, in view of the importance of these species to the area and the loss that would ensue from failure to continue to broaden the knowledge base concerning these populations, we have decided to calculate the sampling requirements on the basis of the catch data submitted in the 2005 proposal.

Appendix XV continues to make it compulsory for division 1.1 to sample the species *Pagellus erythrinus* and *Dicentrarchus labrax* but, as is also the case for the newly incorporated species mentioned earlier, these do not appear in official catch data.

In order to conduct the age sampling requirements for each of the stocks listed in Annex V, a very large quantity of fish must be acquired (see species table, section 11-module I).

Length information for tropical tuna species will be obtained by means of a multi-specific sampling scheme whereby length structure is simultaneously obtained and the specific makeup of the catches estimated. With a view to optimising sampling, given that prior studies have shown Community seiner fleets (French and Spanish) to be homogeneous, the sampling strategy has been developed jointly for the two fleets. This has made it possible to



increase coverage while reducing personnel costs both in terms of the actual conduct of sampling (a single team is employed) and the supervision carried out jointly by the IEO, the French Institut de Recherche pour le Développement (IRD) and the Spanish fishery offices (see Module E: Catches and Landings).

11. Module I – Other biological sampling.

Annex VI of this proposal reflects Spain's commitments in respect of Appendix XVI of the Commission Regulation. Of the sum total of stocks listed, Spain must submit triennial information on 62 of them, which implies an obligation to conduct studies on between 20 and 22 of these stocks each year. Generally speaking, fish must be acquired for growth, fecundity and maturity studies of the following species and stocks:

Species		ICES Area
Anchovy	<i>Engraulis encrasicolus</i>	IXa, only Cadiz
Anchovy	<i>Engraulis encrasicolus</i>	VIII
Megrim	<i>Lepidorhombus boscii</i>	VIb, VIIchjk, VIIIabc, IXa
Megrim	<i>Lepidorhombus whiffiagonis</i>	VIb, VIIchjk, VIIIabc, IXa
Squids	<i>Loligo vulgaris</i>	VIIIc, IXa
Anglerfish	<i>Lophius budegassa</i>	VIb, VIIcjk, VIIIab
Anglerfish	<i>Lophius budegassa</i>	VIIIc, IXa
Anglerfish	<i>Lophius piscatorius</i>	VIb, VIIcjk, VIIIab
Anglerfish	<i>Lophius piscatorius</i>	VIIIc, IXa
Hake	<i>Merluccius merluccius</i>	VIb, VIIchjk, VIIIabc, IXa
Blue whiting	<i>Micromesistius poutassou</i>	VIIbc, IXa
Norway lobster	<i>Nephrops norvegicus</i>	Functional Unit
Octopus	<i>Octopus vulgaris</i>	VIIIc, IXa
Shrimp	<i>Parapenaeus longirostris</i>	VIIIc, IXa
Sardine	<i>Sardina pilchardus</i>	VIIIc, IXa
Mackerel	<i>Scombrus scomber</i>	VIIIc, IXa
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa
Seabreams	<i>Pagellus bogaraveo</i>	VIIIc, IXa
Horse mackerel	<i>Trachurus trachurus</i>	VIIIabc, IXa



Highly Migratory Species		Area
Albacore	<i>Thunnus alalunga</i>	All
Bluefin Tuna	<i>Thunnus thynnus</i>	All
Swordfish	<i>Xiphias gladius</i>	All
Shortfin mako	<i>Isurus oxyrinchus</i>	All
Blue shark	<i>Prionace glauca</i>	All

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Species		MEDITERRANEAN Area
Red shrimp	<i>Aristeus antennatus</i>	1.1
Octopus	<i>Eledone cirrhosa</i>	1.1
Anchovy	<i>Engraulis encrasicolus</i>	1.1,1.2
Anglerfish	<i>Lophius budegassa</i>	1.1
Anglerfish	<i>Lophius piscatorius</i>	1.1
Hake	<i>Merluccius merluccius</i>	1.1
Mullet	<i>Mullus barbatus</i>	1.1
Red mullet	<i>Mullus surmuletus</i>	1.1
Common octopus	<i>Octopus vulgaris</i>	1.1
White shrimp	<i>Parapenaeus longirostris</i>	1.1
Sardine	<i>Sardina pilchardus</i>	1.1
Med. Horse mackerel	<i>Trachurus mediterraneus</i>	1.1
Horse mackerel	<i>Trachurus trachurus</i>	1.1

Species		CECAF Area
Octopus	<i>Octopus vulgaris</i>	Atlantic EC
Squid	<i>Loligo vulgaris</i>	Atlantic EC
Cuttlefish	<i>Sepia hierredda</i>	Atlantic EC
White shrimp	<i>Parapenaeus longirostris</i>	Atlantic EC
Southern pink shrimp	<i>Penaeus notialis</i>	Atlantic EC
Hake	<i>Merluccius</i>	Atlantic EC

Supplementary biological sampling must be conducted in order to obtain growth equations in terms of length and weight, sexual maturity (macroscopic) and gender proportion.

In species where hard parts are extracted to determine age, the same individuals will be used to conduct biological sampling, which will be assessed in that section. In species where age sampling based on hard parts is not necessary, individuals will need to be acquired, which



will significantly raise the cost of this section. The assessment is included in the attendant economic sheet.

Spain has committed to estimating the annual fecundity of the Bay of Biscay anchovy of sub-area VIII and, on a three-yearly basis, that of mackerel, horse mackerel and sardine in divisions VIIIc and IXa and of anchovy in the Gulf of Cadiz (sub-division IXa South).



12. Module J – Economic data on fishing vessels.

The Ministry of Agriculture, Fisheries and Food is now carrying out a survey based on sampling to gain insight into the principal economic magnitudes of the Spanish extractive fishery sector (Economic Indicators for the Fishery Sector) included in the National Statistical Plan. The main goals are to ascertain the profitability of Spain's fishery fleet and to quantify the main macro-magnitudes of the fishery sector (extractive) following the methodology of the European System of Accounts (ESA95) (attached is a file with the methodology and questionnaire used). Business year 2001 is currently under study.

The aforementioned survey would basically cover the requirements laid down in the Community programme's module for assessment of the economic situation of the fishery sector, with reference to the extractive sector (fishing fleet) and as part of the required minimum programme.

The main characteristics of the survey are as follows:

1. Type of research. Research on the population is conducted through stratified random sampling of the statistical units by means of a questionnaire administered by direct interview of the informants.
2. Statistical unit refers to each of the vessel-fishing ground units (Spanish acronym BYC) included in the fishery authorisation lists compiled by the SGPM each year. According to 2001 data, 97.76 % of all vessels work at only one fishing ground, so in these cases the vessel coincides with the BYC. The remaining 2.24 % are vessels working other fishing grounds. In these cases, the BYC is a unit smaller than the vessel. It is used to ascertain profitability by fishing ground and technique in line with established strata.
3. Time and space characteristics. The survey is done on an annual basis coinciding with the calendar year. The research on each year begins in July of the year following and



concludes nine months later. The spatial factor encompasses the fishing grounds worked by the Spanish fleet and is divided into two large blocks: a) domestic waters encompassing the four fishing grounds located within the EEZ where Spain has sovereign rights as regards exploration and resource exploitation (Canary Islands, Gulf of Cadiz, Cantabrian Sea northeast and the Mediterranean); b) non-domestic waters (Community waters of area 27, third countries and international waters).

4. Population stratification (disaggregation levels). Population statistical units are distributed into 24 strata which are combinations of fishery areas and fishing techniques. Thirteen correspond to fishing grounds-techniques located in domestic waters and 11 to fishing grounds-techniques in non-domestic waters. Vessel length is not expressly included in existing stratification. Inclusion of the four levels of vessel length set out in the Community programme (Appendix III of Regulation 1639/2001) would theoretically entail multiplying the currently existing strata in the Ministry of Agriculture, Fisheries and Food (Spanish acronym MAPA) survey by four (vessel length levels) in order to maintain the equiprobability in the selection of units to be sampled and to avoid introducing an element of bias in the results with the required disaggregation. Notwithstanding the above, in practice doubling the number of strata would be sufficient to maintain the said equiprobability of the sample units. The increase in strata would in turn lead to an increase in the sample size and hence in the cost of the operation. In contrast, keeping the number of strata at 24 would skew sample selection equiprobability, thus introducing an element of bias in the results whose magnitude would be unknown but predictably not very high given that the said strata are related to vessel length. This alternative would have the advantage of keeping research costs stable.
5. Parameters. The survey questionnaire stipulates the parameters measured. The data called for in the Community programme are collected via this questionnaire with two exceptions: income by species and quarterly prices by species catch areas (level 3 disaggregation of Appendix I of Regulation 1639/2001). Data regarding species could be



collected by broadening the scope of the current questionnaire. Collection of price data with the required space and time disaggregation would entail significant modification in the sample design and size of the current survey.

6. Precision levels. Profitability, the main variable currently measured, is being researched at the national level with a minimum precision level of 5% error for the 95% confidence level. The error level for data disaggregation should not exceed 25% for the 95% confidence level. If the error attained in practice is higher than that envisaged, the sample size of the affected strata will be increased.
7. Survey costs. The annual survey execution cost totals €188,207.03 of which €179,467.03 corresponds to external technical assistance and €8,740.00 to Spanish government personnel costs. Field work preparation and supervision activities, travel to the informing units (shipowners), completion of questionnaires and the recording, validation and assignment of data are included under technical assistance expenses.

13. Module K – Data concerning the fish processing industry.

14. Databases

In accordance with the obligations established under the Control Regulation, data from already existing sources will be obtained from the fishery control database of the Secretariat-General of Sea Fisheries (SGPM). These data will be stored in databases specially created for that purpose for subsequent grouping and processing in line with the criteria laid down in the Commission Regulation. Moreover, the SGPM will design a global database of basic data for the storage of those data from the Spanish Oceanographic Institute and the Secretariat-General of Sea Fisheries. The said data will be entered in accordance with the



stipulations laid down by the Commission Regulation, and the database will be available for consultation by authorised users in accordance with the provisions of the Commission Regulation.

The data from on-board and fish market sampling and from the catch and effort series compiled by the IEO will likewise be stored in databases. The SIRENO application, used for data management, stores information from a large number of fish markets, from observers on board commercial vessels and from research surveys.

Information standardisation calls for an ongoing process of recoding and adaptation of data from local applications employed at the different ports. Once this process is completed, these data are uploaded using the appropriate filters and controls to preserve the quality of the information. The personnel performing these tasks provide support for processes involving aggregation, weighting and the compiling of reports or work sheets.

15. National and international co-ordination.

Spain plans to participate in the following working groups and international meetings concerned with coordination of methodologies for the collection of basic data:

Planned Meetings
1/Data collection
National co-ordination
2/ Data collection: Regional co-ordination
Baltic (2 meetings : 2004 and 2005)
Atlantic (North East)
Mediterranean waters
NAFO coordination meeting
3/ Planning Groups on data collection



PGCCDBS Plenary meeting ()
Workshop on age reading on Mackerel (to be decided) *
4/ Planning Groups on surveys at sea
WG on Acoustic and Eggs Surveys for sardine and Anchovy in ICES areas VIII and IX**()
ICES International Bottom Trawl Surveys Working Group (IBTS)()
ICES Working Group on Fisheries Science and Technology (WGFAST) ()
ICES Working Group on Mackerel and Horse Mackerel Egg Surveys (WGMEGS) ()
MEDITS (Mediterranean Trawl Surveys) Working group (.)
Planning Group for the Atlantic (North east) and Mediterranean tuna tagging (Malta ¿?)

* Recommended by the Working Group: on the Assessment of Mackerel, Horse Mackerel, Sardine and Anchovy ICES CM 2005/ACFM: In 2006 an international exchange on Northeast Atlantic mackerel otolith reading is planned as per the recommendation by the Working Group assessing the stocks of mackerel, horse mackerel, sardine and anchovy (ICES, 2005).

** This meeting is proposed in coordination with IPIMAR researchers from Portugal.

The international coordination meetings have not yet been agreed on by the Commission, and therefore we will have to wait for communication from the Commission before drafting the definitive table.

Owing to the complexity of Spanish fisheries, which include multiple fleets and sea areas, eligible meetings will have to be attended by more than two researchers per country. Consequently, exceptions are requested in respect of the number of participants at a certain number of meetings. Some of the meetings are also planned to be longer than 5 days.



MINISTRY OF AGRICULTURE,
FISHERIES AND FOOD

SECRETARIAT-GENERAL
SEA FISHERIES

ANNEX I

CORREO ELECTRÓNICO:

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CPUE LIST

ANNEX I

definition (gear)	species	start of series	main use 1995-2000			Biological sampling	last WG used	Recommended Funding		
			Tuning	Production model	Trend			by STECF/SGRN		
						length	ages	M.P.	E.P.	N
ICES	Atlantic shelf									
Purse- Seine	E. Encrasicolus IXa South	1988			yes			2002	☐	
Bottom trawl	Lepidorhombus boscii VIIIc	1986	yes					2002	☐	
Bottom trawl	Lepidorhombus Whiffiagonis VIIIc	1986	yes					2002	☐	
Bottom trawl	Lophius Budegassa VIIIc	1986	yes					2002	☐	
Bottom trawl	Lophius Piscatorius VIIIc	1986	yes					2002	☐	
Bottom trawl	Merluccius Merluccius VIIIc	1986	yes					2002	☐	
Bottom trawl	Nephrops Norvegicus VIIIc	1986	yes					2002	☐	
Bottom trawl	Lepidorhombus boscii VIIIc	1986	yes					2002	☐	
Bottom trawl	Trachurus trachurus VIIIc	1986	yes					2002	☐	
Bottom trawl	Lepidorhombus Whiffiagonis VII Northern	1984	yes					2002	☐	
Bottom trawl	Lophius Budegassa VII Northern	1984	yes					2002	☐	
Bottom trawl	Lophius Piscatorius VII Northern	1984	yes					2002	☐	
Bottom trawl	Merluccius Merluccius VII Northern	1984	yes					2002	☐	
“Baka” Otter trawl- Ondarroa - VIIIabd	Lophius Budegassa Division VIIa,b,d	1993	yes					2002	☐	
“Baka” Otter trawl- Ondarroa - VIIIabd	Lophius Piscatorius Division VIIa,b,d	1993	yes					2002	☐	
“Baka” Otter trawl- Ondarroa - VIIIabd	Merluccius Merluccius Division VIIa,b,d	1993	yes					2002	☐	
“Baka” Otter trawl- Ondarroa - VII	Lophius Budegassa Sub-area VII	1993	yes					2002	☐	
“Baka” Otter trawl- Ondarroa - VII	Lophius Piscatorius Sub-area VII	1993	yes					2002	☐	
“Baka” Otter trawl- Ondarroa - VII	Merluccius Merluccius Sub-area VII	1993	yes					2002	☐	
Bottom trawl	Lophius Piscatorius VIIe-k Northern	1987	yes					2002	☐	
Bottom trawl	Merluccius Merluccius	1987	yes					2002	☐	



	VIIe-k Northern										
Bottom trawl	Merluccius Merluccius	1997	yes					2002	☐		
	VIIIc-IXa Southern Hake										
Bottom trawl	Nephrops Norvegicus	1997	yes					2002	☐		
	VIIIc-IXa Southern Hake										

definition (gear)	species	start of series	main use 1995-2000				last WG used		Recommended Funding		
			Tuning	Produc tion model	Trend	Biological sampling		M.P.	by STECF/ SGRN		
						length	ages		E.P.	N	
ICES	Atlantic shelf										
Pair Trawl	VIIIc-IXa Southern	1983	yes					2002	☐		
	Micromesistius Poutassou										
Bottom Trawl	Nephrops Norvegicus (FU 30)	1994	yes					2004	☐		
Longliners – Basque Country-VI	Molva dypterygia Sub Area VI	1994			yes			2002	☐		
Longliners – Basque Country-VII	Molva dypterygia Sub Area VII	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VII	Molva dypterygia Sub Area VII	1993			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VI	Molva dypterygia Sub Area VI	1994			yes			2002	☐		
Longliners – Basque Country-VI	Molva molva Sub Area VI	1994			yes			2002	☐		
Longliners – Basque Country-VII	Molva molva Sub Area VII	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VII	Molva molva Sub Area VII	1993			yes			2002	☐		



“Baka” Otter Trawl Ondarroa VII	Brosme brosme Sub Area VI	1994			yes			2002	☐		
Longliners Basque Country-VI	Brosme brosme Sub Area VI	1994			yes			2002	☐		
Longliners Basque Country-VII	Brosme brosme Sub Area VII	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VII	Brosme brosme Sub Area VII	1993			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VIIa,b,d	Dicentrarchus labrax Divisions VIIa,b,d	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VIIa,b,d	Loliginid squids Divisions VIIa,b,d	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VII	Loliginid squids Sun Area VII	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VIIa,b,d	Octopods Divisions VIIa,b,d	1994			yes			2002	☐		
“Baka” Otter Trawl Ondarroa VII	Octopods Sub Area VII	1994			yes			2002	☐		

definition (gear)	species	start of series	main use 1995-2000				last WG used	Recommended Funding		
			Tuning	Production model	Trend	Biological sampling		by STECF/SGRN		
						length	ages	M.P.	E.P.	N
ICES	Atlantic shelf									
“Baka” Otter Trawl Ondarroa VIIa,b,d	Sepia spp Divisions VIIa,b,d	1994			yes			2002	☐	



"Baka" Otter Trawl Ondarroa VII	Sepia spp Sub Area VII	1994			yes			2002	☐		
"Baka" Otter Trawl Ondarroa VIIa,b,d	Shortfinned squids Divisions VIIIa,b,d	1994			yes			2002	☐		
"Baka" Otter Trawl Ondarroa VII	Shortfinned squids Sub Area VII	1994			yes			2002	☐		
Bottom trawl	Octopus vulgaris IXa (South)	1993			Yes			2002	☐		
Artisanal	Octopus vulgaris IXa (South)	1993			Yes			2002	☐		
Bottom trawl	Sepia officinalis IXa (South)	1993			Yes			2002	☐		
Artisanal	Sepia officinalis IXa (South)	1993			Yes			2002	☐		
CECAF	SE Atlantic										
Trawl	Loligo vulgaris FAO 34.1.3 and 34.3.1	1975		yes				2003	☐		
Trawl, longline	Merluccius spp FAO 34.1.3 and 34.3.1	1981		yes				2001	☐		
Trawl and pots	Octopus vulgaris FAO 34.1.3	1969		yes				2003	☐		
Trawl and pots	Octopus vulgaris FAO 34.3.1 (stock 1)	1966		yes				2003	☐		
Trawl and pots	Octopus vulgaris FAO 34.3.1 (stock 2)	1985		yes				2003	☐		
Trawl	Parapenaeus longirostris FAO 34.1.3	1987		yes				2003	☐		
Trawl	Parapenaeus longirostris FAO 34.3.1	1988		yes				2003	☐		
Trawl	Penaeus notialis FAO 34.3.1	1988		yes				2003	☐		
Trawl	Penaeus notialis FAO 34.1.3	1987		yes				2003	☐		
Trawl	Sepia hierredda FAO 34.1.3	1975		yes				2003	☐		
Trawl	Sepia hierredda FAO 34.3.1	1975		yes				2003	☐		
ICCAT	Atlantic, Mediterranean										
Troll	T.alalunga North Atlantic	1981	yes					2001	☐		
Bait Boat	T. thynnus E. Atlantic and Medit	1975	yes					2002	☐		
Traps	T. thynnus E. Atlantic and Medit	1981	yes					2002	☐		
Surface longline	Xiphias gladius North Atlantic	1983	yes					2002	☐		



Surface longline	Xiphias gladius North Atlantic	1983		yes				2002	☐		
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definition (gear)	species	start of series	main use 1995-2000			Biological sampling	last WG used	Recommended Funding				
			Tuning	Produc tion model	Trend			length	ages	by STECF/ SGRN		
										M.P.	E.P.	N
CECAF	SE Atlantic											
Surface longline	Xiphias gladius North Atlantic	1988		yes			2002	☐				
CFCM	Balearic sub Area											
Bottom Trawl	Aristeus antennatus (GSA-1)	1999		yes	yes		2003	☐				
Bottom Trawl	Aristeus antennatus (GSA-5)	1995		yes	yes		2003	☐				
Bottom Trawl	Aristeus antennatus (GSA-6)	1995		yes	yes		2003	☐				
Purse seine	E. encrasicolus	1995			yes		2003	☐				
Purse seine	E. encrasicolus	1993			yes		2003	☐				
Purse seine	Sardina pilchardus	1995			yes		2003	☐				
Bottom Trawl	M.merluccius (GSA-1)	1995			yes		2002	☐				
Bottom Trawl	M.merluccius (GSA-5)	1995			yes		2002	☐				
Bottom Trawl	M.merluccius (GSA-6)	1995			yes		2002	☐				
Bottom longline	M.merluccius (GSA-6)	1995			yes		2002	☐				
Bottom Trawl	Mullus spp (GSA-1)	1995			yes		2002	☐				
Bottom Trawl	Mullus spp (GSA-5)	1995			yes		2002	☐				
Bottom Trawl	Mullus spp (GSA-6)	1995			yes		2002	☐				
CFCM	Gulf of Lions Sub Area											
Bottom Trawl	M.merluccius	1995		yes	yes		2002	☐				

ANNEX II



SAMPLING REQUIREMENTS

ANNEX II

ICES

FAO 27

BLUE WHITING		LENGTH		AGE	
Micromesistius poutassou		1 sampling of 50 individuals each 1000 t		1 sampling of 25 individuals each 1000 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIbc, Ixa	25844	26	1292	26	646

HAKE		LENGTH		AGE	
<i>Merluccius merluccius</i>		1 sampling of 100 individuals each 50 t		1 sampling of 100 individuals each 200 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
Vla, VIIchjk, VIIIab*	12541	251	25082	63	6270

HAKE		LENGTH		AGE	
<i>Merluccius merluccius</i>		1 sampling of 50 individuals each 100 t		1 sampling of 50 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	3689	37	1844	7	369

*Used 2001-02. Species under recovery plan. Extended Programme

NORTHERN SHRIMP		LENGTH		AGE	
<i>Pandalus borealis</i>		1 sampling of 100 individuals each 200 t			
Division	Catch	No. Samplings	No. Individuals		
I, II	236	1	118		

BLACK-BELLIED ANGLER		LENGTH		AGE	
<i>Lophius spp.</i>		1 sampling of 50 individuals each 100 t		1 sampling of 25 individuals each 200 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
Vlb, VIIcjk, VIIIab	2893	29	1446	14	362
		1 sampling of 50 individuals each 50 t		1 sampling of 50 individuals each 500 t	
VIIIc, IXa	1748	35	1748	4	178

MEGRIM		LENGTH		AGE	
<i>Lepidorhombus spp.</i>		1 sampling of 50 individuals each 100 t		1 sampling of 50 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
Vlb, VIIchjk, VIIIab	7025	70	3512	14	702
VIIIc, IXa	781	8	391	2	85

COD		LENGTH		AGE	
<i>Gadus morhua</i>		1 sampling of 50 individuals each 200 t		1 sampling of 25 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
IIab	9572	48	2393	19	479

REDFISH		LENGTH		AGE	
<i>Sebastes mentella</i>		1 sampling of 100 individuals each 100 t		1 sampling of 50 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
XII, XIV	3015	30	3015	6	302

(***) otoliths are currently gathered in this fishery but are not read because the working group (NWWG) does not use age in the evaluation, due largely to the fact that no key was found acceptable by all members of this group.



ROCKFISH					
		LENGTH		AGE	
<i>Helicolenus dactylopterus</i>		1 sampling of 25 individuals each 50 t		1 sampling of 25 individuals each 50 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
IXa, X*	6	0	0	0	0

Catch below 200 tons

POUTING					
		LENGTH		AGE	
<i>Trisopterus luscus</i>		1 sampling of 25 individuals each 50 t		1 sampling of 25 individuals each 50 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	864	17	432	17	432

SKATES					
		LENGTH		AGE	
<i>Raja spp</i>		1 sampling of 50 individuals each 1000 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
All areas	7135	0	0	0	0

Exemption requested for these samplings given that most often species are landed together in wing form.

HORSE MACKEREL					
		LENGTH		AGE	
<i>Trachurus trachurus</i> (*)		1 sampling of 50 individuals each 1000 t		1 sampling of 25 individuals each 1000 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
Ila, IVa,V, VI, VII, VIIIab(**)	2723	3	136	3	68
		1 sampling of 50 individuals each 200 t		1 sampling of 25 individuals each 500 t	
IXa (**)	31316	157	7829	63	1566

Error detected in Regulation 1639/2000. Age sampling in MP, tag E2 and should be E4

(*) Catches correspond to *Trachurus spp.*

(**) A change should be made in the Regulation due to a change in the configuration of horse mackerel stocks.

MACKEREL					
		LENGTH		AGE	
<i>Scomber scombrus</i>		1 sampling of 25 individuals each 200 t		1 sampling of 25 individuals each 200 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, IXa	21774	109	2722	109	2722

ANCHOVY					
		LENGTH		AGE	
<i>Engraulis encrasicolus</i>		1 sampling of 50 individuals each 200 t		1 sampling of 25 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIII (*)	5897	76	3813	12	295
		1 sampling of 50 individuals each 50 t		1 sampling of 50 individuals each 1000 t	
IXa	4744	95	4744	5	237

(*LENGTHS) Given the current situation (2005) of the stock at VIII and what a 60% reduction in the sampling levels of this species could mean for the quality of the monitoring of this species and the coverage of sampling, it is requested that 2005 sampling levels be maintained, i.e. 76 and 3813 individuals instead of 29 samplings and 1474 individuals which would be called for in accordance with catches.

SARDINE					
		LENGTH		AGE	
<i>Sardina pilchardus</i>		1 sampling of 50 individuals each 100 t		1 sampling of 50 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	29128	291	14564	58	2913

SEA BREAM					
		LENGTH (*)		AGE	
<i>Sparidae (Pagellus bogaraveo)</i>		1 sampling of 50 individuals each 50 t		1 sampling of 25 individuals each 50 t	



Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	119	18	900	2	60

(*) LENGTHS *Pagellus bogaraveo* + sea breams: In light of the significant variations in sampling levels during the period that this Regulation has been in force - 32 samplings with 1579 individuals in 2002 compared with zero in 2003 and 2 samplings with 119 individuals envisaged for 2006, which could indicate a large degree of uncertainty in respect of official catches - given that this is the last year under this Regulation, before new criteria are applied for the selection of the sampling level and with a view to upholding a certain degree of stability in sampling levels: the sampling requested for the 2006 estimate is an average for the years when sampling was actually done, including that envisaged for 2006. According to this criterion, 18 samplings with 50 individuals each should be done in 2006 (2002:32; 2004:29; 2005:9; 2006:2).

Norway LOBSTER		LENGTH		AGE	
<i>Nephrops norvegicus</i>		1 sampling of 400 individuals each 50 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VI(*)	17	0	0		
		1 sampling of 200 individuals each 50 t			
VII	615	12	2460		
		1 sampling of 200 individuals each 20 t			
VIIIc, Ixa	264	13	2643		

(*) Catch below 200 tonnes

WHITE SHRIMP		LENGTH		AGE	
<i>Parapenaeus longirostris</i>		1 sampling of 200 individuals each 50 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	1084	22	4334		

(*) In light of the significant variations in sampling levels during the period that this Regulation has been in force - 76 samplings with 15226 individuals in 2002 compared with 22 with 4334 individuals envisaged for 2006, which could indicate a large degree of uncertainty in respect of official catches - given that this is the last year under this Regulation, before new criteria are applied for the selection of the sampling level and with a view to upholding a certain degree of stability in sampling levels: the sampling requested for the 2006 estimate is an average of the 2 previous years together with the number that would be required for 2006 in accordance with official catches. In accordance with this criterion, 40 samplings with 200 individuals each should be done in 2006 (2004:41; 2005:59; 2006:22).

COMMON OCTOPUS		LENGTH		AGE	
<i>Octopus vulgaris</i>		1 sampling of 50 individuals each 50 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	2197	44	2197		

CUTTLEFISH		LENGTH		AGE	
<i>Sepia officinalis</i>		1 sampling of 50 individuals each 50 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, Ixa	512	10	512		

COMMON SQUID		LENGTH		AGE	
<i>Loligo vulgaris</i>		1 sampling of 200 individuals each 50 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
VIIIc, IXa (*)		20	4000		

(*) In light of the significant variations in sampling levels during the period that this Regulation has been in force - 23 samplings with 4666 individuals in 2003 in contrast with zero in 2006 given that there are no catches, which could indicate a large degree of uncertainty in respect of official catches - given that this is the last year under this Regulation, before new criteria are applied for the selection of the sampling level and with a view to upholding a certain degree of stability in sampling levels: the sampling requested for the 2006 estimate is an average of the 3 previous years. According to this criterion, 20 samplings with 200 individuals each should be performed in 2006 (2003:23 samplings; 2004:23; 2005:14).

ROUNDNOSE GRENADE (*)		LENGTH		AGE	
<i>Coryphaenoides rupestris</i>		1 sampling of 50 individuals each 1000 t		1 sampling of 100 individuals each 100 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
All areas	0				



(*) An inconsistency has been noted in Commission Regulation (EC) No 1639/2001, amended by Commission Regulation 1581/2004 regarding the number of tonnes and individuals of ages (Length = F3 and ages = C2). To be put on an equal footing with length sampling.

BAIRD'S SMOOTH-HEAD (**)	Catch	LENGTH		AGE	
<i>Alepocephalus bairdii</i>		1 sampling of 50 individuals each 1000 t		NA	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
All areas	0				

(**) This species is not included in the species list in Appendix XV of Commission Regulation (EC) No 1639/2001, amended by Commission Regulation 1581/2004, but it is included in Council Regulation (EC) No 2347/2002 for deep sea stocks. The number of samplings called for is the same as for the roundnose grenadier.

MEDITERRANEAN, EXCEPT LARGE PALAGICS FAO 37

TONS					
HAKE	Catch	LENGTH		AGE	
<i>Merluccius merluccius</i>		1 sampling of 50 individuals each 100 t		1 sampling of 25 individuals each 200 t	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	3033	30,326	1516,3	15,163	379,075
BLACK-BELLIED ANGLER	Catch	LENGTH		AGE	
<i>(L. piscatorius + L. budegassa)*</i>		1 sampling of 100 individuals each 100 t		1 sampling of 25 individuals each 200 t	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	1336	13,36	1336	6,68	167
MULLET	Catch	LENGTH		AGE	
<i>(M. surmuletus + M. barbatus)*</i>		1 sampling of 50 individuals each 100 t		1 sampling of 25 individuals each 200 t	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	2408	24,08	1204	12,04	301
ANCHOVY	Catch	LENGTH		AGE	
<i>Engraulis encrasicolus</i>		1 sampling of 50 individuals each 200 t		1 sampling of 25 individuals each 500 t	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	5659	28,293	1414,65	11,3172	282,93
SARDINE	Catch	LENGTH		AGE	
<i>Sardina pilchardus</i>		1 sampling of 50 individuals each 200 t		1 sampling of 25 individuals each 500 t	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	16456	82,279	4113,95	32,9116	822,79
HORSE MACKEREL	Catch	LENGTH		AGE	
<i>(T. trachurus + T. mediterraneus)*</i>		1 sampling of 50 individuals each 500 t		1 sampling of 25 individuals each 500 t	
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	6007	12,014	600,7	12,014	300,35
RED SHRIMP	Catch	LENGTH		AGE	
<i>Aristeus antennatus</i>		1 sampling of 50 individuals each 50 t			
Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	486	9,726	486,3		
WHITE SHRIMP	Catch	LENGTH		AGE	
<i>Parapenaeus longirostris</i>		1 sampling of 50 individuals each 100 t			



Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	322	3,22	161		

OCTOPI		LENGTH		AGE	
<i>E. cirrhosa + O. vulgaris</i>		1 sampling of 25 individuals each 500 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
1.1	5625	11,2502	281,255		

(* In light of the significant variations in sampling levels, the catches from the 2005 proposal have been used (mean catches 1998-2000) in lieu of those corresponding to the period 2002-04 (black-bellied angler: 231 t; mullet: 27; horse mackerel: 154) in order to maintain a degree of stability in sampling levels vis-à-vis previous years.

CECAF

FAO 34

SENEGALESE HAKE		LENGTH		AGE	
<i>M. senegalensis - M. Polli</i> (*)		1 sampling of 100 individuals each 100 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
ATLANTIC EC	9879	99	9879		

WHITE SHRIMP (*)		LENGTH		AGE	
<i>Parapenaeus longirostris</i>		1 sampling of 100 individuals each 100 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
ATLANTIC EC	1995	20	1995		

SOUTHERN PINK SHRIMP ()		LENGTH		AGE	
<i>Penaeus notialis</i>		1 sampling of 100 individuals each 100 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
ATLANTIC EC	922	9	922		

COMMON OCTOPUS (*)		LENGTH		AGE	
<i>Octopus vulgaris</i>		1 sampling of 100 individuals each 100 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
ATLANTIC EC	10030	100	10030		

COMMON SQUID (*)		LENGTH		AGE	
<i>Loligo vulgaris</i>		1 sampling of 100 individuals each 200 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
ATLANTIC EC	1543	8	772		

CUTTLEFISH		LENGTH		AGE	
<i>Sepia hierredda</i>		1 sampling of 100 individuals each 200 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
ATLANTIC EC	1540	8	770		

(* In light of the significant variations in sampling levels, the catches from the 2005 proposal have been used (mean catches 1998-2000) in lieu of those corresponding to the period 2002-04 in order to maintain a degree of stability in sampling levels vis-à-vis previous years.

NAFO

FAO 21

HALIBUT (*)		LENGTH		AGE	
<i>Reinhardtius hippoglossoides</i>		1 sampling of 100 individuals each 20 t		1 sampling of 50 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
2, 3	0	0	0	0	0

(* This species is under a recovery plan and the TAC for Spain for 2006 is 5000 t.

AMERICAN PLAICE (**)	Catch	LENGTH		AGE	
<i>Hippoglossoides platessoides</i>		1 sampling of 100 individuals each 20 t		1 sampling of 50 individuals each 500 t	



Division		No. Samplings	No. Individuals	No. Samplings	No. Individuals
3LNO	682	34	3409	1	68
3M*	107	5	534	0	11

(**) Species under moratorium. By-catch only. In division 3M, catch is under 200 tonnes

WITCH FLOUNDER		LENGTH		AGE	
<i>Glytocephalus cynoglossus</i>		1 sampling of 100 individuals each 20 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
3NO	240	12	1202	12	1202

YELLOWTAIL FLOUNDER		LENGTH		AGE	
<i>Limanda ferruginea</i>		1 sampling of 100 individuals each 20 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
3LNO	158	8	791	8	791

REDFISH		LENGTH		AGE	
<i>Sebastes spp.</i>		1 sampling of 100 individuals each 20 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
3LN	427	21	2135	21	2135
		1 sampling of 100 individuals each 20 t			
3M*	362	18	1809	0	18

ROUNDNOSE GRENADE		LENGTH		AGE	
<i>Macroulidae</i>		1 sampling of 100 individuals each 20 t		1 sampling of 50 individuals each 500 t	
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
2, 3	0	0	0	0	0

SKATES		LENGTH		AGE	
<i>Raja spp</i>		1 sampling of 100 individuals each 200 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
All areas	6569	33	3284	-	-

NORTHERN SHRIMP		LENGTH		AGE	
<i>Pandalus borealis</i>		1 sampling of 100 individuals each 200 t			
Division	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
3M	335	2	167	-	-

LARGE PELAGICS WORLDWIDE

TONS

ALBACORE		LENGTH		AGE	
<i>Thunnus alalunga</i>		1 sampling of 100 individuals each 100 t			
FAO Region	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	10761	107	10700		
Mediterranean	226	22	220		
Other oceans	269	22	220		

BLUEFIN TUNA		LENGTH		AGE	
<i>Thunnus thynnus</i>		1 sampling of 100 individuals each 100 t			
FAO Region	Catch	No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	4373	43	4300		
Mediterranean					
Other oceans	290				

SWORDFISH		LENGTH		AGE	
<i>Xiphias gladius</i>		1 sampling of 100 individuals each 100 t			



FAO Region		No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	7794	77	7700		
Mediterranean	1534	15	1500		
Other oceans	6697	66	6600		

SKIPJACK TUNA		LENGTH	AGE		
<i>Katsuwonus pelamis</i>	Catch	1 sampling of 100 individuals each 100 t			
FAO Region		No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	4799	47	4700		
Mediterranean	15				
Other oceans	85377	853	85300		

YELLOWFIN TUNA		LENGTH	AGE		
<i>Thunnus albacora</i>	Catch	1 sampling of 100 individuals each 100 t			
FAO Region		No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	29244	292	29200		
Mediterranean					
Other oceans					

BIGEYE TUNA		LENGTH	AGE		
<i>Thunnus obesus</i>	Catch	1 sampling of 100 individuals each 100 t			
FAO Region		No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	4986	49	4900		
Mediterranean	5				
Other oceans	9638	96	9600		

SHARKS (*)		LENGTH	AGE		
<i>Squalidae</i>	Catch	1 sampling of 100 individuals each 200 t			
FAO Region		No. Samplings	No. Individuals	No. Samplings	No. Individuals
Atlantic	506	5	506		
Mediterranean	10				
Other oceans	94	1	94		

(*) Shark catches are not broken down by species

ANNEX III



ANNEX III

Species	Area	Growth		Maturity		Fecundity		Sex Ratio		
		Data		Data						
		Length	Weight	Length	Age	Length	Age	Length	Age	
ICES (1)										
Cod	Gadus morhua	I,II	T	T	T	T			T	T
Shrimp	Pandalus borealis	I,II	T	T	T				T	
Roundnose Grenadier	Coryphaenoides rupestris	All areas	T	T	T	T			T	T
Anchovy	Engraulis encrasicolus	IXa, only Cadiz	T	T	T	T	T	T	T	T
Anchovy	Engraulis encrasicolus	VIIIc	T	T	T	T	Y	Y	Y	Y
Megrim	Lepidorhombus boscii	Vlb, VIIcjk, VIIIabc, IXa	T	T	T	T			T	T
Megrim	Lepidorhombus whiffiagonis	Vlb, VIIcjk, VIIIabc, IXa	T	T	T	T			T	T
Squids	Loligo vulgaris	VIIIc, IXa	T	T	T				T	
Anglerfish	Lophius budegassa	Vlb, VIIcjk, VIIIab	T	T	T	T			T	T
Anglerfish	Lophius budegassa	VIIIc, IXa	T	T	T	T			T	T
Anglerfish	Lophius piscatorius	Vlb, VIIcjk, VIIIab	T	T	T	T			T	T
Anglerfish	Lophius piscatorius	VIIIc, IXa	T	T	T	T			T	T
Hake	Merluccius merluccius	Vlb, VIIcjk, VIIIabc, IXa	T	T	T	T			T	T
Blue whiting	Micromesistius poutassou	VIIIbc, IXa	T	T	T	T			T	T
Norway lobster	Nephrops norvegicus	Functional Unit	S	S	S				T	
Octopus	Octopus vulgaris	VIIIc, IXa	T	T	T				T	
Shrimp	Parapenaeus longirostris	VIIIc, IXa	T	T	T				T	



Species		Area	Growth		Maturity		Fecundity		Sex Ratio	
			Data		Data					
			Length	Weight	Length	Age	Length	Age	Length	Age
ICES (2)										
Sardine	<i>Sardina pilchardus</i>	VIIIc,IXa	T	T	T	T	T	T	T	T
Mackerel	<i>Scombrus scomber</i>	VIIIc,IXa	T	T	T	T	T	T	T	T
Redfish	<i>Sebastes</i> spp.	XII,XIV	T	T	T	T			T	T
Cuttlefish	<i>Sepia officinalis</i>	VIIIc, IXa	T	T	T				T	
Seabreams	Sparidae (<i>Pagellus bogaraveo</i>)	VIIIc, IXa	T	T	T	T			T	T
Horse mackerel	<i>Trachurus trachurus</i>	Ila,IVa,V,VI,VII ,VIIIabc, IXa	T	T	T	T	T	T	T	T
MEDITERRANEAN										
Red shrimp	<i>Aristeus antennatus</i>	1.1	T	T	T				T	
Octopus	<i>Eledone cirrhosa</i>	1.1	T	T	T				T	
Anchovy	<i>Engraulis encrasicolus</i>	1.1,1.2	T	T	T	T			T	T
Anglerfish	<i>Lophius budegassa</i>	1.1	T	T	T	T			T	T
Anglerfish	<i>Lophius piscatorius</i>	1.1	T	T	T	T			T	T
Hake	<i>Merluccius merluccius</i>	1.1,1.2	T	T	T	T			T	T
Mullet	<i>Mullus barbatus</i>	1.1	T	T	T	T			T	T
Red mullet	<i>Mullus surmuletus</i>	1.1	T	T	T	T			T	T
Common octopus	<i>Octopus vulgaris</i>	1.1.	T	T	T				T	
White shrimp	<i>Parapenaeus longirostris</i>	1.1	T	T	T				T	
Sardine	<i>Sardina pilchardus</i>	1.1	T	T	T	T			T	T
Med. Horse mackerel	<i>Trachurus mediterraneus</i>	1.1	T	T	T	T			T	T
Horse mackerel	<i>Trachurus trachurus</i>	1.1	T	T	T	T			T	T
HIGHLY MIGRATORY SPECIES										
Sharks	Squaliidae								T	
Albacore	<i>Thunnus alalunga</i>		T	T						
Yellowfin	<i>Thunnus albacares</i>				T	T			T	T
Bigeye	<i>Thunnus obesus</i>				T	T			T	T
Bluefin	<i>Thunnus thynnus</i>		T	T	T	T			T	T
Swordfish	<i>Xiphias gladius</i>		T	T	T	T			T	T



Species	Area	Growth		Maturity		Fecundity		Sex Ratio		
		Data		Data						
		Length	Weight	Length	Age	Length	Age	Length	Age	
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
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
Shrimp	<i>Pandalus spp.</i>	3M	T	T	T				T	
Skates	<i>Raja spp.</i>	SA 3	T	T					T	
Greenland halibut	<i>Reinhardtius hippoglossoides</i>	3KLMNO	T	T	T	T			T	T
Redfish	<i>Sebastes spp.</i>	3M	T	T					T	
Redfish	<i>Sebastes spp.</i>	3LN	T	T						
Redfish	<i>Sebastes spp.</i>	3O	T	T						
CECAF FAO 34										
Senegalese Hake	<i>Merluccius senegalensis</i>	Atl. EC	T	T	T	T			T	T
Benguela Hake	<i>Merluccius polli</i>	Atl. EC	T	T	T	T			T	T
Shrimp	<i>Parapenaeus longirostris</i>	Atl. EC	T	T	T				T	
Shrimp	<i>Penaeus notialis</i>	Atl. EC	T	T	T				T	
Octopus	<i>Octopus vulgaris</i>	Atl. EC	T	T	T				T	
Squid	<i>Loligo vulgaris</i>	Atl. EC	T	T	T				T	
Cuttlefish	<i>Sepia hierredda</i>	Atl. EC	T	T	T				T	

ANNEX IV



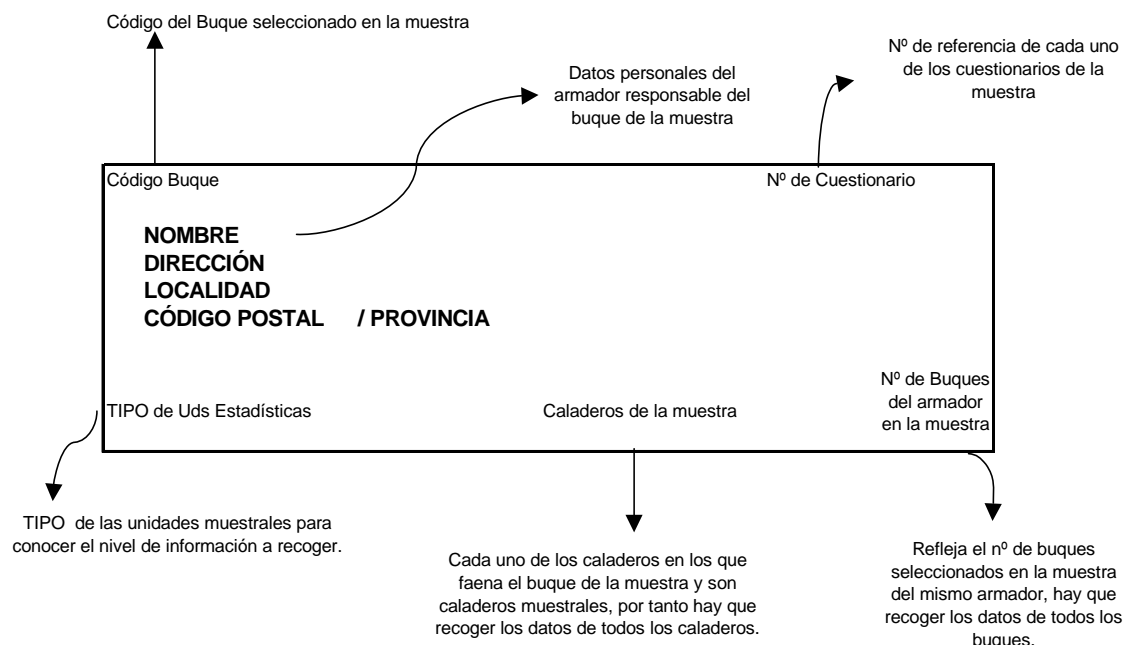
ANNEX IV

INSTRUCTIONS QUESTIONNAIRE

Instructions to complete the questionnaire

Map and identification

On the map attached to the questionnaire there will be a ticket identifying the shipowner, which will include the vessel code, the questionnaire number, the type of statistical unit, the fishing grounds the sampled vessel is working and the number of the shipowner's vessels included in the sample. It is structured as follows:



TIPOS DE UNIDADES ESTADÍSTICAS

- TIPO 1.- 1 sólo Buque 1 sólo Caladero
- TIPO 2.- 1 sólo Buque más de 1 Caladero
- TIPO 3.- más de un Buque 1 sólo Caladero (el buque muestra)
- TIPO 4.- más de un Buque más de 1 Caladero (el buque muestra)

Nivel de Información

	1	2	3
X			
X		X	
X			X
X		X	X

Niveles de Información

- 1) Nivel de Buque y Caladero
- 2) Nivel de Buque
- 3) Nivel de Total Buques del armador

(This information level outline will be useful for filling out table 9 of the questionnaire).

Cover

CORREO ELECTRÓNICO:

asucompm@mapya.es



Questionnaire No:

This will be an 8-digit number. The first three digits indicate the strata, the next three represent the sequential order within each strata and the last two digits represent the year during which the data is collected.

Table 1. – Legal form of the shipowner

This table must be filled out by ALL SHIPOWNERS. Identification of the shipowner or company owner as a natural or legal person and indication of type. The appropriate box should be marked with an “X”.

If box 10 (other) is checked, information must be provided as to the legal form in question.

In filling out the rest of the questionnaire it must be borne in mind whether the person is a natural or legal person, as in the case of a legal person, tables 2, 3, 4 and 4 (continued) will not need to be filled out.

In the last section **the percentage of the company’s equity that is in foreign hands** must be indicated.

Table 2. Balance sheet. Shipowner. Assets

Property and rights comprising the shipowner’s assets. **Only to be answered by shipowners who have a legal obligation to submit accounting statements.** Accounts in brackets have a negative balance.

The question regarding the unit used to express balance sheet data (euros or thousands of pesetas) must be answered.



- **1. Total uncalled subscribed capital.** Capital stock or owners' contributions receivable. Both monetary and other contributions are included in this point.
- **2. Total fixed and other non-current assets.** This box is the sum total of the amounts in points 3, 4, 5, 6 and 7.
- **3. Setting-up expenses.** This includes all necessary expenditures for the incorporation of the company or an increase in its capital, and likewise necessary expenditures until the company initiates productive activity at the time of start-up or upon expansion of capacity.
- **4. Intangible assets.** This includes all intangible assets constituted by monetarily appraisable rights. This will also include (with a negative sign) all value corrections due to depreciation or reversible losses of intangible assets.
- **5. Tangible assets.** This includes all tangible fixed and moveable assets. Construction in progress at the close of the financial year will also be included in this point and likewise value corrections due to depreciation or reversible losses of tangible assets (the latter preceded by a negative sign).
- **6. Long-term investments.** This includes permanent financial investment in group or associated companies or in others, regardless of the form used, including accrued interest with maturity in excess of one year, and likewise bonds and long-term deposits secured by these companies.

Also included here (but preceded by a negative sign) are depreciation allowances for marketable securities or for insolvency of long term credits.



- **7. Treasury stock.** This point includes all treasury stock acquired by the company.
- **8. Total deferred expenses.** This includes all expenses deferred by the company because they are considered to have future economic impact.
- **9. Total current assets.** This box is the sum total of the amounts in points 10, 11, 12, 13, 14, 15 and 16.
- **10. Called subscribed capital receivable.** This identifies subscribed and not-paid-up share capital that is called up from shareholders.
- 11. Inventories.** This includes all commodities, raw materials, other provisions, work in progress, semi-finished goods, finished goods, auxiliary products, consumables and replacements from the company and likewise provisions for depreciation of inventories (the latter preceded by a negative sign).
It also includes advances to suppliers as payment for future supplies.
- **12. Accounts receivable.** This includes all accounts receivable from customers or public administrations (tax or promotion payments made by the public administration) and likewise all short-term credits issued to company personnel.

This point also includes cash current accounts with owners, administrators and any other natural or legal person who is not a bank or credit institution or company supplier and which are not shared accounts.

Provisions for loss in value of current assets of group, associated and other companies will be preceded by a negative sign, as will the amount corresponding to refundable containers or packaging invoiced to customers.



- **13. Short term investments.** This section includes short term financial investment in group, associated and other companies, and likewise short term guarantees and deposits.

Also included here (but preceded by a negative sign) are not-paid-up and uncalled shares held by group or associated companies, and likewise depreciation allowances for marketable securities or for insolvency of short term credits.

- **14. Short term treasury stock.** Short term treasury stock acquired by the company.
- **15. Cash.** This includes cash available, and likewise positive balances in sight current and savings accounts available on demand.
- **16. Period adjustments.** This includes all expenses recorded in the financial year that has ended but corresponding to the following year, and likewise interest paid by the company corresponding to subsequent financial years.
- **17. Total.** This is the sum total of points 1, 2, 8 and 9.

Table 3. Balance sheet. Shipowner. Liabilities

Obligations and shareholders' equity comprising shipowners' liabilities. **Only to be answered by shipowners who have a legal obligation to submit accounting statements.** Accounts in brackets have a negative balance.

The question regarding the unit used to express balance sheet data (euros or thousands of pesetas) must be answered.



- **1. Total shareholders' equity.** This is the sum total of points 2, 3, 4, 5, 6, 7 and 8
- **2. Capital stock.** Includes capital stock in trading companies and others, and likewise capital belonging to individual companies.
- **3. Issue premium.** This includes all contributions made by shareholders when stocks are issued and sold at a price above their par value.
- **4. Revaluation reserve.** This includes the revaluations of assets deriving from the application of update laws.
- **5. Retained earnings.** This includes all of the company's retained earnings other than those deriving from revaluation.
- **6. Prior years' income.** This includes all income not paid out nor specifically applied to any other account, and likewise owners' contributions to compensate for company losses. This also includes (preceded by a negative sign) prior years' losses.
- **7. Profit and loss statement.** This includes the profits and losses corresponding to the year just ended.
- **8. Dividends paid in advance.** This includes all advance payments of revenues.
- **9. Total deferred revenues.** This includes all revenue deferred by the company to future years.



- **10. Total provisions for contingencies and expenses.** This includes provisions whose purpose is to cover expenses incurred during the present or a previous year.
- **11. Total long-term debt.** This is the sum total of points 12, 13, 14, 15 and 16.
- **12. Debentures and other negotiable securities.** This includes all external long-term financing in the form of negotiable securities.
- **13. Debt payable to credit institutions.** This includes all long-term debt payable to credit institutions deriving from loans and other debits.
- **14. Debt payable to group and associated companies.** This includes long-term debt with group and associated companies.
- **15. Other payables.** This includes all external long-term financing other than by marketable securities and not contracted with group or associated companies or with credit institutions.
- **16. Shares not paid up and not called.** This includes all not-paid-up and uncalled shares of group, associated or other companies.
- **17. Current liabilities.** This is the sum total of points 18, 19, 20, 21, 22, 23 and 24.
- **18. Debentures and other negotiable securities.** This includes all external financing in the form of marketable securities whose period to maturity does not exceed one year.



- **19. Short-term debt payable to credit institutions.** This point includes all debt or debt interest contracted with credit institutions deriving from loans and other debits whose period to maturity does not exceed one year.
- **20. Short-term debt payable to group and associated companies.** This includes all debt which will become payable in less than one year and likewise cash current accounts with group or associated companies.
- **21. Trade accounts payable.** This includes all debt payable to suppliers, service providers, joint venture creditors and advances from customers as payment for future supplies. Also included in this section (preceded by a negative sign) is the amount corresponding to refundable containers or packaging invoiced by suppliers.
- **22. Other non-trade payables.** This includes debts payable to public authorities, social security, VAT accrued or excess corporate income tax accrued in respect of corporate income tax payable. This also includes salaries payable, redeemed marketable securities payable, external short-term financing not envisaged in the foregoing sections (18, 19, 20 and 21), current accounts with owners and administrators, suspense accounts (which, due to their nature, should not be included in other sections) and called-up payables corresponding to financial investment in equity holdings.

This also includes all short-term bonds and deposits received and constituted.

- **23. Operating allowances.** This includes allowances to cover expenses deriving from sales returns, revisions and similar.



- **24. Accrual accounts.** This includes income or interest recorded in the fiscal period that has ended but which correspond to the following.
- **25. Total.** This is the sum total of points 1, 9, 10, 11 and 17.

Table 4. Profit and loss statement. Summary

Summary of shipowner's fiscal year revenues and expenses. Only to be answered by shipowners who have a legal obligation to submit accounting statements. Accounts in brackets have a negative balance.

The question regarding the unit used to express balance sheet data (euros or thousands of pesetas) must be answered.

A) DEBIT

- **AI. Operating expenses.** The following expenses should be listed in this box: expenses deriving from reduction in inventories of finished goods and work in progress and supplies (commodities, raw materials and other external costs), payroll expenses and personnel-related social security payments, depreciation of fixed assets, expenses deriving from variations in trade allowances and any other operating expense.
- **1.DI. Operating profit.** The difference between income (BI) and total operating costs (AI).
- **AII.- Financial expenses and similar.** This includes financial expenses and similar deriving from debt payable to group and associated companies and



others, financial investment losses, changes in provisions for short-term investment and exchange rate losses.

- **2.DII. Financial gains.** This is the difference between financial income and similar (BII) and financial expenses and similar expenses.
- **3.DIII. Earnings from ongoing activities.** This is the sum of operating profit and financial gains minus operating losses and financial losses.
- **AIV. Extraordinary expenses.** This includes losses deriving from changes in provisions for tangible and intangible fixed assets and controlling portfolio, losses from operations in own shares and debentures, extraordinary expenses and expenses and losses from other financial years.
- **4.DIV Extraordinary earnings.** The difference between extraordinary income (BIV) minus extraordinary expenses (AIV).
- **5.DV. Pre-tax profits.** The sum of earnings from ongoing activities and extraordinary earnings minus losses from ongoing activities and extraordinary losses.
- **AVI. Taxes.** This is the amount of tax on yearly earnings and their adjustment plus other taxes.
- **6.DVI. Year-end earnings.** Pre-tax earnings minus tax accrued during the year.

B) CREDIT

- **BI. Operating revenues.** This is net turnover (sales, services rendered and returned goods and volume discounts) and increases in inventories of finished



goods or work in progress, works undertaken by the company for fixed assets and other operating revenue.

- **7.HI. Operating losses.** The difference between expenses (AI) and revenues (BI).
- **BII. Financial income and similar.** These are the revenues from equity holdings and other marketable securities and loans for fixed assets (from group, associated and other companies), plus other interest and similar income and gains on exchange.
- **8.HII. Financial losses.** Difference between financial and similar expenses (AII) minus financial and similar income.
- **9. HIII. Losses from ongoing activities.** This is the sum of operating losses and financial losses minus operating profit and financial gains.
- **BIV. Extraordinary income.** This refers to gains on the disposal of intangible fixed assets, tangible fixed assets and controlling portfolio, gains from operations in own shares and debentures, capital grants transferred to retained earnings, extraordinary income and income and profit from other financial years.
- **10. HIV. Extraordinary losses.** The difference between extraordinary expenses (AIV) and extraordinary income (BIV).
- **11. HV. Losses before tax.** The sum of losses from ongoing activities and extraordinary losses minus revenue from ongoing activities and extraordinary earnings.



- **12. HVI.** Year-end losses These are the losses before tax (HV) plus taxes accrued during the year (AVI).

Table 5. Detailed information concerning the shipowner

Detailed information regarding some points of the balance sheet and the profit and loss account of the shipowner's company. To be answered by ALL SHIPOWNERS.

The question regarding the unit used to express balance sheet data (euros or thousands of pesetas) must be answered.

Information concerning land-based personnel (boxes 1 to 7). The number of hours worked during the year by land-based personnel (freelance and salaried workers) is to be indicated, and likewise the number of workers who performed the said work-hours, drawing a distinction as to whether the work was performed full-time or part-time (principal or secondary activity for freelancers). These entries must also take into account the gender of the workers (men, women and totals).

Personnel whose occupation is other than those described in boxes 2, 3, 4 and 5 are to be entered in the box marked "Other" (6) specifying the occupation on the dotted line. Box 7 is for the totals of data concerning land-based personnel

Information concerning the cost of salaried land-based personnel (boxes 8 to 12). The aim here is to indicate the cost (in thousands of pesetas or euros) of salaried land-based personnel under each heading. Other headings not listed are to be entered on the dotted line of box 10. The total cost is to be reflected in box 12.

Information concerning other land-based expenses (boxes 13 to 29). These boxes reflect other operating expenses (unrelated to vessels) expressed in thousands of



pesetas or euros, incurred by the shipowner's company under each of the given headings.

Other headings not listed are to be entered on the dotted line in box 25. Box 26 reflects provisions for amortisation of fixed capital excluding vessels during the financial year. Box 27 reflects the amortisation of any setting-up expenses incurred by the Company. Box 28 reflects the variation in trade provisions (variation of provisions in terms of inventories, losses on irrecoverable debts...). The total amount of all expenses is to be entered in box 29.

On-land revenues (box 30). Management and operation revenue. This refers to revenue from operations not directly related to the vessels. To be specified on the dotted line.

Financial and Extraordinary expenses / income (boxes 31 to 34). All of the shipowner's financial expenses and income are to be entered, and likewise extraordinary expenses and income (the latter not including capital subsidies received during the year).

Proportional share of vessels in the company. A proportional part of the company's indirect final outcome, on a percentage basis, will be attributed to each of the said company's vessels.

Table 6. Vessels. Basic data

To be answered by ALL SHIPOWNERS.

First of all, the surveyed shipowner is asked the total number of his ships in the survey. Basic data is then filled out concerning the shipowner's different ships. If more than five



vessels are owned, the shipowner will fill out successive surveys until information is completed concerning all vessels, bearing in mind that the data pertaining to the sample vessel are to appear in the first column (Vessel 1).

- **1.** Vessel identification code appearing on the fishery license.
- **2.** Vessel registration and information sheet.
- **3.** Vessel name.

It is not compulsory to complete all three foregoing points; owners should complete all those of which they are sure in order to unequivocally identify the vessel.

- **4.** GT, Gross tonnage. This measure is preferable to GRT.
- **5.** Gross Registered Tonnage (GRT).
- **6.** Vessel power expressed in Horse Power (HP).
- **7.** Vessel length expressed in metres.
- **8.** Port at which the vessel most frequently docks.
- **9.** Type of vessel according to the fishing technique or gear for which the vessel is especially equipped.
- **10.** Year launched.



- **11.** Sum of the vessel purchase price plus significant repairs and transformations it has undergone since it was purchased and which could have a bearing on its value (not including VAT).
- **12.** Current balance of the mortgage outstanding on the vessel.
- **13.** Provision made during the financial year for amortisation of the vessel.
- **14, 15, 16, 17, 18 and 19.** Capacity of each of the vessel's different facilities, measured in cubic metres.
- **20 and 21.** Tonnes of finished product manufactured daily by the different items of equipment indicated above.
- **22.** Number of filleting, gutting and head-removal machines on board the vessel.
- **23.** Capacity in cubic metres of live bait holds on board.
- **24.** If the vessel is equipped with any machinery or auxiliary facility not listed here, such machinery or facility must be listed in the box of the vessel in question along with its capacity, number or output, and the unit of measurement used.
- **25.** Number of days at sea during the year. Number of days that the vessel is out of port and working during the financial year.
- **26.** Number of completed trips during the financial year.
- **27.** Total number of hours worked during the financial year differentiating between those performed by men, women and both genders.



- **28.** Number of workers who have performed the said hours; total hours broken down by gender.
- **29.** Total number of crew members on each vessel (vessel posts).

Table 7. Activity on fishing grounds

Indicate the total number of fishing grounds worked by each of the vessels, and likewise the number of fishing days per year at each of the fishing grounds listed. The number of hours worked during the financial year at each of the fishing grounds and the number of people performing the said work-hours must also be indicated. And lastly, indicate the number of foreign nationals engaged under fishery agreements. To be answered by ALL SHIPOWNERS. An additional questionnaire is to be used whenever the shipowner has more than four vessels. The first table is always reserved for the sample vessel (vessel 1).

The number allocated to the questionnaire's sample fishing ground is to be entered at the bottom.

Table 8. Principal fishing technique (gear) used, by vessel/fishing ground

Indicate for each vessel at each of the fishing grounds that it works, the principal gear used (this principal gear does not necessarily have to coincide with the type of vessel described in question 9 table 6). The vessel number is assigned in table 6 and the fishing ground number is shown in the column to the left –No.- of table 7. In any case the first column to be filled out will be for the sample vessel (vessel 1) at the sample fishing ground where the said vessel is working. Other fishing techniques used but not listed in the table are to be indicated in the lower boxes. To be answered by ALL SHIPOWNERS.

Table 9. Vessel results.



Indicate annual income and expenses under the different table headings, always in reference to the vessels. To be answered by ALL SHIPOWNERS.

The question regarding the unit used to express balance sheet data (euros or thousands of pesetas) must be answered.

An effort will be made to provide maximum disaggregation both in terms of income and expenses. If a certain section cannot be differentiated by headings, an annotation will be made next to that figure stating what headings it includes and naturally the total value will appear as well.

The first three columns of the table refer to the three levels of information described at the beginning of these instructions. More or fewer columns will need to be filled out depending on whether the statistical unit is type 1, 2, 3 or 4.

The last three are auxiliary columns and are for additional information which could be useful in completing the principal columns.

Income (boxes 1 to 3). Breakdown of operating income by vessel and fishing ground. Income by fishery activity is listed under item 1 without VAT or any other taxes levied on the products which could affect the sale price. This box will also reflect any returned goods and volume discounts on sales, and likewise variations in product inventories.

Box 2 is for any other operating income directly related to the vessels, which is to be entered on the dotted line. Box 3 reflects total income by vessel and fishing ground.

Personnel expenses (box 4 to 10). Breakdown of personnel expenses incurred by vessel and fishing ground. Any items not covered in the list are to be entered on the dotted line in box 8. Box 10 reflects total personnel expenses by vessel and fishing ground.



Other expenses (boxes 11 to 38). Breakdown of operating expenses other than those related to personnel, incurred by the vessel and fishing ground and assessed according to purchase price (including tax levied on the products but excluding deductible tax such as VAT). These are intermediate consumables or goods and services consumed as inputs in the production process. Any expense not included in the list is to be identified on the dotted line in boxes 35 and 36.

There are two subtotals: one covering the first four items (subtotal 15) and another grouping the rest (subtotal 37). Box 38 is the sum total of Other expenses by vessel and fishing ground.

Table 10. Subsidies and taxes.

To be answered by ALL SHIPOWNERS. This table classifies all subsidies and taxes relating to shipowner production.

The monetary unit used to reflect data must be indicated.

The five columns to be completed indicate different levels of information. The first three are the same as the main columns of table 9 and refer to vessel data. The fourth column contains indirect data not directly related to the vessels, while the last column reflects the total of direct and indirect data.

The white boxes are for each tax or subsidy item indicated. The shaded boxes are secondary, i.e. they are not compulsory but serve as support information in filling out the white or main boxes.

It is advisable to break down most of the items in the lower part of the table in order to facilitate their classification.

Tax return for fuel provisioning.

Official operating subsidies. These are operational supports granted to the vessel and fishing ground by public administrations or European Union institutions. They



are classified in two categories: 2.1. Subsidies for products (subsidies paid per unit of a good or service produced or imported) and 2.2, other production subsidies (subsidies received by companies for their participation in production).

Non-official operating subsidies. Granted by companies or individuals.

Items 4, 5, 6 and 7 refer to official and non-official subsidies unrelated to production, part of which are received during the economic period concerned. The total amount of these subsidies and the part reflected in the final balance of the financial year concerned must be indicated. Years in which official capital subsidies have been received must also be indicated.

Taxes levied on products. These are defined as the taxes paid on each unit of a certain good or service produced or distributed. They include VAT (sections 8.1, 8.2 and 8.3 are used to indicate VAT collected and deductible VAT paid by the shipowner) and other taxes on products and imports (section 8.4).

Other taxes on production. These are taxes paid by the companies as a result of their participation in production, regardless of the quantity or value of the goods and services produced or sold: Tax on Economic Activities...

OBSERVATION SHEET.

These sheets are for any observations that may arise in the collection, processing and recording of data.