

**STUDY**

**EVALUATION OF THE FISHERIES AGREEMENTS  
CONCLUDED BY THE EUROPEAN COMMUNITY**

**SUMMARY REPORT**

**IFREMER**

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# 1. INTRODUCTION

## 1.1. Background

The European Union's policy on fisheries agreements is being conducted against a background of the full exploitation or even overexploitation of the potential of many of the world's renewable marine resources. Nearly 16% of the stocks for which information is available are acknowledged to be dangerously over-fished (FAO 1997). World production, estimated at 17 million tonnes in 1950, was more than 87 million tonnes in 1996. However, over the last ten years growth has slowed down considerably. This would seem to suggest that stock potential will shortly be fully exploited and as a result, the opportunities for developing fisheries.

Community catches overall account for an increasingly small share of world catches. Between 1950 and 1996 catches in non-EU countries increased sevenfold, while those of EU countries rose by a factor of less than 2 (from 3.8 million tonnes to 7 million tonnes). Catches in the Northeast Atlantic, where Community vessels obtain over 75% of their take, have remained virtually unchanged at around 5.5 million tonnes since 1973. Increased production in the Mediterranean (9% of Community catches on average) has gone hand-in-hand with a drop in the proportion accounted for by the EU countries (from 50% to 40% during the Eighties).

The foundation for the Community's policy on fisheries agreements is the Council resolution of 3 November 1976<sup>1</sup> on the creation of a 200-mile fishing zone off the coastal areas of the North Atlantic and the North Sea. This decision led to the conclusion of fisheries agreements between the Community and non-member countries laying down (i) conditions for the exchange of rights of access (reciprocity) to areas and stocks, whether shared or adjoining, or (ii) conditions for the purchase of rights of access to fishing areas under the sovereignty of states which are not members of the Union (exclusive economic zone or EEZ of non-member countries). It is more appropriate therefore to speak of existing activities continuing as a result of fisheries agreements than of new ones being created, with increases in the crews of the EU Member States' fleets. Community fisheries agreements have also gradually been replacing some Member States' bilateral agreements as they join the Community.

Starting with the first agreement with the United States in 1977, a total of 29 have been signed, including the 26 that were in force during the reference period 1993-97, mainly with African and Indian Ocean countries (15) and the countries of the north Atlantic (10); only one has been signed with a Latin American country. The Community budget earmarked for fisheries agreements rose from € 5 m<sup>2</sup> in 1981 to € 38 m in 1987, then to € 163 million in 1990, reaching € 205 million in 1993 and almost € 300 million in 1997. Over the period 1993-97, commitments from Community funds for fisheries agreements totalled € 1053 million. Private contributions, which are added to this income of the non-member countries, represents on average 18% of the compensation paid. The amount set aside for fisheries agreements in the 1998 budget was around 5% of the Community's total allocation for external operations.

Table 1 lists the various forms of Community fisheries agreements, of which there are three main types today:

**Agreements with financial compensation** have been concluded with non-member countries wishing to grant a share in the exploitation of the resources in their own EEZ without receiving access rights in return. The main object of these agreements is the range of fishing authorisations that are granted (for a certain number of vessels or a certain volume in terms of gross registered tonnage - GRT). They involve payment of financial compensation by the Union and fees from private ship-owners in return for rights of access. This category includes all the agreements signed with the African and Indian Ocean countries (Morocco plus 14 African, Caribbean and Pacific countries which have signed the Lomé Convention) together with the agreement with Greenland (no private fees in this case). As well as financial compensation, preferential access to the EU market may be granted at reduced rates of customs duty.

**Reciprocal agreements** involve exchanges of fishing opportunities/rights between Community fleets and the fleets of non-member countries. The reference base used to ensure equality of exchange is "the cod equivalent", i.e. one tonne of cod represents x tonne(s) of another species being exchanged. Norway, Sweden (before it became a member), the Faroe Islands and Iceland have concluded agreements of this type.

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<sup>1</sup> OJ C 105, 7.5.1981.

<sup>2</sup> €m: million euros, used in this report to cover also the period before the introduction of the single currency. However, the Ecu is used in the final report itself.

Agreements with the Baltic countries combine the principle of reciprocity with payment of financial compensation by the Community.

**The 'second generation' agreements** are based on incentives for setting up joint ventures which can develop their fishing activities in the EEZ of the non-member country with the assurance of receiving a quota from the species listed in the agreements. The founding of joint enterprises, expressly provided for in the agreement with Argentina (the only one of this type in force during the reference period), has meant that vessels from the national fleets of some Member States, all of which previously fished in Community waters only, are now able to do so elsewhere.

As part of the share-out of responsibilities and tasks within the Community, the Council issues instructions prior to negotiations, which are then conducted by the Commission right the way through from the exploratory stage to the drafting of the protocol. Parliament is consulted on the draft agreement arising out of the negotiations and the Council takes the final decision to adopt it. As the main party involved in securing the agreements, the Commission is given responsibility for their administrative, financial and technical management in co-operation with the Member States' administrations; it is responsible for liaising with the non-member countries concerned.

In 1997 the Council launched a debate on the Community fisheries agreements and asked "the *Commission to carry out a cost/benefit analysis of the fisheries agreements with the Community*" which form an integral part of the Common Fisheries Policy (CFP).

The purpose of this document is to summarise that study evaluating the Community fisheries agreements in force between 1 January 1993 and 31 December 1997. The study evaluates each of the agreements for the purpose of comparing them and makes an overall assessment of the agreements as a whole. The findings, which will be put to the Council, are meant to contribute to the guidelines that will be drawn up for renegotiating the existing agreements and the negotiation of new ones.

The purpose of evaluating the fisheries agreements policy can be summed up in the following three questions:

- ◆ To what extent have the agreements been properly applied?
- ◆ What effects can be identified and assessed?
- ◆ Do the benefits of the agreements outweigh the costs?

The specification establishing the evaluation objective and the methodological framework contains six detailed questions that were to be addressed in the study:

- ◆ What is the volume and breakdown of the fishing activities created or safeguarded by the agreements in the Community? What is the overall cost of achieving this and what is the breakdown in costs between the Community and ship-owners?
- ◆ What are the effects (volume, variety and prices) on supply of marine products to the Community market?
- ◆ What is the impact on the non-member countries concerned (budget transfers, impact on activities associated with fishing, effects on development and conservation of resources)?
- ◆ Is the fisheries agreements policy consistent with the Union's political relations and other Community policies?
- ◆ What is the outcome of the technical analysis of the fisheries agreements' conditions and procedures?
- ◆ What impact would the non-conclusion of Community fisheries agreements have on the Union?

## **1.2. Method of analysis**

The study quantifies the impact of the agreements, mainly in terms of value added and new jobs, and compares them with the goals pursued and the costs incurred (excluding the production costs of each vessel). Because of their differences, the agreements of the northern European countries (northern agreements), the southern countries (southern agreements) and the agreement with Argentina have been studied separately.

### Information sources

The quantitative approach used in the study is based on the data available to the Commission (licences, fleets, catches, Community compensation) and to the statistical services of the Member States' and third countries' fisheries directorates (landings, average prices, jobs, on-shore industries). Microeconomic data on fishing and other businesses in the sector are available from specialist bodies on certain conditions.

During the process of collating the data it became apparent, however, that, regardless of source, the information was not always detailed enough, especially as regards vessels operating in the fishing grounds, or as reliable as might be wished to allow the necessary checks to be carried out so as to provide accurate answers to the questions put in the specification. A considerable volume of time-consuming work entailing inquiries, cross-checking and processing was needed in order to be able to draw conclusions which were adequately backed up and reliable.

### [Method used to evaluate the impact of fisheries agreements](#)

The measurement of the effects of fisheries agreements in the Member States and the non-member countries takes account both of the direct effects on the fisheries sector and of the indirect effects in the sectors upstream and downstream of fishing. The two main indicators used are the value added created and the jobs associated with the fisheries agreements. Estimating the value added and direct jobs (fishermen on board) is relatively simple but quantifying indirect employment and the value added associated with the agreements is less clear-cut: account was taken only of closely related spin-off jobs immediately upstream and downstream of the fishing activities arising from the agreements.

### [Evaluating the direct effects of the fisheries agreements](#)

**Direct value added (DVA)** varies with the share of the catches taken under the agreements and the technical criteria for the type of fishing vessel and fishing carried on. Determined by fleet segment, (speciality, nationality and EEZ fished), on the basis of the vessels' operating/trading accounts, then aggregated by fleet type, the direct value added was calculated as the difference between the estimated value of catches (turnover) and the 'intermediate consumables'<sup>3</sup>, the value of which can be known (in the case of seiners, shrimp trawlers, cephalopod vessels) or estimated (other fleets).

The value of catches under the northern agreements was calculated on the basis of the average annual prices of landings at the ports of the Member State concerned. Other reference prices were used for southern agreements including DG XIV data on the average prices of landings, data from the markets Directorate of the Ministry of Agriculture, Fisheries and Food in Spain, and from the directorate for Planning and Agriculture in Portugal. The breakdown by item of the value added means that its distribution can be studied by economic operator: government (tax and charges), households (wages) and businesses (gross operating income).

**Direct employment** associated with southern agreements for the non-tuna fleets was assessed on the basis of the average number of fishermen for each type of vessel plus an additional figure (+15%) to cover administrative duties (important in the case of seiners), technical tasks required to maintain on-shore equipment (important in the case of long-liners) and crew rotation. Employment in tuna fleets was calculated using surveys of ship-owners and set against catches taken in the EEZs.

The proportion of employment attributable to the Member States was assessed by deducting non-EU labour on board Community vessels (taking into account situations where wages are paid without fishermen actually being taken on board) estimated using on-the-spot surveys in the non-member countries and the Member States.

Because of the difficulty of counting the number of vessels actually fishing under the northern agreements, the impact on direct employment was calculated by applying an employment coefficient to the direct value added generated by the vessels obtained from socio-economic studies in the regions dependent on fishing (carried out for DG XIV in 1992) and weighted according to the type of catches and their subsequent market preparation.

### [Evaluating the indirect effects of the agreements](#)

This was carried out by considering the activities involved in:

- the supply of consumables and services;
- port facilities, first marketing and shipyards;
- processing of products.

In order to calculate the **indirect value added** created by the agreements, where it is not possible using the available information to make a direct estimate of the difference [*output in terms of value - intermediate consumables*], multipliers were applied to the direct value added calculated. These multipliers were determined taking into account the level of development of the activities upstream and downstream in the fisheries sector of

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<sup>3</sup> All consumables and services used by the businesses; includes the costs of fuel, fishing gear, packaging, and various maintenance and repair costs.

the countries concerned<sup>4</sup>.

**Indirect employment** in the Member States linked with the northern and southern fisheries agreements was measured by applying an "indirect employment" multiplier to the estimated number of direct jobs, then adjusted to reflect the circumstances and knowledge of fisheries (multiplier obtained from socio-economic studies in the regions dependent on fishing referred to above).

### 1.3. The main limitations of the evaluation

Some of the limitations arise from the requirements of the study specification, others are bound up with the data processed, the measurement of the cost/benefit ratio, the measurement of the use of the fisheries agreements, or the way in which the cost/benefit assessments introduced by the fisheries agreements are presented. They are unlikely in any case to alter significantly the volumes measured<sup>5</sup>, whether value added, employment or trade flows, or reverse the trends identified for the period 1993-97. On an ad hoc basis and by cross-checking several sources of information, it was possible to determine the most significant distortions.

#### Limitations of the data used

The systematic use of DG XIV information sources concerning, for example, catch declarations, rates of use of fisheries agreements, registers of licences, records of fishing activities and features of vessels, can be explained by the fact that keeping the relevant databases using information provided by the Member States is one of the requirements included in the protocols to the fisheries agreements. Consequently their appraisal before use for this study is part of the process of evaluating the agreements. This evaluation of the quality of the data has produced practical recommendations.

#### Limitations connected with measuring the cost/benefit ratio

The proportion of the real costs to the Union of the fisheries agreements is underestimated because of the difficulty of incorporating the costs of investment support at sea and on land for fleets covered by fisheries agreements, of the monitoring and inspection of those fleets, of fisheries research, of managing and negotiating fisheries agreements and of supporting the markets in products connected with fisheries agreements.

In the case of direct and indirect benefits, the volumes measured do not take into account all the factors such as, for example, the effects of public investment made using Community compensation and certain indirect positive repercussions in terms of quality (image of the Union).

#### Limitations associated with the period studied

The time frame limiting the study to a five-year period may hamper the assessment of national public strategies, dominant market trends (demand, supply and consumption habits) and the condition of the natural resources concerned in the EEZs of non-member countries. Other external factors also have to be held constant over such a short period, for example, the strategies of operators in non-member countries, changes in national policy in the non-member countries and the impact of environmental pressure groups.

#### The particular limitations of measuring the use of fisheries agreements

The rate of use makes it possible to compare the fishing opportunities actually used with those available under each protocol. This ratio is calculated in terms of the unit of measurement provided for in the protocol (GRT, number of vessels, quota by species or group of species); in most cases it is presented as a percentage or in absolute numbers. Attractive because of its simplicity, it is based on the number of licences awarded. However, these do not always give an accurate picture of the actual number of vessels operating and consequently of the fishing effort deployed. This is particularly true in the case of the tuna fleets, for which this indicator is becoming meaningless. Indeed, applications for licences of this type are being made increasingly in order to secure rights of passage or the potential right to operate in a large number of EEZs in order not to run the risk of having to interrupt a voyage when following highly migratory stocks.

#### Limitations of cost/benefit analysis for individual fisheries agreements

Community fisheries agreements are not necessarily independent of one another in the strategies adopted by ship-owners for their use or in the balance of the economies of regions dependent on fishing. Some agreements can be understood only in relation to others and on a broader scale than that of a particular EEZ.

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<sup>4</sup> For details of the methodology see the main report.

<sup>5</sup> The only exception being tuna agreements on account of the cost of intervention in some years, linked with market prices.

Furthermore, they are not consistent in terms of their usefulness to the fleets concerned: (i) continuity of fishing as an extension of fishing in Community waters (northern agreements and some southern ones); (ii) fishing activities shared across several EEZs but only under fisheries agreements; (iii) tuna fishing with supplementary private agreements. These differences limit the scope for comparing the agreements.

## 2. STATUS REPORT: FLEETS AND CATCHES

### 2.1. Fleets operating under the various Community fisheries agreements in the period 1993-97

The sections below review the fleets operating under the southern agreements, the agreement with Argentina and the northern agreements in that order.

#### 2.1.1. Community fleets under the southern agreements

The southern agreements cover the activities of six Member State fleets in eight African EEZs (see Table 2). On average (excluding tuna fishing), 725 Spanish vessels operate every year in a maritime area stretching from Morocco to Angola. The five other Member States concerned (Greece, Italy, Netherlands, Portugal and United Kingdom) average a combined total of some 50 vessels, most of them Portuguese, operating mainly in Moroccan waters.

These fleets can be broken down into several categories.

- **Specialist fleets**, consisting mainly of:

- a *shrimp fleet* operating across the whole African zone, although its activities are concentrated mainly in Moroccan, Angolan and Mauritanian waters. Vessels in this fleet average 30m in length and are for the most part registered in Spain, although Portuguese, Italian and Greek vessels also feature. In all there are almost 200 shrimp trawlers in the Community fleet;
- a *cephalopod fleet* operating primarily in the Moroccan EEZ, with some activity in the waters of Mauritania and Guinea-Bissau. Most of these vessels, which range between 35 and 40m in length, are Spanish, with a small number of Italian vessels. The Community fleet numbers around one hundred cephalopod trawlers;
- Spanish vessels make up the majority of the *tuna fleet* that operates under the southern agreements, followed by French vessels. Most of these two fleets consist of seiners. There is also a lesser number of Italian and Portuguese pole-and-line and long-liner vessels (see Table 3). There are around 50 Spanish tuna seiners (51 in 1993 compared with 43 in 1997 with an average engine capacity of 2 652 kw and GRT of 1 746). These are registered in Berméo, Santander, Vigo and Cádiz. Spain fishes under all of the agreements, its fleet composition varying by country (long-liners, pole-and-line, seiners). France had a fleet of 31 tuna seiners under four different owners for its 1997 tuna operations (compared with 35 in 1993), with an average engine capacity of 2 688 kw and average GRT of 1 419. With over 95% of its vessels based in Concarneau in Brittany, this fleet divides its activities between the Atlantic and Indian Oceans.

Because these vessels specialise in certain species with a high commercial value, they are heavily dependant on access to non-Community waters, and therefore on the Community fisheries agreements.

- **Non-specialist fleets**, composed of:

- **long-range vessels** operating in fisheries with species similar to those of the Community, such as:

- a fleet of Spanish and Portuguese *long-liners* measuring between 20 and 25m in length. These operate mainly in the Moroccan EEZ catching the hake and silver scabbard that are in great demand in the Portuguese market. Two-thirds of the 120 vessels are Spanish.
- a fleet of *seiners* (40m long), all Spanish, operating out of the Canary Islands and taking small pelagic species (sardine) in Moroccan waters.

- a fleet of Dutch and UK *pelagic trawlers* (five units, each over 100m long, and one unit, respectively), taking small pelagic species in Mauritanian waters, which are then frozen on board.
- fleets of *demersal trawlers* from various Member States, numbering around 70 units of between 30 and 40m long. These operate in all non-Community waters. Most are Spanish and a small number are Greek. The most logical way to break down this disparate group may be by catch composition rather than by the waters in which they operate.

The fisheries agreements have enabled the vessels in this category to carve out a niche for themselves, achieving satisfactory returns from lucrative markets (hake in Spain, scabbard fish in Portugal, etc.).

- **short-range vessels**, which are mainly Spanish seiners under 20m in length (twenty or so units active in the zone at any one time) working the sardine and anchovy stocks that straddle the coastal waters of southern Spain and northern Morocco and mostly based in Andalusian ports. Around thirty small private Spanish vessels under 15m long also operate under the Community fisheries agreements in Moroccan waters, undertaking a variety of activities. This is due to the proximity of these waters to their traditional fishing zones (they are registered in the Canary Islands or Andalusia).

The Community fisheries agreements enable these short-range vessels to fish on a continuous basis, depending on the seasonal availability of stocks in the non-Community waters.

### 2.1.2. Community fleets under the agreement with Argentina

In 1998, this fleet comprised 29 vessels, run by joint enterprises and joint ventures. 15 Community vessels were considered to have been operating prior to 1997, rising to 26 in 1997 (3 of which were run by joint ventures). Spain accounted for the largest portion of these vessels (25 units). In addition, between 1 and 2 vessels each (depending on the year) from Germany, Italy, the Netherlands and the United Kingdom were operating. The fleet is composed of modern vessels 60-80m long, with a GRT of between 700 and 1800 and an average engine capacity of 1900 kw (see Table 4).

### 2.1.3. Community fleets under the northern agreements

Almost all the vessels in this fleet applied for one or more licences. Whether or not the licences are used, the fleet numbers 1 800 vessels (Table 5) with fishing rights in the waters of 9 northern countries. The fleets operating under these agreements are naturally those of the northern Member States. On average, in the 1993-97 period, 47% of the vessels were Danish, 24% British, 10% Dutch and 9% German. The following countries (in descending order according to their share) account for lesser numbers of vessels: France, Sweden, Belgium, Spain, Finland, Portuguese and Ireland. Together they account for 13% of the fleet on average.

The vessels operate in three main geographic areas:

- the Baltic Sea, which enables Swedish, Finnish, German and Danish vessels to fish species across several fishing zones;
- Norwegian waters (south of 62°N), which constitute an area of continuous fishing for Member State fleets, based on shared fishing rights between Norway and Community countries;
- the waters of Greenland, the Faroe Islands, Iceland and Norway (north of 62°N), which are worked by vessels that operate in international waters as well as Community and foreign fleets.

The Community fleet operating under these agreements falls into three broad categories:

- trawlers taking all species for human consumption (35-120m long);
- industrial fishing by pelagic trawlers and seiners for the production of fishmeal and fish oil products;
- inshore fishing vessels equipped with trawling gear and static gear (from 15 to 25m long).

Most **long or medium-range demersal trawlers** are over 35m long, while some pelagic vessels are as long as 120m. They operate partly in the Community waters in the North Sea and partly in the EEZs of Greenland,

Norway and the Faroe Islands. The smaller vessels are concentrated in the fishing zones close to their port of registration. Overall, this category of vessels accounts for **two-thirds of the Community fleet** operating under the northern fisheries agreements.

There are some 350 **industrial trawlers and seiners seeking pelagic species**, almost all Danish. They are based on the western coast of the Jutland peninsula. The eastern coast of this peninsula is home to the bulk of the vessels plying the Baltic and southern Norwegian waters. This category accounts for around **16% of the Community vessels** operating under the northern fisheries agreements.

For the long-range fleets, the northern fisheries agreements are primarily a means of fishing the migratory species outside the Community EEZ. The agreements also grant reciprocal fishing rights to non-Community fleets.

**Short-range inshore vessels** consist in particular of:

- about 200 Danish netters (less than 10m long) fishing for demersal species in Baltic and southern Norwegian waters on a daily basis;
- a fleet of 80 multipurpose Swedish vessels operating in the fishing zones of Norway, the Baltic states and Poland;
- a fleet of fifty or so UK netters working Norwegian waters;
- the Finnish fleet operating under the agreements (26 vessels). This is limited to several small liners, netters and trawlers.

In total, short-range vessels account for **18% of the Community fleet** working under the northern fisheries agreements. Like the southern agreements, these agreements allow vessels to extend their fishing activities from their own fishing zones into the neighbouring waters of non-Community countries.

## 2.2. Catches landed by Community fleets under the fisheries agreements

In the 1993-97 period, the overall catch landed by Community vessels under the fisheries agreements was **2.7 million tonnes** (an average of 540 000 tonnes per year). In addition some 200 000 tonnes were landed under the fisheries agreement with Argentina<sup>6</sup> (on average 50 000 tonnes per year).

*The catch under the southern fisheries agreements* totalled on average around **240 000 tonnes**<sup>7</sup> a year for the 1993-97 period. With more than 87% of the total catch, Spain eclipses all the other Member States in terms of volume (not including tuna catches). Morocco was the major source of the catch, accounting for over 74% of the Community catch. It far outstripped Mauritania, Guinea-Bissau, Senegal and Angola (these four together accounting for more than 25% of the total). The other fisheries agreements are therefore of limited significance only.

The breakdown of the catch by tonnage (Table 6) points up a concentration on several key species. **Cephalopods** (of which octopus alone makes up 80% of the catch) account for around **14%** of the landed catch; this species is caught mainly in Moroccan (86%) and Mauritanian (7%) waters.

**Shrimp catches**, which make up a lesser portion of the total landed volume (5%), are evidence of the operation of specialist fleets. The breakdown by origin of the total catch is as follows: Morocco (28%), Angola (28%), Mauritania (18%), Guinea-Bissau (15%) and Senegal (8%). Other crustaceans (lobster, crab and various unclassified species) represent less than 0.6% by volume of the total catch landed.

Taken as a whole, **demersal species** (numbering around thirty species) represent 5% of the landed catch, of which more than 80% comes from the Moroccan EEZ. The remainder comes mostly from Senegal, Guinea-Bissau and Mauritania. At 24 869 tonnes, sole represent 2% of the catch. **Hake** (from the Mauritanian EEZ, and, to a lesser degree, that of Morocco) accounts for **9.4%**, not significantly less than the combined share of shrimps and other demersal species.

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<sup>6</sup> Given separately, since the vessels landing catches under this agreement are not registered in a Member State of the Community.

<sup>7</sup> This average figure was calculated over a five-year period, despite the temporary suspension during this period of the agreement with Morocco.

By volume, almost **58%** of the catch is **small pelagic species** (sardines, sardinellas, anchovies, horse mackerel and mackerel). Most of these are Moroccan sardines (81%), caught for processing into fish oil and fishmeal. The new Dutch trawlers in Mauritania have already caught more than 100 000 tonnes of sardinellas in two years during the reference period.

On average, the **total catch** under the southern fisheries agreements (Table 7) is worth **€ 485 million** annually (3.7 times greater than the value of the catch under the northern agreements). Spain accounts for 82% of the total, followed in order of value by France and Portugal, with about 7% (some € 34 million) each.

Around 54% of the total value of the catch comes from Moroccan waters (almost three times that of the catch from Mauritanian waters). In terms of value, Moroccan waters account for 20% of the total turnover of cephalopod vessels, followed by seiners (9%) and then by trawlers and deep long-liners (7%). Behind these is a group of 11 fleet types with values ranging from 2% to 5% which, taken together, represent just over a third of the total catch value (38%). The remaining fleets combined do not amount to more than 2% of the total.

The catch under the southern fisheries agreements represents almost 20% of the value of fisheries production in Spain, 11.4% in Portugal, 4% in France and 3% for the Netherlands. In contrast, in Italy, Greece and the United Kingdom such catches make up less than 1% of national fisheries production by value.

The catch under the agreement with Argentina in the 1995-98 period is estimated at 201 136 tonnes of processed product, with a total value approaching € 180 million, which represents an **annual turnover of € 45 million**. Catches of hake make up 73% of the value of the catch (and 76% by volume); squid is 17% of both the value and the volume. Other species make up 10% of the catch (of which 6% is cusk-eel). On average over 95% of the catch is exported to the Community.

The catch under the northern fisheries agreements fluctuated between **300 000** and **370 000 tonnes** annually in the 1993-97 period. The main industrial species (sandeel, Norway pout, capelin, blue whiting and sprat) account for more than 70% of the landed tonnage. Denmark tops the list of producer countries with 82% of the catch in this sector. Germany and the United Kingdom share 10% of the volume, while Sweden accounts for less than 5%. Catches landed by other Member States are less than 5% of the total. In terms of value, cod is the main species fished under the agreements.

The **average annual value** of the catch for the 1993-97 period was **€ 130 m** (of which 31% - a figure of € 42 m - was generated by Danish vessels). The Danish, German and UK fleets together account for 80% of the total catch value. This distribution of turnover has not been altered either by the accession of Finland and Sweden to the Community in 1995 or by the new fisheries agreements negotiated by the Community with the northern countries. The agreement with Norway, accounting for more than 60% of the value of the catch, is the most important northern fisheries agreement, surpassing the one with Greenland (27% of the total, due to capelin and redfish catches). The other agreements contribute less than 2% of the value (Table 9).

The catch under the northern agreements represents a significant proportion of the value of the national catch for Germany (20%), Sweden (7%) and the United Kingdom (4%) - it is of lesser importance for the other Member States.

## **3. THE AGREEMENTS, THEIR IMPLEMENTATION AND THE FINANCIAL RESULTS**

### **3.1. Calculation of fishing rights**

Fishing rights are calculated differently for each fisheries agreement (in particular the southern agreements); for tuna fleets they are based on the number of vessels, while for other types of fleet they are based on volume (in GRT).

The fishing rights allocated to joint enterprises and joint ventures under the Argentine agreement are quotas deducted from the total catch volume laid down in the agreement. Rights to fish non-surplus stocks are awarded by transferring existing fishing licences from Argentine vessels to foreign vessels, which thereby replace their Argentine counterparts. Issuing new licences allows surplus stocks to be fished subject to the conditions set out in the protocol.

Under the northern agreements, fishing rights are calculated as annual quotas, which generally entail the imposition of ceilings on the number of vessels. The number of vessels permitted to operate at any one time is

restricted by the number of "valid" licences issued. The licences issued under the northern agreements function more as a guidance mechanism for the administration of the quotas than as a direct management tool.

### **3.2. Types of fishing covered**

Because the terms of the licences are becoming increasingly more specific (laying down particular species, methods and zones), there is less room for flexibility in the protocols (to transfer different types of licence between vessels, for example). Tightening the conditions of the agreements in this manner enables the non-Community countries to regulate the fishing of their stocks to suit their requirements, even, where necessary, going so far as to differentiate the licence fees.

The agreements list four different types of tuna vessel: seiners, long-liners, pole-and-line vessels and liners. The fishing rights are defined differently for each category.

The licences for the other fleets operating under the southern agreements are based on more specific categories. These stipulate at least which species can be fished and / or which production method should be used (fresh or frozen fish). Most countries work with four or less categories (except for Morocco, Mauritania and Senegal).

Under the agreement with Argentina, vessels that have changed their port of registration are classified by nationality; technical equivalency criteria are used to ensure that the existing fishing effort for "non-surplus" stocks is not exceeded. Licences issued under this agreement assume the terms of validity of the original licence that was transferred. For joint ventures, the conditions governing the implementation of the venture and the issuing of licences are more or less identical to those that apply to joint enterprises, except that the period of validity is adjusted to cover the duration of the joint venture.

Licences issued under the northern agreements are defined in terms either of species, groups of species, fishing zones or vessel size, or a combination of these. There was almost no change to the categories in each agreement over the reference period (few licence types were cancelled or new types created).

### **3.3. Stock conservation measures in the protocols to the agreements**

Each country has its own particular schemes for preserving fish stocks. The only rules common to all the southern agreements are those governing the mesh size of nets, although even these vary slightly between countries for certain species.

Other measures, more general in nature, are more commonly used. For example:

- controls on by-catches,
- the temporary suspension of fishing activity for reasons of "biological recovery" (in force in Morocco, Mauritania and Senegal), or
- (in the northern fisheries agreements) the closure of fishing zones or restrictions on access to them.

Some types of measure, however, are specific to certain agreements:

- the designation of protected species,
- minimum size requirements for landing fish of certain species,
- the exchange of information, and
- the monitoring of discards.

Because they have changed their port of registration (either permanently or temporarily), vessels licensed under the agreement with Argentina are subject to the same operational conditions and obligations to declare catches as the Argentine national fleet.

The agreements in force in the Indian Ocean do not contain any specific rules for protecting tuna stocks. Instead, the protocols to these agreements promote stock conservation by referring to the recommendations on tuna protection in the Atlantic that are laid down in the ICCAT<sup>8</sup>.

### **3.4. Arrangements for monitoring and inspecting the Community fleets**

Measures for monitoring and inspecting compliance with the rules governing the Community fleets feature in almost all the protocols. The desire of the signatory States (both Community and non-Community countries) to enforce greater compliance with the measures in the agreements is reflected in the progressive reinforcement of two facets of the system: monitoring of vessel presence and monitoring of catches. A third measure focuses on monitoring compliance with the fishing rules of the different non-Community countries.

Disregarding isolated cases (surface long-liners operating in the waters of Gambia, Equatorial Guinea and the Seychelles), all the southern agreements make provision for on-board observers. Some southern agreements require vessels to undergo inspections, controls and technical inspections at different times: in Guinea-Bissau, Guinea and Senegal once a year; at the point of discharge in Morocco, or, most frequently, randomly. On the whole, it would appear that non-Community countries do not always have sufficient means to enforce the inspection arrangements in the protocols.

In addition, Member States have a specific responsibility to monitor the operations of their vessels in non-Community waters (see the "Control" Regulation, No 2847/93). The measures include requirements on vessels to keep a logbook in which they note their catches, and to make a statement to their country of registration concerning products landed or transhipped in non-Community ports or onto non-Community ships. The information contained in these logbooks must be notified to the Commission in electronic form every quarter. However, various problems have been encountered in attempting to analyse this data:

- Collating the data: the necessary data is generally collected by the national authorities, but it does not always find its way into the central Commission database, from where it can be analysed;
- The form of the data: sometimes data has been aggregated to a level incompatible with some objectives of the analysis, or is not available in electronic form;
- Reliability of the data provided.

These difficulties show that the situation is far from ideal as regards monitoring the activity of certain fleets in non-Community waters.

### **3.5. Measures involving fishermen and on-shore industries in non-Community countries**

All the protocols (with the exception of the agreements with the Comores, Equatorial Guinea and Mauritius) contain requirements to include a certain proportion of domestic seamen in the crews of the Community vessels. Each country has its own methods: quotas per vessel or per fleet, statutory minimum percentages, etc. Half of the countries that have agreements with the Community have seen an increase in the levels of their nationals employed in this manner. Morocco (with more than 800 seamen employed on Community vessels in 1997) and the Ivory Coast have benefited from this measure. Senegalese seamen are employed in equally large numbers. In other cases (such as Guinea and Mauritania), vessel owners have preferred to pay the wages of the fishermen to the shippers without actually employing them on-board.

Under all the agreements (with the exception of Angola), non-tuna fleets are obliged to land a certain proportion of their catch in the non-Community country. However, this measure is actually less restrictive than it might appear, since European vessels are able to obtain exemptions (except in Morocco). The species landed in these countries (e.g. Senegal and Gambia) by Community vessels tend to be of low commercial value and not in great demand on the Community market.

The landing obligations on tuna fleets are not as binding. Apart from in Senegal, they are mere recommendations intended to cover by-catches (valued at local market prices) and the proportion of landed tuna to be processed in local canning plants for subsequent export. These measures have next to no effect on the domestic markets of the non-Community countries but are a major source of foreign currency (in the Ivory Coast, Senegal, the Seychelles, Mauritius and Madagascar).

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<sup>8</sup> ICCAT: International Convention for the Conservation of Atlantic Tunas.

### 3.6. Utilisation of fishing rights

Utilisation rates in both the north and the south (i.e. the proportion of the licences available under the agreements that are actually issued) vary depending on commercial interest in the main species and their density in certain fishing zones at certain times. The highest utilisation rates are associated with the species with a high commercial value. These are (in the south) octopus, shrimp, hake and other high-value demersal species and (in the north, with the exception of Greenland) shrimp, salmon and cod.

Contrasts abound, however. In the south, the rates are as follows:

- zero or negligible in Gambia and Guinea-Bissau;
- moderate for trawl-net fishing in most countries (not including shrimp activities) and for all types of fleet in Senegal, and
- high or even very high (>70%) for shrimp fishing in all countries and for practically all species in Morocco and Mauritania.

Such relatively stable rates do not preclude the existence of considerable variations, due either to seasonal (trawl-net fishing in Angola, not including shrimps) or structural (trawl-net fishing in Guinea) factors.

In the north, variable utilisation rates can be noted for capelin (in Greenland) and herring. In the latter case, rates are on an upward curve due to the increasing importance of the Baltic agreements for Community fishermen. Rates also vary for industrial species (herring, sprat, sandeel and Norway pout), fluctuating considerably according to stock density at any given time. The Community fleet only uses its full quota of such species if a certain level of profitability can be guaranteed. Utilisation rates are very high in Norwegian waters (more than 80% for most species).

The average utilisation rate in 1997 and 1998 for the quotas set under the Argentina agreement was 65.2%. This shows the arrival of new vessels after 1997. The breakdown of utilisation rates by vessel reveals a difference between the utilisation of the quotas for less sought-after species and that of the quotas of in-demand species, such as hake (the utilisation rates for which can approach 90%).

The instances of low utilisation could be related to market factors (price falls, demand trends) or natural factors associated with the stocks fished. Ship-owners are able to maintain profit levels by adapting their operations to the behaviour of the target stocks (e.g. obtaining multiple licences to cover the large-scale migrations of tuna species, fishing pelagic species only when stock levels permit). Ship-owners may not make use of their fishing rights because they find the technical and financial conditions of the agreements too restrictive. Other arrangements for access to the same stocks may be offered either by the non-Community country (private licences, temporary registration under its national flag, chartering) or by the Community (joint enterprises); this makes the conditions of the agreement less attractive.

In some instances, the low utilisation is caused by an overestimation of the demand for fishing rights when drawing up the agreement, or because they are artificially inflated by the non-Community countries to justify the level of financial compensation they are demanding.

The tuna agreements are a typical example of how fishing rights under certain agreements are under-utilised. At the beginning of the fishing year it is established practice for ship-owners (especially owners of seiners) to obtain licences in several different countries, to enable them to fish tuna continuously by following their migratory route. Monitoring licences does not, in this case, give reliable information on the size or geographical distribution of fleets. Some seiners, for example, take up to nine different licences in the same year, several of which they never use. The northern agreements offer some striking examples of extreme under-utilisation of fishing rights, for example:

- the Faroe Islands,
- cod in Greenland waters (the agreement underestimated the potential stock available), and
- redfish in Icelandic waters (although that was the only species covered by the agreement).

### 3.7. Cost of the fisheries agreements

In the southern agreements, the financial compensation paid by the Community is supplemented by private payments, while the northern agreements work on the principle of zero private cost for access rights. The mechanism for exchanging fishing rights under the northern agreements (known as "reciprocity") is intended to guarantee equal opportunities by using the yardstick of cod equivalent that is generally used for quota exchanges. Today the mechanism has no relation to real monetary values, since the value of the different species relative to one another has changed since the system was introduced.

The arrangements for setting up joint enterprises or joint ventures under the Argentina agreement include provision for Community financial assistance depending on vessel tonnage (four categories of GRT) and age (three age categories). Community financial support for setting up temporary operations in Argentina is also based on vessel tonnage. The system therefore operates by providing incentives both to the non-Community country and to the Community ship-owner (who applies for one of the forms of assistance on offer) together with his partner there.

The breakdown of the financing for the agreements into public sector (Community financial contribution) and private sector sources shows that, over the five-year reference period, the Community financed 82.8% of the total cost of the southern agreements (an average of €155 m per year). The remaining 17.2% of the total cost was funded by the ship-owners themselves (an average of over €32 m per year in fees - see Table 10).

### [The public share: financial contribution and compensation paid by the Community](#)

The overall cost of the fisheries agreements to the Community budget in the reference period was €1 053 m (Table 11), of which almost €300 m was paid out in 1997 alone.

In the southern non-Community countries and Argentina, the annual cost of the agreements rose by 60% over the reference period. In the same period, however, the overall trend for access rights (not including tuna) was downwards: 120 fewer Spanish vessels were authorised by Morocco, and the number of licences available under the agreement with Mauritania was increased by only 35.

During this period, the agreement with Morocco contained the greatest portion of public financing (41%), followed by Greenland (17%), Mauritania (13%) and Argentina (11%). The agreements with Angola, Senegal and Guinea-Bissau together represent around 12% of the cost of the agreements.

The tuna agreements account for less than 3% of the total cost of the agreements but they have helped to support a Community presence in the fishing grounds of the South Atlantic and the Indian Ocean. As such they complement the private agreements signed by French and Spanish ship-owners.

In some cases, the Community financial contribution is paid as a lump sum, while in others individual amounts are paid by category. This depends on the preferences of the non-Community country government (research, training, administrative support, specific schemes in the sector). In the southern countries and Greenland, financial compensation and fishing rights are negotiated in advance for the agreement as a whole. For the Baltic states, this takes place on a yearly basis. Contributions to scientific and technical programmes and to specific measures can be paid to the ministries responsible for fisheries as specified in the protocols. The funds for the training programme can be administered by the Commission (DG XIV) or directly by the non-Community countries. Specific programmes (research, training, joint enterprises and other measures) each account for less than 10% of Community funding. The training budget represents less than 2% (Table 12).

### [The private share: fees paid by ship-owners](#)

For the tuna fleets, total fees over the five years of the reporting period amounted to €10.5 m, of which €2.1 m was paid in 1997 (according to the catch statements submitted by ship-owners, the fees were generally €20 per tonne of tuna caught). Agreements dealing primarily or exclusively with tuna may include a maximum catch volume. For all catches declared above this limit, the rate of compensation is increased at the rate of €50 per additional tonne.

Ship-owners must make an advance payment (the amount of which varies by country) on all catches, regardless of the volume they declare. This payment represents a clearly increasing share of the total fee (in 1993-5, it was less than 20% of the fee: by 1996-97 this had risen to over 30%). Requiring more of the fee to be paid in advance has generated greater revenue for some non-Community countries but increased the risks of the multiple-licence strategy practised by ship-owners. In 1997, advance payments for seiners ranged from €1 000 to €7 500 per vessel, depending on the country. Surface long-liners are generally required to pay a smaller

portion of the fee in advance, except in the Cape Verde islands and Mauritania. Pole-and-line vessels make advance payments of between € 200 and € 300 each, apart from São Tomé, where the figure is € 500.

For the non-tuna fleets, the fee paid by ship-owners for a licence is based on vessel tonnage, the validity period of the licence and the current rates in the relevant country. Morocco issues quarterly licences (the price of which varies according to tonnage in the case of shrimp trawlers). Senegal issues four-monthly licences to some demersal fleets. In a supplement to the protocol to the 1993 agreement, Mauritania issued licences to 18 vessels for a period of 8½ months. These cases aside, all countries offer licences of three, six or nine months.

The price of yearly licences for fishing shrimp and related species (crustaceans, lobster, etc.) can vary by a factor of as much as five, depending on the country. The highest fees are charged by Angola, Mauritania, Guinea-Bissau, Guinea, the Ivory Coast and Senegal. The price differential is slightly less for other types of trawlers. For cephalopod vessels, it varies between € 96 per GRT in Morocco and € 348 in Mauritania; for trawlers seeking fin fish, the range is from € 60 in Gambia up to € 188 in Guinea-Bissau. Lastly, licences for black hake are much more expensive in Mauritania than in Morocco. During the reference period, Morocco, Mauritania (excluding cephalopod vessels) and Senegal raised prices for trawler licences, whereas prices in Guinea and Angola (apart from for cephalopod vessels) fell. Fluctuations in the level of licence fees reflect the periodic preferences of ship-owners for different products and fishing zones.

The most expensive countries for ship-owners (in relative prices) are Angola, the three Guineas and the Ivory Coast; less than 80% of the total cost of the fisheries agreements with these countries is financed directly from public sources. Conversely, the Community finances over 90% of the cost of the agreements with Mauritius, Gambia, Senegal and São Tomé. Most of the disparity in public funding levels can be explained by the different cost of licences in the non-Community countries.

### **3.8. Licence costs in relation to fleet turnover**

The ratio of licence costs to turnover has been worked out for the agreements that involve a Community financial contribution and therefore applies only to the agreements with the southern countries and Greenland. The amount of public funds paid by the Community during the reference period for access to the waters of the southern countries averaged € 155 m per year. With an estimated average annual catch value of € 485 m (Table 7), this means that **every €1** paid by the Community for access rights to the EEZs of the southern countries generated an average **turnover of € 3.1**. If the costs paid by the ship-owners are added to the equation, this figure falls to € 2.6.

For each vessel, the portion of turnover represented by the licence costs can be estimated from the turnover/licence cost ratio calculated for the Community fleets. The proportion represented by licence fees varies considerably, from 2% to 17% (Table 13). It seems to be correlated not with the type of licence (for shrimp, cephalopods, etc.) but rather with the country in question (depending on the protocol to each agreement). Thus the proportion is higher (between 12 and 17%) in Angola, Gambia and Guinea, regardless of the species being fished. In contrast, the average proportion of turnover represented by licences in Mauritania and Senegal is no higher than 8% for all fleets apart from demersal fleets (10-11%).

In none of the cases did the fees paid by tuna vessels (including for non-Community licences) account for more than 3% of the turnover achieved in the EEZ in the reference period. The 1997 figure for the EEZs fished under the agreements was 2.6% (as against 4.4% for all the EEZs, including those fished under private agreements). The difference between these two sets of figures also demonstrates that private licences to fish in non-Community waters are less profitable (in terms of the fees/turnover ratio) than those obtained under the Community fisheries agreements.

The profitability levels calculated for certain fleets (shrimp, cephalopod and tuna vessels) may justify a readjustment of the respective levels of public and private financing. However, the yearly fluctuations hamper any attempt to draw a definitive conclusion.

## 4. CONTRIBUTION TO THE ECONOMY OF THE EUROPEAN COMMUNITY

### 4.1. Value added

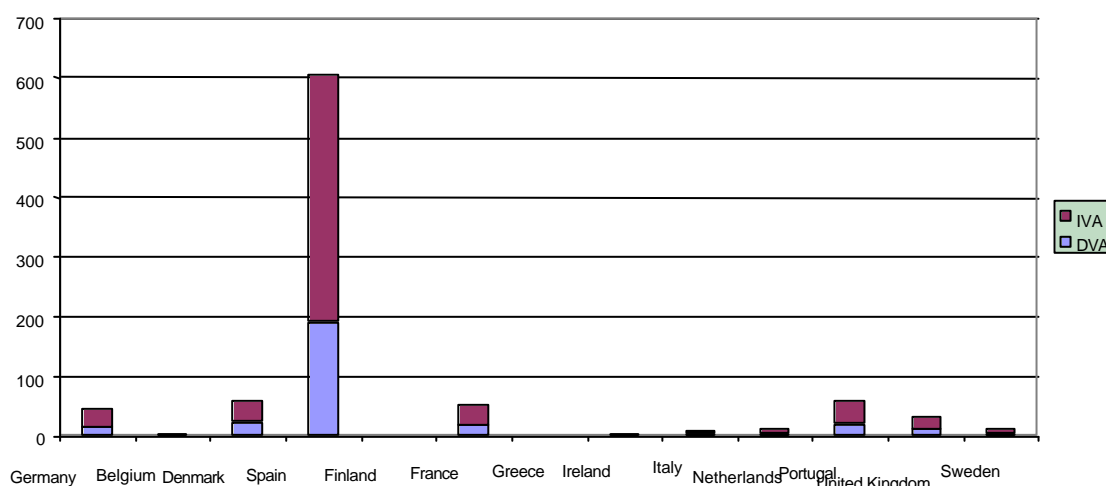
Overall, the Community fisheries agreements (northern, southern and Argentina) create € 944.5m of value added per year in the Member States, involving 40 650 jobs, more than 82.5% of which under the southern agreements, 15.7% under the northern agreements and 1.8% under the Argentina agreement (Tables 14, 15, 16 and 17).

Thus direct value added generated by Community fisheries agreements is estimated at a total of € 294m per year on average. **The southern agreements** account for € 222m per annum or 75% of the annual total, **the northern agreements** for € 62m or 21% and the **Argentina agreement** for € 10m or 4%.

The effects on repair and maintenance yards, handling by dockers in Community ports, providing supplies including spare parts, which are immediately upstream of the fishing sector, are less concentrated than the effects downstream. Tuna fleets purchase 56% of their intermediate consumption in the Member States and non-tuna fleets 77%. In spite of the distance from their bases, fisheries-agreement-based fleets buy goods and services from businesses in Community countries estimated at € 154m as an annual average, broken down as follows: € 27m for maintenance and repair, € 25m for passenger transport, € 18m for goods transport, € 17m for fuel and 16m for supplies. The remaining local effects (€ 51m) are spread over several sectors.

Over and above this intermediate consumption, Community fisheries agreements also generate effects in shipbuilding as a result of the new investments that they have encouraged. It is estimated that 24 trawlers and 13 seiners were built between 1993 and 1997, representing a total amount of around EUR 250m over that period or an annual average of € 50m. The main shipyards benefiting from the agreements are in Galicia and Brittany, but given the diversity of the nationality of suppliers, the impact is spread over all Community economies.

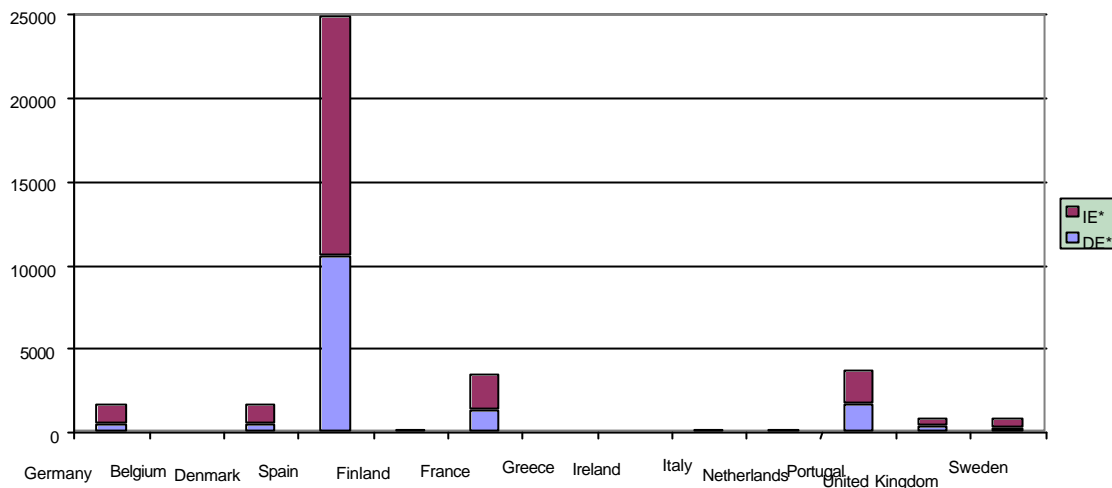
Most of the catches taken under Community fisheries agreements in southern EEZs are sold fresh or frozen and account for most of the downstream activities affected by the agreements. By contrast, tuna and cephalopods (100% and 10% of purse-seine catches respectively) are canned. Overall, each year the industry processes about 17 000 tonnes of tuna in Spain and 4 500 tonnes in France, plus 2 500 tonnes of cephalopods caught under Community fisheries agreements in Spain (including 71% octopus), 50 tonnes in Italy (88% cuttlefish) and 10 tonnes of cuttlefish in Portugal.



The surveys of the effects created estimate indirect value added at € 650m/year for all Community fisheries agreements taken together (78% southern agreements with almost € 509m, 18% northern agreements with € 114m, and € 27m or 4% for the Argentina agreement). Most of the indirect value added is generated by upstream activities (shipbuilding and fitting), with 9% accounted for by canning in Spain and France.

## 4.2. Employment

As a measure of the impact on employment in the Member States, vessels under the **southern agreements** have an average of more than 13 440 Community fishermen on board. Indirect employment resulting from the southern agreements is almost 19 400 persons on average per year (of which 18% in the canning industry). The agreement with **Argentina** provides 730 on-board jobs per year on average and 745 indirect jobs. The impact of the **northern agreements** is estimated at more than 6 400 jobs, 2 100 direct and 4 300 indirect.



\* - indirect employment

\*\* - direct employment

The impact of Community fisheries agreements on employment in the processing sector can be gauged in terms of the sources of the raw materials supplied to processors. Thus, jobs in processing tropical tuna fished under agreements are estimated at around 3 800 in the case of Spain and 700 in the case of France, the representative countries in this area.

The overall analysis of the impact on value added and employment shows a high concentration of economic effects resulting from the **agreements with southern third countries**. More than 80% of those effects benefit Spain, followed by France and Portugal (each with about 7%). Most of the effects are due to the agreements with Morocco (more than 50%), Mauritania (about 20%), Seychelles, Angola and Senegal (each with about 5%). The fishery segments accounting for most of this are cephalopod vessels in Morocco, trawlers and bottom long-liners in Mauritania, shrimp vessels in several West African countries and tuna seiners in the Atlantic and Indian Oceans.

As far as the **northern agreements** are concerned, the return is greatest in the case of Denmark (one third of the effects), Germany (one quarter) and the United Kingdom (20%). The agreements with Norway and Greenland account for most of the economic impact, at 65% and 25% respectively. The main fishery segments operating under northern agreements are Danish factory trawlers and industrial-fish trawlers (all third countries) and UK demersal trawlers (Norway, Faroe Islands and Greenland).

## 4.3. Impact of fisheries agreements on regions dependent on fishing

Community fisheries agreements have a significant impact on some regions dependent on fishing. The distribution of the value of catches originating in the EEZs of the various third countries varies from port to port and reflects the degree of dependency of those regions on fisheries agreements according to which countries are involved. For some specialised fleet segments, fishing in more than one EEZ ensures fewer interruptions in operations but cannot disguise the problem of the need to achieve a minimum threshold to balance the economy of some ports. Where a certain minimum volume of activity is not reached, the sizing of local infrastructures and facilities should be reviewed and the coastal economy reassessed. This reflects the interdependence of all fishery activities in the main ports concerned:

- the heavy involvement of **Spain** in Community fisheries agreements reflects the high degree of dependence of the ports of Las Palmas, Huelva, Vigo, Cadiz, Almeria, La Guardia, Villagarcia, Malaga and Barbata on Community policy, and especially with regard to Morocco. The impact of the southern agreements is reflected in the breakdown of the value of catches taken in those zones: Canary Islands 38%, Andalusia

25.8%, Basque Country 20% and Galicia 9%. The other regions (Asturias, Melilla, Valencia and the Balearic Islands) account for 8.0% of the total. The fleet segments operating out of Vigo (Galicia) and San Sebastian (Basque Country) are mainly dependent on northern agreements;

- in **Portugal**, the two ports of Sesimbra and Olhao are involved in southern agreements, in particular the agreement with Morocco, from which they draw 76% and 15% of their supplies respectively. There are also about ten Portuguese demersal trawlers fishing under northern agreements out of Aveiro and Viana del Castelo;
- in **France**, Concarneau is the main port involved in tuna agreements. Boulogne sur Mer, Saint Malo, Dieppe, Fécamp and Concarneau are the main ports involved in northern agreements.

In the other Member States, with the exception of the island of Bornholm (Denmark) and a few Scottish ports, the dependence of the regions on Community fisheries agreements is much less acute given the small number of vessels involved.

#### 4.4. Impact on supply to the Community market

An analysis of the impact of Community agreements on the Community market in fishery products (Table 18) shows that:

- ❑ a little over three quarters (77%) of catches taken under the agreements is intended for human consumption and is used principally to supply the Community market (12% is exported);
- ❑ the various market segments concerned by the agreements represent a total of 70% of the Community market in fishery products for human consumption;
- ❑ total net supplies under Community fisheries agreements (less exports to outside the Community) go towards meeting Community market requirements to varying degrees depending on the species, ranging from 0% to 10-20% (sardine), 12% (octopus) and 30% in the best cases (tuna). Overall, these supplies account for:
  - 8% of all markets taken together (or only 5% if only tuna catches taken in EEZs are considered),
  - 11% of species intended for human consumption (and 6% if only that part of tuna catches taken in EEZs is considered),
  - between 3 and 5% in the case of the markets in fish meal and oil.

The main countries benefiting from this trade are Spain (74% of the trade in terms of volume: tuna, sardine, hake, octopus and shrimp), the United Kingdom (8%: cod and haddock), Germany (7%: redfish, cod and saithe) and Denmark (4.5%: industrial species, mackerel, cod and deepwater prawn). Seven species or groups of species (cod, crab, prawn, high-value demersal species, octopus, sardine and tuna) account for the main effects in terms of the market (volume of supply, prices, range and extent of markets).

## 5. CONTRIBUTION TO THE ECONOMY OF THE NON-COMMUNITY COUNTRIES CONCERNED

### 5.1. Contribution to national revenue of Community fisheries agreements involving financial compensation

As an annual average over the period 1993-97, the southern third countries (82%), northern third countries (18%) and Argentina received almost € 217 m in compensation for granting fishing rights to Community fleets. Four countries shared more than 80% of this amount: Morocco (41%), Greenland (17%), Mauritania (13%) and Argentina (11%). For some countries, the financial contribution of Community fisheries agreements is particularly large when compared with their total budget revenue: Greenland (7%), São Tomé (13%), Mauritania (15%) and Guinea Bissau (almost 30%).

Most revenue from compensation paid to third countries goes into the national budget and it is difficult to trace to what use it is put. However, in some countries some of the funds are clearly allocated to promote and develop the national fisheries sector, either because the agreement provides for targeted measures or because they are allocated *a posteriori* at the instigation of the national authorities responsible for the sector or research institutes and development agencies (Angola, Madagascar, Seychelles, Guinea, etc.).

## 5.2. Creation of value-added

Direct Value Added (DVA) generated by all northern and southern Community fisheries agreements amounts to **€ 107 m** plus **€ 11.1 m** for the agreement with Argentina.

Since the **northern agreements** are based on the principle of reciprocity, catches of certain species in Community waters generate turnover for northern third countries estimated at € 95.3 m as an annual average. The average DVA of € 55 m per year over the reference period represents 58% of the value of catches. A breakdown by country shows that 91% of this DVA goes to Norway, but a breakdown over time shows a strong variation from year to year. Indirect Value Added (IVA) resulting from port activities, processing and marketing amounts to € 102 m per year on average, and here also the main beneficiary is Norway. Total value added is thus **€156 m** (Table 19).

As regards the **southern agreements**, the share of DVA falling to third countries is 19% or around € 53 m as an annual average (Table 20), 61% of which is made up of taxes, 29% of wages and 9% of port charges. IVA (upstream and downstream sectors) is estimated at € 45 m, i.e. **total value added is € 98 m**. The breakdown by country confirms the importance of Morocco (€ 36 m or 38%) and Mauritania (€ 14 m or 14%) in creating effects in third countries.

For the **Community fisheries agreement with Argentina**, annual DVA is estimated at € 11 m plus IVA at € 8 m, i.e. total value added is **€ 19 m** (Table 20). This places Argentina just behind Morocco, Mauritania and Norway on the list of top beneficiary countries.

Value added in the upstream sector of third countries was gauged on the basis of an estimate of intermediate consumption by Community vessels in third countries. In terms of effects induced upstream by tuna fleets, the third countries most affected are those in which the fishing vessels dock, essentially Seychelles and Ivory Coast, but also, on a more seasonal basis, Madagascar and Senegal. In 1997, Community tuna seiners operating in the Atlantic spent € 7.8 m in Ivory Coast and € 1.55 m in Senegal. Community seiners in the waters of third countries in the Indian Ocean spent € 3.8 m in Seychelles, € 2.2 m in Madagascar and € 0.2 m in Ivory Coast and Senegal (maintenance and repairs and consignee services).

For value added in the downstream sectors of third countries, with the exception of Argentina, the analysis is based mainly on the effects generated by tuna fleets. Tuna vessels fishing in the Atlantic land their catches in the ports of Abidjan and Dakar. Vessels operating in the Indian Ocean unload in Seychelles, Madagascar, Mauritius, Kenya and Thailand. The fish is delivered direct to local canning firms or transhipped on refrigerated vessels for onward delivery to France, Italy, Porto Rico and Thailand. On the basis of where the fish is shipped to, the value added generated can be estimated at around € 19 m.

## 5.3. Employment

For all fisheries agreements taken together, more than 5 400 direct jobs and almost 11 000 indirect jobs are linked to the existence of the Community fisheries agreements.

Under the **northern agreements**, the number of direct jobs connected with third countries is estimated at 2 500, with almost 80% being accounted for by Norway (about 2 000 jobs). The number of indirect jobs in upstream and downstream sectors linked to Community vessel activities is estimated at almost 5 000.

Under the **southern agreements**, the number of on-board jobs per year for nationals of third countries is almost 2 400 for all southern Community fleets taken together. This involves four countries in particular, representing 85% of total direct jobs in third countries; these are, in descending order: Morocco, Ivory Coast, Senegal and Mauritania.

Community vessels operating under southern agreements maintain almost 5 000 jobs in indirect onshore activities, broken down as follows: 36% in Ivory Coast (canning and repairs), 21% in Senegal (essentially canning), 25% in Madagascar (repairs and canning), and 12% in Seychelles. Overall 41% of jobs are in tuna canning and packaging manufacture for canning plants.

Finally, **the Community fisheries agreement with Argentina** provides some 540 direct jobs to fishermen who are not Community nationals and indirectly generates more than 800 jobs in Argentina.

#### 5.4. Competition with national fleets

Competition between fishing fleets translates into rivalry for the same resource where more than one fleet with different technical characteristics (industrial fishing *versus* small-scale fishing) and/or from different origins target the same species (or size categories). It may be in the shape of competition for areas where the fishing methods used by the various fleets are incompatible in terms of the space they require, even if they are targeted at different fish (conflict between dragnets, such as trawls, and passive gear or drift-nets such as long-lines or simple nets). Ultimately it leads to rivalry for markets, in this case mainly in exports where Community fleet catches compete with third-country fleets on foreign markets (disputes between Morocco and Spain in octopus fishing and exports to the Japanese market).

The contribution of Community funding towards the financial balance of investments and the operation of certain fleets and sectors accentuates the competition between Member-State and third-country operators where the resources and markets targeted are the same.

Most affected are the fisheries agreements with Morocco, Mauritania and Senegal, although the nature, extent and context of the competition are different in each case. Morocco displays all possible types of competition but to varying degrees; the economic issues linked to fishing by cephalopod fleets give the situation added significance for the future shape of this Community fisheries agreement.

Competition between the Community fleet and national interests comes in addition to existing conflicts in third countries (among small-scale fleets themselves and between them and industrial fleets). This is the case with the fisheries agreement with Morocco and to a lesser extent with the other African countries involved (Senegal and Mauritania). In such situations, technically defining types of zone of activity is rarely sufficient to resolve conflicts between fleet segments. For certain resources, laying down zones reserved for certain types of fishing will not prevent competition arising from targeting the same stock and the same market. Nevertheless, in some cases, the diversity of size of operators benefits the sector as a whole and may also be beneficial for markets in small-scale fishery products also intended for export.

In the case of tuna resources and the tuna sector, there is no direct competition between third countries and Member States. Scientific institutions and bodies monitoring tuna fishing in the areas covered by Community fisheries agreements continue to be developed, and receive support under Community co-operation policy, including fisheries agreements covering specific measures.

#### 5.5. Consistency with other parts of the CFP

There is no link between the reduction in fishing effort in Community waters and the fisheries agreements, although the agreement with Argentina has helped to reduce capacity.

Consistency with the parts of the CFP directed at structures and markets is difficult to assess. However, fisheries agreement policy is consistent with resource management policy.

#### 5.6. Consistency with other Community policies

Direct development effects on fisheries depend on the level of co-operation on the management of jointly fished or traded resources. Under the northern agreements, such co-operation is mainly in the form of international agreements (NAFO, NEAFC, IBSFC and NASCO) and diagnostics and advice provided by ICES. The effects are significant because the agreements are negotiated then reviewed annually as part of a concerted stock management policy.

**In the north**, as a result of their status as an independent region of Denmark and an overseas territory respectively, Greenland and the Faroe Islands are special cases for the Union. In the case of the former, this takes the form of compensation higher than the market value of the resources fished by Community fleets in Greenland waters in addition to customs advantages. The Faroe Islands enjoy favourable reciprocal arrangements under the cod-equivalent rule. The Baltic countries' desire to join the Union is underpinned by co-operation over and above the fisheries agreements with the Community.

The northern agreements are a natural extension of fishing in Community and international waters. Essentially, these agreements tie in with the other Community agreements and international agreements through multilateral negotiation of measures taken on the conservation and exploitation of northern European resources (responsibility of the EU, the Member States and third countries for resources in NAFO and NEAFC areas).

**In the south**, previous arrangements and direct co-operation between countries which are now Member States of the Union and third countries have a bearing on the continuation of fishing by Community fleets whose fishing

areas have practically always been those now negotiated under Community fisheries agreements. The Lomé Convention and the Association Agreement with Morocco cover the areas of co-operation involved in Community fisheries agreements. Thus a slight advantage under the Community fisheries agreement may be compensated by joint effects resulting from a separate trade agreement (for example, the issue of import quotas for products is not without significance for the position adopted by certain countries).

However, the other parts of Community development co-operation policy bear only little relation to the arrangements laid down in the individual fisheries agreements. The inclusion of targeted measures in fisheries agreements is more a gesture towards a policy of consistency still under construction. The main, i.e. commercial, purpose of Community fisheries agreements means that the co-operation measures they incorporate are often limited in scope.

## **6. CONSEQUENCES OF NOT CONCLUDING COMMUNITY FISHERIES AGREEMENTS**

### **6.1. The impact at regional level in the Member States**

Under present conditions, activity generated in some regions of the Member States by fleets fishing under southern agreements, which are often the jewel in the crown of the major ports, has major knock-on effects for the regional economy, which explains their high degree of dependence on such "external" fisheries. The impact of non-conclusion of Community fisheries agreements in the fishery sector would be particularly severe in Spain in the regions of the Canary Islands (91% of the local fleet operates outside Spanish waters) and Andalusia (75%), and to a lesser extent in Galicia (55%) and the Basque Country (48%), where there is strong dependence on upstream activities. A major impact can also be expected on shipyards in Galicia.

In the north, not concluding Community fisheries agreements would produce negative effects on present conditions for concerted resource management. In the Member States, the island of Bornholm, and in Scotland the regions of Aberdeen, Banff and Moray, which are supplied not only by Scottish vessels but also vessels from Norway, Iceland and especially the Faeroes, would be hardest hit were no Community fisheries agreements to be concluded. In northern third countries, the main effect would be a reduction in the range of products fished by Norway and the Faroe Islands, and restrictions on fishing by the Baltic countries, whose fleets are being modernised more and more.

#### **6.1.1 Impact on employment and remuneration of those working in the sector in the Member States**

A consideration of the effects of not concluding Community fisheries agreements must also take account of the cost of Community compensatory aid (cessation of activity in the majority of cases under southern agreements or fall in profitability of vessels under northern agreements and tuna agreements). Such measures would entail immediate costs (adjustment within one year) and costs staggered over about ten years (early retirement of fishermen, conversion, etc.).

**In the case of the southern agreements**, there are various scenarios: (i) no possibility of transferring activities to other third countries or other arrangements (private agreements or joint ventures), (ii) a reduction in income with no cessation of fishing. Tuna seiners fall within the second category because they take only a small part of their catch in the EEZs of third countries (between 18 and 21%), and they already conclude private agreements. Since the possibility of vessels under Community fisheries agreements returning to Community waters is excluded, this has not been taken into consideration in calculating the financial impact.

Several Community measures have been taken on the temporary suspension or permanent abandonment of fishing. Such measures and Council Decision 95/451/CE granting compensation to fishermen in certain Member States after suspending their activities in waters under Moroccan jurisdiction) provide a basis in this report for calculating the financial compensation and allowances to be paid in the event of a temporary suspension of fishing. However, an across-the-board halt to Community fisheries agreements would bring about a totally different situation in that the measures taken would no longer be just temporary measures but would call for structural adjustment.

The Community measures for ship-owners are based on vessel characteristics. The measures for crews are based on the age and length of service of fishermen (early-retirement premiums, allowances for temporary cessation and conversion premiums).

Based on certain assumptions (composition of crews, age structure, retirement age in each country, etc.), application of such measures in the event of the non-conclusion of Community fisheries agreements would entail a public cost estimated at just over **€1.047 billion** to cover structural adjustment (split between the Union, national governments and regions of the Member States). The public costs are made up of 15% immediate costs (compensation payments to ship-owners and crews), 22% staggered costs for early retirement and 63% staggered costs for flat-rate conversion premiums (Table 21).

**In the case of the southern agreements**, leaving aside the 2 000 jobs linked to tuna agreements, 13 000 direct jobs in the Member States would be under threat. Jobs in the downstream part of the fisheries sector would be less affected because imports could fill the gap in supply to canning plants. By contrast, jobs in the upstream part would be sensitive to the fall-off in activity in the sector, in particular in several regions of Spain where vessels in third-country fishing zones have major knock-on effects for the regional sector. Upstream effects of a cessation of vessel activity under Community fisheries agreements would also be felt in Portugal (although to a lesser extent, due to Portuguese vessels obtaining their supplies in Spain). Negligible effects on direct and indirect jobs are to be expected in Italy, Greece, the United Kingdom and the Netherlands. The cost of non-renewal of **southern fisheries agreements** is estimated at **€ 921 m**, although the savings brought about in public investment would have to be deducted from this.

In the case of the **northern agreements**, non-conclusion would lead to a reduction in vessel activity and thus a fall in profitability. Keeping available for Community vessels the resources traditionally traded under reciprocal arrangements would, depending on the particular fleet, entail an increase in resources for some vessels and a reduction for others, but also the possible disappearance of some livelihoods (for example, Scottish white fish long-liners in Norway). The advantage of catching fish at the most favourable time from a commercial and biological point of view would be lost. A reduction in vessel activities under northern Community fisheries agreements would entail the redundancy of at least 2 000 Community fishermen; some fleet segments falling below the profitability threshold would no doubt disappear, compounding the impact. The public cost for the first year would amount to € 17.5 m, of which € 2.5 m for ship-owner compensation and € 15 m for crews. The cost of handling early retirement is estimated at € 28 m plus € 79 m in flat-rate premiums, i.e. a total of **€ 126 m** for the **northern Community fisheries agreements**.

### 6.1.2. The impact on the fleet

Excluding any possibility of fishing units under Community agreements returning to Community waters, there are three possible scenarios under the financial instrument for fisheries guidance (FIFG): scrapping, transfer to a third country, and setting up joint ventures. The calculations used for fleets under southern Community fisheries agreements are based on the following assumptions:

- scrapping of all vessels (958 vessels registered between 1993 and 1997);
- scrapping of all vessels but with a single non-digressive scale according to age to take account of the modernisation of vessels and the exceptional circumstances surrounding this issue;
- transfer of vessels under 30 years old (672 vessels costing € 236 m) and scrapping of vessels older than 30 years (€ 93 m);
- transfer of vessels under 30 years old by setting up joint ventures (672 vessels costing € 435 m) and scrapping of vessels older than 30 years (€ 93 m).

Depending on which scenario is selected (Table 22), non-conclusion of Community fisheries agreements would entail a cost of between € 329 m (transfer of vessels under 30 years old and scrapping of vessels older than 30 years) and € 602 m (scrapping of all vessels with a single scale). The figures for the intermediate scenarios involving scrapping with compensation on a digressive scale, and transfer to joint ventures, are € 564 m and € 527 m respectively. Withdrawal of the 958 vessels would mean a reduction of the Community register by 182 000 GRT, 70% accounted for by Spain, 20% the Netherlands and 5% Portugal (i.e. 9% of total Community GRT in 1997).

As indicated above, not concluding Community fisheries agreements with northern third countries would have only a slight overall impact on the Community fleet in that the majority of the vessels concerned, in spite of the large numbers of employees involved, already carry out a significant part of their activities in Community waters. The problem would be to manage the fishing effort (re)deployed by them with its specific (technical) characteristics. The future of some very disparate units (Scottish long-liners and factory trawlers) could be threatened.

## 6.2. The consequences for supply to the Community market

The overall impact would be slight in terms of the quantities landed by vessels under Community fisheries agreements and in relation to total Community landings, but would still be significant for some species.

The northern Community fisheries agreements' role in supplying the market for human consumption (almost 100 000 tonnes of species with a high commercial value) contributes towards diversifying supply and meeting demand in the Community (9% of the Community market in redfish products is provided by Community fisheries agreements, less than 5% in the case of Greenland halibut and 3% in the case of cod); non-conclusion of Community fisheries agreements would have appreciable consequences. For southern Community fisheries agreements, effects would be expected for octopus (they account for more than 12% of supply to the Community market), high-value demersal species (7%), tuna (more than 6%) and shrimp (6%).

The scope for switching to imports or alternate products to offset the loss in supplies under Community fisheries agreements varies depending on the species.

Demand for white fish (cod, saithe, hake, redfish, haddock and Alaska pollack) is reasonably well distributed across national markets for fresh fish consumption, although there are marked preferences for certain species in Germany, Denmark, Spain and Italy. Hake, redfish and cod have no direct substitutes; in the case of hake, consumers prefer European hake (*Merluccius merluccius*) and Chilean hake (*Merluccius australis*). On these markets, fluctuations in supply are reflected in prices, as evidenced by the pressure on cod prices (in 1997 and 1998).

For the processing industry, white fish species are interchangeable since they are in the same price range. Processors adjust their purchases to availability and prices on the international raw materials market. Thus, the sharp rise in cod prices (*Gadus morhua*) in 1997-98 led processors to switch to supplies of "*Gadus macrocephalus*" from China, hoki from New Zealand, etc. The various species of cod are directly interchangeable and can be replaced by other white fish species (Alaska pollack, for example).

There is no substitute for octopus; the Moroccan and Mauritanian product is identical to the Spanish product and enters the Union exempt from customs duty. Their pricing mechanisms are outside the Community market and do not depend on catches taken under Community fisheries agreements. The Community market takes products which are second-class products on the international market.

The fall in tuna supplies would lead to an adjustment in prices which could be significant in spite of the availability of substitutes (tinned salmon). The countries covered by the System of Generalised Preferences (SGP) (in particular Columbia in the case of loins and Thailand in the case of canned products) are competing sources of supply. Those countries, like the African, Caribbean and Pacific countries, enjoy customs exemption, with quotas for the SGP countries. The system of compensatory allowances for Community producers costs €6.7 m per year as an average for the period.

The effects on the market in industrial species are subject to their own dynamics since the world market tends to be speculative and prices on it vary with supply in meal from the various origins and the scope for substitution by agricultural products (soya, for example). However, although catches taken under Community fisheries agreements (about 200 000 t in the north and 100 000 t in the south as an annual average) may appear large, they represent only 9% of world supply and cannot influence prices on such a scale.

For the other species, the impact would be marginal if not zero, either because the volume of catches under Community fisheries agreements itself is marginal, substitution between products is possible on the Community market, or demand for these species is not very dynamic.

A study of the consequences for each species or group of species clearly indicates that a reduction in supply resulting from not concluding fisheries agreements could lead to a rise in imports (and consequently the EU trade deficit) depending on whether it would be possible to obtain supplies on the international market of either the same species or alternative species. In the case for example of hake (imported from Chile at 15% customs duty) and octopus (imported from Morocco and Mauritania duty-free), such imports would generate costs of €80 m and €61 m respectively under present tariff conditions.

### 6.3. Summary

On the basis of what the study has been able to quantify, and within the limits of the terms of reference of the assessment, not concluding Community fisheries agreements would create immediate public costs of between €460 m and €760 m, comprising €300 m to €600 m for fleet withdrawals and €160 m for aid for ship-owners and crews. Over a ten-year period, accompanying measures (early retirement and flat-rate premiums) would entail public expenditure estimated at €800 m. Payments out of public funds of aid for conversion, scrapping, and laying off part of the on-board workforce would be between €1 260 m and €1 760 m, which is close to the public share of the cost of access negotiated over a similar period (€1 550 m<sup>9</sup>).

## 7. CONCLUSIONS AND RECOMMENDATIONS

The answers to the evaluation questions are reproduced in the full report. We give below the conclusions which have directly led to the main recommendations.

### Fleet segment activities

Conclusion: The Community fisheries agreements have enabled the Community to maintain the fishing activities carried out prior to the introduction of exclusive economic zones, including all the pre-CFP bilateral agreements in southern waters and the access rights and quotas in northern waters. The fisheries agreement with Argentina has permitted the temporary or permanent transfer of Community fishing vessels towards stocks of interest to the Community market.

The agreements provide additional income for vessels also active in Community waters, and this enables some fleets to strengthen their profitability. They provide an important contribution to shore activities in regions dependent on fishing which serve as bases for service and processing activities connected with fleets working within (and outside) the fisheries agreements.

The tuna agreements help to strengthen Community presence in the southern Atlantic and the Indian Ocean where there is no competition with national fleets from third-country signatories. Access opportunities under the southern fisheries agreements, excluding tuna fishing, decreased during the period under examination (1993-97). The Argentina agreement has partly offset that decrease.

Finding: Monitoring of fleet segments and their fisheries agreement-based activities is not harmonised and the information available is not treated uniformly by the national and Community bodies responsible for monitoring. The work on this analysis provides a single database, but it is restricted to the period from 1993 to 1997 and is not necessarily the right instrument to use for decisions on cancelling or renegotiating current agreements or on seeking out new ones.

Recommendation:

*If the negotiators are to have this essential knowledge at their disposal it is vital that all the existing rules should be applied systematically (in particular the control regulation). This would give both a better co-ordination of information sources and an up-to-date analysis of the situations in respect of each agreement and of the policy as a whole. With all operators, public and private, involved, a process of individual and collective responsibility would develop, helping towards an accurate definition of the requirements to be negotiated and a rational allocation of the public funds invested. An analysis of fleet dynamics under the agreements should be conducted with priority given to the utilisation of investments (fleet restructuring) rather than merely the financial results. The results of the analysis will be compared with the CFP's objectives and instruments (Structural Funds and MAGPs).*

### Utilisation of the fisheries agreements

Conclusion: There are great differences in the use made of the fishing opportunities offered by the agreements. Analysis of the behaviour of ship-owners indicates that the fleets respond to differences and variations in the physical and financial yields linked to certain species of major commercial interest (prawns, tuna, cephalopods, hake, capelin, cod and demersal species). There may be changes in preference from one season to the next which both explain the great variations in utilisation rates and emphasise a degree of rigidity in the protocols, given that fleet transfers are blocked for the duration of an agreement because of the compensation, which is also set at the beginning of the agreement.

Every agreement contains access rights the utilisation rate of which is very poor, but no agreement evaluated over the reference period of 1993 to 1997 contains utilisation rates which are consistently low for all fleet

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<sup>9</sup> On the sound assumption that the financial compensation negotiated remains stable at €155m per year, as over the period 1993-97.

segments (with the exception of the Gambia). This illustrates the composite feature of each agreement and explains why it is difficult to cancel one in its entirety. That situation is often made more complicated by the diverging interests of Member States, which value opportunities differently.

Finding: Current monitoring of utilisation rates is not suitable for monitoring physical and financial yields which are the real reason for the degree of utilisation.

Recommendations:

*Utilisation rates based on reference figures used during negotiation (gross registered tonnage, number of fishing units, stock quotas) may be retained because they are simple to monitor but indicators should be added which take account of actual catches under agreements and the profitability of fishing companies. Even if the multi-annual nature of the agreements, where it exists, cannot be called into question, the Joint Committees should be authorised to reallocate a proportion of the licences so as to allow fleet segment numbers and fishing effort to be adjusted to fluctuations in stocks (and in markets).*

#### Impact of the agreements within the European Community

Conclusion: The agreements have resulted in the maintenance of jobs and services in regions dependent on fishing. The apparent impact in terms of job creation is generally low, because the actual impact is more in preventing the erosion of jobs and of activities resulting from the constant adjustment of national fleet segments in Community waters. The main regions benefiting from the agreements are mostly those whose economies strongly depend on the fishery sector.

Finding: Cost-benefit analysis, within its recognised limitations, yields figures which can be used to measure the impact of implemented public commitments and provides a solid method for monitoring the agreements. It is clear that the impact is concentrated at regional level but no analysis of the future prospects for the economies of regions dependent on fishing has been possible. The impact of fluctuations in fleets and in their activities on stocks has seldom been studied or used as a basis for discussions with the different parties involved.

Recommendations:

*Some of the drawbacks of the analysis resulting from the terms of reference could be overcome by additional analyses. The current work should be supplemented with an analysis of the impact of Community fleets on stocks, an analysis of the links between structural policy and the fisheries agreements and an analysis of the situations of the operators over a period longer than the reference period (1993-97), which can then include financial data.*

#### The cost of the agreements

Conclusion: Between the start and end of the period, while the fishing opportunities offered by the southern agreements decreased, the public and private costs of access increased within an international scenario of decreasing stocks, over-capacity and the expansion of the fishing sectors in the southern countries. In the northern agreements, the use of cod equivalents, which helped to balance up trade under reciprocity of access, is no longer in tune with economic reality. Where tuna activities are concerned, the mechanism for calculating private contributions is currently being harmonised between the agreements and advance payments are increasing. The analysis demonstrates differences in the ratio of licence cost to fleet segment turnover. Margins are appearing in the main fleets (tuna, cephalopods, prawns) which justify readjusting the ratio between private and public contributions but it has not been possible to determine the level of the readjustment.

Finding: The data on public costs, albeit incomplete with regard to connected elements paid excluding the financial compensation, are accurate and available. However, the ratios measured for the contribution of private operators to the agreements, the discrepancies recorded and the ratios of the private cost of licences to the financial results of the fleet segments have not been systematically established.

Recommendations:

*An analysis is required of the terms and conditions for the adjustment of public and private contributions. A useful benchmark would be provided by the situation of fisheries not covered by agreements. Such an analysis would involve refining the essential micro-economic data over longer periods so as to take account of investment strategies and structural elements.*

#### Impact on the Community supply balance

Conclusion: Community prospects in supply balance terms seem hard to quantify and are limited in quantity to a few particular species most of which are available on the international market without any obvious disparities in price. The result of the analysis, therefore, is that even if local or national impacts specific to certain Member States are evident which encourage the consumption of particular species, the overall impact on the Community market is modest in both volume and price terms on the assumption of changes in compulsory supply networks.

Finding: The quality of available information on retail prices makes an accurate evaluation difficult at this level and where there is an absence of information, this is not a problem specific to this study but an inevitable consequence of the evaluation of sector data.

Recommendations:

*Improving the relevance, accessibility and reliability of data is a general requirement, in particular with regard to data on the landing price of species. This goes beyond the scope of this study and should be made part of new sector monitoring protocols for Community fisheries. Only after that has been done will it be possible to undertake more serious studies specific to the impact of the agreements.*

#### Impact on third countries

Conclusion: The financial return on agreements is particularly favourable in overall budget terms to certain third countries, feeding the national budget and thus reducing public debt. Impact in terms of added value and jobs varies according to the nature of the agreements, the fleet segments concerned, the structure of the sectors and the stage of development of the structures specific to the third countries. There is competition between fleets in countries which already have a production sector, and this is mainly for stocks with a high commercial value intended for the international market.

Finding: Apart from one or two specific schemes aimed at the fisheries sector, the destination of the funds paid into national budgets is not traceable. The analysis has not revealed any proportionality in the impacts. Each agreement is different in that sense, which means that standardising the protocols is not necessarily likely to have the same consequences in different non-Community countries. The individual approach of analysing impact for each agreement made it impossible to assess the impact of a strategic analysis by sector or by group of stocks assuming the restructuring of the agreements.

Recommendations:

*Forward analyses are needed on the likely expansion of the national fishery sectors in non-Community countries. Competition analyses are also needed. The emphasis should be on agreements covering stocks intended for the international market where competition is likely to be at its greatest. They should cover possible distortions of competition caused by specific CFP measures (market support, Structural Fund aid to investment). There should also be an analysis of the opportunities for new (re-)negotiations based on an approach by individual fishery.*

#### The terms and conditions of fisheries agreements

Conclusion: In the southern agreements, the fact that the authorised fishery types are being more and more precisely defined plus the multi-annual nature of the protocols and access rights negotiated makes the agreements less flexible than needed by operators suffering a reduction in returns. Fluctuations in the distribution and quantities of certain stocks (pelagic in particular) would require negotiating and monitoring the resultant activities on a scale possibly greater than that of the EEZ of a specific third country. Control costs are not marginal in the context of fisheries agreements and the technical resources at the disposal of third countries may seriously reduce the scope of some of the measures contained in the protocols.

Finding: Numerous improvements are needed in the exchange of information between active fishing vessels (entry, exit, landings, etc.) and non-Community countries as specified in the protocols, and also between the third countries and Member States. The high cost of controls or simply of accurately monitoring some of the protocol points may explain the difficulties encountered in remedying the deficiencies.

Recommendations:

*Despite the many constraints imposed by the technical parameters used in current negotiations, the parameters offer the advantage of relatively simple monitoring, based on non-confidential data from counting (number) or measuring (GRT). Any amendment seeking to integrate microeconomic monitoring parameters would mean a radical change in monitoring methods for the Commission and the Member States. Current parameters, however, could easily be subject to better and more frequent monitoring. We therefore recommend creating the right conditions and appropriate means for accessing and using that type of information.*

#### Consequences of not concluding fisheries agreements

Conclusion: The analysis shows that the consequences of not concluding fisheries agreements vary according to whether fleets are partly active in Community waters or whether they specialise in stocks in foreign EEZs. It is therefore possible to distinguish between the impacts of the northern and southern agreements. The impact on the Argentina agreement is a case apart because of the definitive transfer of some of the vessels under that agreement. Reorganising the supply circuits should avoid any shortfalls on the market and only the segments processing fish for fishmeal would suffer drastically from the ending of certain agreements. The public funding of aid for conversion, scrapping or retirement from fishing activities would be staggered over ten years at an overall estimated cost in that period of between € 1 260 m and € 1 760 m; this is similar to the public share of

negotiated access costs over the same period (€ 1 550 m<sup>10</sup>). Regional impact would be largely concentrated on regions already highly dependent on fishing.

Finding: Where the northern fleet segments are concerned it is difficult to measure impact in terms of the financial return for segments deprived of additional catches. As regards regional impact, especially for the future of regions particularly dependent on fisheries agreements, the analysis does not permit a forecast taking account of the job and wealth creation opportunities outside the fisheries sector.

Recommendations:

*Analyses of sector opportunities and dependence should be the subject of case studies on pilot regions carried out in Member States and probably also in third-country signatories to agreements.*

It will not be possible to continue the policy of Community fisheries agreements without first reinforcing:

- 1. the scientific evidence, collected and collated by consensus, on the status of marine resources involved in the fisheries agreements, in line with international conventions;*
- 2. the economic and financial analyses on which to base adjustments in public funding to the consequences of cancelling certain agreements, given their impact on Community, regional or national economies;*
- 3. the shared forecasts to be used by the Council, negotiators and private operators, and to be developed at the instigation of the Commission, making full use of the bodies competent for issues of resources, markets and international negotiation.*

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<sup>10</sup> On the strong assumption of stability in the compensation negotiated, equivalent to € 155 m per annum, as in the period 1993-97.

Table 1 : List of Community fisheries agreements

up to 1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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**JOINT AGREEMENTS**

MOROCCO																					Agreements A and B *	Agreements A and B*		
ANGOLA																					Agreement A	Agreement B	Agreement C	
GAMBIA																					Agreement A	Agreement B		
GUINEA-BISSAU																					Agreement A	Agreement B	Agreement C	Agreement D *
GUINEA																					Agreement A	Agreement B	Agreement C	
MAURITANIA																					Agreement A	Agreement B*	Agreement C *	
SENEGAL																						Agreement A	Agreement B*	Agreement C *
MOZAMBIQUE																					Agreement A			

**TUNA AGREEMENTS**

GABON																						Agreement 1	
COMOROS																					Agreement A	Agreement B	
EQUATORIAL GUINEA																						Agreement A	Agreement B
MADAGASCAR																					Agreement A	Agreement B	
SAO TOME																					Agreement A	Agreement B	Agreement C
SEYCHELLES																					Agreement A	Agreement B	Agreement C
CAPE VERDE																					Agreement A	Agreement B	Agreement C
COTE D'IVOIRE																					Agreement A	Agreement B	Agreement C
MAURITIUS																					Agreement A	Agreement B	Agreement C

**NORTHERN AGREEMENTS**

GREENLAND																					Agreement A*
ESTONIA																					Agreement A et B*
LATVIA																					Agreement A et B *
LITHUANIA																					Agreement A et B *
FAEROE ISLES																					Agreement A*
ICELAND																					Agreement A*
NORWAY																					Agreement A*
POLAND																					Agreement A*
RUSSIA																					Agreement A*

**OTHER AGREEMENTS**

ARGENTINA																					Agreement A
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Guinea-Bissau: Agreement D from 16.6.1997 to 15.6.2001  
Mauritania: Agreement B from 1.8.1993 to 31.7.1996 with additional protocol from 15.11.1995 to 31.7.1996, Agreement C: 1.8.1996 to 31.7.2001  
Senegal: Agreement B with extension from 2.10.1996 to 1.11.1996, Agreement C: from 1.5.1997 to 30.4.2001  
Morocco: Agreement A from 1.5.1992 to 30.4.1996 and Agreement B from 1.12.1995 to 30.11.1999  
Iceland: Agreement A from 1.1.1994 until 2003  
Estonia: Agreement A from 5.7.1993 to 5.7.2003, replaced by Agreement B from 1.1.1997 to 1.1.2007  
Latvia: Agreement A from 5.8.1993 to 5.8.2003 and B from 6.2.1997 to 6.2.2003  
Lithuania: Agreement A from 13.4.1994 to 13.4.2004 and B from 1.1.1997 to 1.1.2003  
Faeroe Isles: Agreement A extended  
Greenland : Agreement A from 1.1.1985 to 31.12.2000  
Norway: Agreement A extended  
Poland: Former agreements with Sweden, under the responsibility of the EU since the end of 1995  
Russia: Agreement A from 11.12.1992 to 11.12.2002. Former agreements with Sweden, under the responsibility of the EU since the end of 1995

Table 2: Community fleet active under southern agreements (excluding tuna activities)

THIRD COUNTRY	SPANISH FLEET UNDER SOUTHERN AGREEMENTS EXCLUDING TUNA														
	1993		1994		1995		1996		1997		Ave./5 yrs				
Angola	30	23	30	27	29	28									
Ivory Coast	2	2	1	4	3	2									
Gambia	3	2	2	2		2									
Guinea-Bissau	9	12	23	15	15	15									
Guinea	8	1	13	7	6	7									
Morocco	614	612	489	551	494	552									
Mauritania	74	75	93	103	109	91									
Senegal	21	43	37	22	21	29									
<b>Total</b>	<b>761</b>	<b>770</b>	<b>688</b>	<b>731</b>	<b>677</b>	<b>725</b>									
THIRD COUNTRY	REST OF COMMUNITY FLEET UNDER SOUTHERN AGREEMENTS EXCLUDING TUNA														
	1993		1994		1995		1996		1997		Ave./5 yrs				
MEMBER STATE:	GR	IT	PO	IT	PO	IT	PO	UK	IT	NL	PO	GR	IT	NL	PO
Guinea-Bissau		4	13	2	13	14	12		12		10		1		11
Guinea	1														n.s.
Morocco						36					46				44
Mauritania								1	2	6	2	3	6	5	2
Senegal		5		3					1				3		
<b>Total</b>	<b>23</b>	<b>18</b>	<b>62</b>	<b>80</b>	<b>75</b>	<b>52</b>									

n.s. : not significant

Source: Annual surveys, sources: DGXIV files, IFREMER/CEMARE/CEP. GR=Greece, IT=Italy, PO=Portugal, UK=United Kingdom, NL=Netherlands.

Table 3: Inventory of tuna licences during the period 1993-1997

THIRD COUNTRY	SEINERS											Member States average 1993-97
	SPAIN					FRANCE					ITALY 1997**	
	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997		
Angola	1	0	0	0	0	12	0	7	7	12	0	8
Cape Verde	7	7	8	5	15	0	16	15	16	15	0	21
Comores	19	18	16	20		17	17	17	17		0	28
Ivory Coast	25	25	23	21	21	18	18	16	16	15	0	40
Guinea-Bissau	1	3	5	5	15	17	17	14	16	13	0	21
Guinea	7	13	13	18	15	35	33	31	30	32	0	45
Madagascar	20	18	18	22	22	17	17	17	17	20	0	38
Morocco*	21	20	8	23	27	0	0	0	0	0	0	20
Mauritius	0	0	0	22	20	17	17	16	20	16	0	26
Mauritania	14	13	13	13	12	17	17	14	14	15	0	28
São Tomé and Príncipe	20	15	15	15	12	18	18	16	18	15	0	32
Senegal	28	24	23	18	18	17	15	14	0	15	0	34
Seychelles	19	18	19	22	23	17	17	17	17	19	1	38
<b>Total all third countries</b>	<b>201</b>	<b>192</b>	<b>180</b>	<b>226</b>	<b>223</b>	<b>219</b>	<b>219</b>	<b>211</b>	<b>205</b>	<b>206</b>	<b>1</b>	<b>417</b>

Fleet type	Third countries	1993	1994	1995	1996	1997	Average for period 1993-97	
Long-liners	Senegal	6	6	6	6	21	9	
	Guinea	0	0	6	8	13	5	
	Madagascar	0	3	12	12	11	8	
	Mauritius	0	0	0	1	1	n.s.	
	Seychelles	0	0	0	3	12	3	
	Sao Tomé and Príncipe	0	0	0	22	25	9	
	Angola	2	2	5	8	11	6	
	Ivory Coast	0	0	0	0	14	3	
	Cape Verde	7	2	15	18	26	14	
	Mauritania	9	9	9	16	28	14	
Pole-and-line vessels and long-liners	Ivory Coast	2	2	3	5	1	3	
	Cape Verde	0	0	0	0	9	2	
Pole-and-line vessels	Senegal	7	9	9	9	11	9	
	Guinea	1	3	0	10	10	5	
	Guinea-Bissau	8	8	11	13	33	15	
	Seychelles	2	6	8	1	1	4	
	Mauritania	9	9	9	16	28	14	
	<b>Total all countries</b>		<b>44</b>	<b>50</b>	<b>84</b>	<b>132</b>	<b>227</b>	<b>107</b>

\*: For Morocco long-liners and pole-and-line vessels are included under other southern agreement licences in Table 28

\*\* No Italian seiners before that date in the period under study

Source: Licence survey from files from DGXIV. IFREMER/CEMARE/CEP 1999.

**Table 4: Joint venture and joint enterprise fleet in Argentina: survey as at 30.11.1998.**

Partner Member State	Vessel class	Number of vessels
United Kingdom	Less than 500 GRT	2
Spain	Less than 500 GRT	4
Spain	Greater than or equal to 500 GRT but less than 1000 GRT	7
Germany	Greater than or equal to 1000 GRT but less than 1500 GRT	2
Italy	Greater than or equal to 1000 GRT but less than 1500 GRT	1
Spain	Greater than or equal to 1000 GRT but less than 1500 GRT	11
Spain	Greater than or equal to 1500 GRT	2
<b>Total</b>		<b>29</b>

Source: Unidad de Seguimiento de la Flota Comunitaria (USEFCO), 3.9.1998.

**Table 5: Community fleet in northern agreements**

Member States	1993	1994	1995	1996	1997	Average no. of units
Denmark	1053	1081	760	734	695	865
United Kingdom	259	296	520	540	546	432
Germany	203	204	130	137	118	158
Netherlands	203	197	179	174	172	185
Belgium	68	69	59	58	55	62
France	40	49	37	43	44	43
Sweden	0	0	62	83	126	n.c.
Spain	0	22	24	23	22	n.c.
Portugal	6	6	7	9	11	8
Finland	0	0	0	0	26	n.c.
Ireland	0	1	2	2	3	n.c.
<b>Total vessels</b>	<b>1832</b>	<b>1925</b>	<b>1780</b>	<b>1803</b>	<b>1818</b>	<b>1832*</b>

n.c.: not calculated for periods with years with nil returns.

\* calculation over a 5-year period without correction for years with nil returns.

Source: Annual surveys from DG XIV files, IFREMER/CEMARE/CEP.

Table 6: Breakdown of catches under southern agreements by third country EEZ and by group of species (exc. tuna)

	Morocco	Angola	Ivory Coast	Guinea	Guinea-Bissau	Mauritania	Senegal	Total countries
	Tonnes (%)	Tonnes (%)	Tonnes (%)	Tonnes (%)	Tonnes (%)	Tonnes (%)	Tonnes (%)	Tonnes (%)
<b>Small pelagic</b>	568160 (83,16)					115059 (16,84)		683 219 (57,0)
<b>Large pelagic</b>	19074 (84,93)					2697 (12,01)	3 (0,01)	21 774 (1,8)
<b>Cephalopods</b>	143103 (86,45)	19 (0,01)		3137 (1,90)	5784 (3,49)	11982 (7,24)	1511 (0,91)	165 536 (13,8)
<b>Prawns</b>	17923 (28,81)	17631 (28,34)	773 (1,24)	294 (0,47)	9244 (14,86)	11384 (18,30)	4913 (7,90)	62 162 (5,2)
<b>Other crustaceans</b>	22 (0,37)	1029 (17,17)		9 (0,15)	479 (7,99)	1917 (31,99)	2527 (42,17)	5 983 (0,5)
<b>Demersal</b>	53936 (83,78)			419 (0,65)	2713 (4,21)	3803 (5,91)	3476 (5,45)	64 347 (5,4)
<b>Hake</b>	43094 (38,12)	5484 (4,85)		29 (0,03)	268 (0,24)	55507 (49,10)	8660 (7,66)	113 042 (9,4)
<b>Miscellaneous</b>	44592 (53,75)	990 (1,19)	35 (0,04)	972 (1,17)	6361 (7,69)	27084 (32,65)	2863 (3,45)	82 897 (6,9)
<b>Total all species</b>	889 904 (74,2)	25 153 (2,1)	808 (0,1)	4 860 (0,4)	24 849 (2,1)	229 433 (19,1)	23 953 (2,0)	1 198 960 (100,0)

Source: IFREMER/CEMARE/CEP calculations based on catch files from DGXIV and EU delegation in Rabat.

Table 7: Value of production under southern agreements by Member State and by third country (€million)

Member State	Average	%	Third country	Average	%
<b>Spain</b>	399,64	82,48	<b>Angola</b>	24,42	5,04
<b>France</b>	34,80	7,18	<b>Cape Verde</b>	0,94	0,19
<b>Greece</b>	0,66	0,14	<b>Comores</b>	1,36	0,28
<b>Italy</b>	6,72	1,39	<b>Ivory Coast</b>	9,21	1,90
<b>Netherlands</b>	8,72	1,80	<b>Gambia</b>	0,12	0,02
<b>Portugal</b>	33,72	6,96	<b>Guinea</b>	3,59	0,74
<b>United Kingdom</b>	0,25	0,05	<b>Guinea-Bissau</b>	32,34	6,67
<b>Total</b>	<b>484,51</b>	<b>100,00</b>	<b>Equatorial Guinea</b>	2,42	0,50
			<b>Madagascar</b>	3,24	0,67
			<b>Morocco</b>	259,07	53,47
			<b>Mauritius</b>	0,45	0,09
			<b>Mauritania</b>	97,46	20,12
			<b>Mozambique</b>	0,26	0,05
			<b>Sao Tome</b>	0,92	0,19
			<b>Senegal</b>	24,20	5,00
			<b>Seychelles</b>	24,52	5,06
			<b>Total</b>	<b>484,51</b>	<b>100,00</b>

Source: DGXIV catch files, EU prices and ministries, IFREMER/CEMARE/CEP

**Table 8: Catches by Community fleets under northern agreements, by third country EEZ (in tonnes)**

Species	Estonia	Russian Federation	Greenland	Faeroe Isles	Iceland	Latvia	Lithuania	Norway	Poland	Sweden	Total	%	Annual average
Sandeel								479108			479108	32,18	95822
Industrial species*								311592			311592	20,93	62318
Cod	1815	937	1645			3891	4307	132413	161	6121	151290	10,16	30258
Sprat	45867					59738	13044		30693	535	149877	10,07	29975
Capelin			107621								107621	7,23	21524
Mackerel				21613				73740			95353	6,40	19071
Redfish			58882	841	425			9222			69370	4,66	13874
Saithe				2151				19619			21770	1,46	4354
Haddock								16180			16180	1,09	3236
Black halibut			13434					390			13824	0,93	2765
Shrimp			5052					1939			6991	0,47	1398
Herring	1188					858	70	169	2459	2104	6848	0,46	1370
Atlantic plaice								5855			5855	0,39	1171
Blue whiting				3815				2			3817	0,26	763
Ling and blue ling				3696							3696	0,25	739
Cod and haddock				2074							2074	0,14	415
Atlantic salmon (no.)	41	5				106	51		14	489	706	0,05	141
Flatfish				299			18				317	0,02	63
Rock grenadier			305								305	0,02	61
Halibut			53								53	0,00	11
Catfish			17								17	0,00	3
Whitefish*								12			12	0,00	2
Whiting								12			12	0,00	2
Other				1758				40468			42226	2,84	8445
<b>Total 1993-1997</b>	<b>48911</b>	<b>942</b>	<b>187009</b>	<b>36247</b>	<b>425</b>	<b>64593</b>	<b>17490</b>	<b>1090721</b>	<b>33327</b>	<b>9249</b>	<b>1488914</b>	<b>100,00</b>	<b>297783</b>
<b>Proportion as a %</b>	<b>3,29</b>	<b>0,06</b>	<b>12,56</b>	<b>2,43</b>	<b>0,03</b>	<b>4,34</b>	<b>1,17</b>	<b>73,26</b>	<b>2,24</b>	<b>0,62</b>	<b>100,00</b>		

\* includes Norway pout and blue whiting

Source: DG XIV annual surveys from northern catch files; IFREMER/CEMARE/CEP

**Table 9: Value of production under northern agreements by Member State and by third country (€million)**

Member State	Average	%	Third country	Average	%
Germany	30,84	24,80%	Estonia	1,66	1,10%
Belgium	1,31	1,10%	Russian Federation	1,19	0,40%
Denmark	41,64	33,50%	Greenland	33,79	27,00%
Spain	4,87	3,90%	Faroe Islands	4,89	3,90%
Finland	1,21	0,20%	Iceland	0,19	0,10%
France	6,42	5,20%	Latvia	3,17	2,00%
Ireland	1,19	0,80%	Lithuania	2,22	1,40%
Netherlands	3,21	0,50%	Norway	76,85	61,70%
Portugal	5,46	4,40%	Poland	1,2	0,60%
U.K.	27,40	22,10%	Sweden	5,79	1,90%
Sweden	7,40	3,60%	<b>Total</b>	<b>130,95</b>	<b>100%</b>
<b>Total</b>	<b>130,95</b>	<b>100%</b>			

Source: Annual surveys using DG XIV files, IFREMER/CEMARE/CEP; EUROSTAT, MARSOURCE, SEAFISH Bulletins for price information.

**Table 10: Compensation and fees under agreements (€thousand, averages over the period 1993-97)**

Agreements	Average cost* and proportion as a %			
	EU proportion		Operators' proportion	
	In €	As a %	In €	As a %
Angola	10 890	73.0	4 017	27,2
Cape Verde	555	86.3	88	15.4
Comores	281	80.5	68	19.5
Ivory Coast	710	81.3	163	24.2
Gambia	286	91.6	26	8.4
Guinea-Bissau	6 912	74.1	2 419	25.9
Guinea	2 092	83.6	409	22.0
Equatorial Guinea	200	79.0	53	24.5
Madagascar	726	85.0	128	15.0
Morocco**	90 597	83.6	17.802	16.5
Mauritius	458	92.4	38	7.6
Mauritania	28 580	84.9	5 071	15.0
Mozambique	31			
Sao Tome	718	90.4	76	9.6
Senegal	9 368	90.1	1 028	9.9
Seychelles	3 543	80.6	854	17.0
<b>TOTAL</b>	<b>155 947</b>	<b>83.8</b>	<b>32 240</b>	<b>17.2</b>

\*The average for the Morocco, Gambia and Mauritania agreements conceals sizeable year-on-year disparities explained by the temporary suspension of the Gambia and Morocco agreements and a revaluation of the Mauritania agreement during the period.

\*\*The heading "operators" for Morocco includes licences, fees and observers

Source: IFREMER/CEMARE/CEP calculations based on DG XIV data (licence and catch files, protocols)

**Table 11: Breakdown of the total amount for 1993-97 by third country (in current €)**

Third country	Agreement type	Total amount	As a %	Cumulative
Morocco	Mixed	€452 985 033	43,00	43,00
Greenland	Northern	€186 416 071	17,70	60,70
Mauritania	Mixed	€142 898 000	13,57	74,27
Argentina	Second generation	€80 306 860	7,62	81,89
Angola	Mixed	€54 450 000	5,17	87,06
Senegal	Mixed	€46 838 289	4,45	91,51
Guinea-Bissau	Mixed	€34 561 933	3,28	94,79
Seychelles	Tuna	€17 713 202	1,68	96,47
Guinea	Mixed	€10 462 547	0,99	97,46
Baltic states	Estonia	€2 717 634	0,26	97,72
	Lithuania	€2 609 398	0,25	97,97
	Latvia	€1 579 626	0,15	98,12
Madagascar	Tuna	€3 630 432	0,34	98,46
São Tomé	Tuna	€3 588 308	0,34	98,80
Ivory Coast	Tuna	€3 552 019	0,34	99,14
Cape Verde	Tuna	€2 776 275	0,26	99,40
Mauritius	Tuna	€2 289 772	0,22	99,62
Gambia	Mixed	€1 429 695	0,14	99,76
Comores	Tuna	€1 404 433	0,13	99,89
Equatorial Guinea	Tuna	€998 529	0,09	99,98
Mozambique	Mixed	€156 900	0,01	99,99
<b>TOTAL</b>		<b>€1 053 364 956</b>	<b>100 %</b>	<b>100 %</b>

Source: IFREMER/CEMARE/CEP from DG XIV accounting information

**Table 12: Breakdown of total amount for 1993-97 by nature of expenditure (in current Euros)**

Expenditure	Total amount	%
Financial compensation	€855 417 646	81,21
Joint ventures and joint enterprises	€61 144 958	5,81
Other measures	€66 198 266	6,28
Research	€51 625 238	4,90
Training	€18 978 848	1,80
<b>TOTAL</b>	<b>€1 053 364 956</b>	<b>100%</b>

Source: IFREMER/CEMARE/CEP from DG XIV accounting information

**Table 13: Ratio between licence cost and turnover for main fleet segments under agreements (as a %)**

Fleet segments	Average for period 1993-1997
Shrimp trawlers: Angola	17
Demersal trawlers: Angola	13
Shrimp trawlers: Ivory Coast	5
Coastal shrimp trawlers: Gambia	14
Cephalopod trawlers: Guinea	13
Cephalopod vessels: Guinea-Bissau	9
Shrimp trawlers: Guinea-Bissau	8
Hake trawlers: Mauritania	3
Demersal trawlers: Mauritania*	11
Cephalopod vessels: Mauritania	9
Crustaceans: Mauritania	7
Pelagic trawlers: Mauritania	8
Deep-sea demersal trawlers: Senegal	10
Hake trawlers: Senegal	2
Shrimp trawlers: Senegal	5

\* other than hake

Source: DGXIV, IFREMER/CEMARE/CEP from DG XIV files, prices from various sources

**Table 14: Average added value and jobs generated by southern and Argentina agreements by Member State (€million and number)**

Member States	DVA Member States	IVA upstream	IVA downstream	IVA total Member States	Total VA Member States	Direct jobs Member States	Indirect jobs – upstream	Indirect jobs – downstream	Total indirect jobs - Member	Total jobs Member States
Germany	0,38	1,09		1,09	1,47	42	22		22	64
Spain	194,25	396,24	59,5	455,74	649,99	11 020	12 146	3800	15943	26 963
France	13,85	27,70	4,20	31,90	45,75	1 240	1 364	697	2 061	3 301
Greece	0,28	0,56		0,56	0,84	36	39		39	75
Italy	3,32	6,88		6,88	10,20	142	156		156	298
Netherlands	3,25	6,49		6,49	9,74	32	36		36	68
Portugal	16,48	32,96		32,96	49,44	1 667	1 840		1 840	3 507
U.K.	0,09	0,18		0,18	0,27	3	3		3	6
<b>Total</b>	<b>231,9</b>	<b>472,1</b>	<b>63,7</b>	<b>535,8</b>	<b>767,7</b>	<b>14 182</b>	<b>15 606</b>	<b>4 497</b>	<b>20 100</b>	<b>34 282</b>

Source : IFREMER/CEMARE/CEP\*

**Table 15: Annual averages for value added and jobs by agreement in the Member States (€million and unit)**

Agreement	Direct VA Member States	Indirect VA Member States	Total VA Member States	Direct jobs Member States	Indirect jobs Member States	Total jobs Member States
Angola	8,53	17,33	25,86	530	599	1 129
Cape Verde	0,13	0,59	0,72	72	104	176
Comores	0,53	1,44	1,97	57	98	155
Ivory Coast	1,92	5,78	7,70	403	638	1 041
Gambia	0,02	0,06	0,08	36	36	68
Guinea	1,29	2,90	4,19	171	216	387
Guinea-Bissau	15,21	30,63	45,84	580	662	1 241
Equatorial Guinea	0,41	1,13	1,54	112	172	283
Madagascar	1,39	3,72	5,11	153	250	403
Morocco	130,93	304,24	435,07	7 549	11 122	18 671
Mauritius	0,09	0,30	0,39	38	53	91
Mauritania	42,76	89,58	132,34	1 969	2 478	4 448
São Tomé	0,09	0,33	0,42	40	63	104
Senegal	8,75	21,15	29,90	592	892	1 484
Seychelles	10,40	28,37	38,77	1 148	1 901	3 049

Source: IFREMER/CEMARE/CEP

**Table 16: Annual averages for VA and jobs linked to northern agreements by Member State (€million and quantity)**

Member State	Direct VA Member States	Indirect VA Member States	Total VA Member States	Direct jobs Member States	Indirect jobs Member States	Total jobs Member States
Germany	14,39	29,86	44,26	517	1122	1639
Belgium	0,69	1,04	1,73	24	31	55
Denmark	21,63	37,69	59,32	519	1163	1682
Spain	2,84	5,38	8,22	130	300	430
Finland	0,25	0,43	0,67	37	86	123
France	3,27	4,58	7,85	92	156	248
Ireland	0,56	0,56	1,11	17	18	35
Netherlands	0,35	0,86	1,21	6	19	25
Portugal	3,17	6,65	9,82	114	274	388
United Kingdom	10,96	20,83	31,79	351	561	912
Sweden	3,92	6,26	10,17	254	574	828
<b>Total</b>	<b>62,03</b>	<b>114,14</b>	<b>176,15</b>	<b>2061</b>	<b>4304</b>	<b>6365</b>

Source: IFREMER/CEMARE/CEP calculation

**Table 17: Annual averages for added value and jobs linked to the northern agreements in the Member States (€ million and quantity)**

Agreement	DVA	IVA	Total VA	Direct jobs	Indirect jobs	Total jobs
Estonia	0,88	1,40	2,27	35	75	110
Russian Federation	0,63	1,01	1,64	50	116	166
Greenland	13,65	27,84	41,49	391	837	1228
Faeroes	2,40	4,66	7,06	65	141	206
Iceland	0,09	0,20	0,29	3	6	9
Latvia	1,91	3,08	5,00	117	261	378
Lithuania	1,29	2,06	3,34	74	167	241
Norway	37,85	68,56	106,41	1223	2471	3694
Poland	0,54	0,87	1,42	18	38	56
Sweden	2,78	4,47	7,25	86	192	278
<b>Total</b>	<b>62,02</b>	<b>114,14</b>	<b>176,16</b>	<b>2061</b>	<b>4303</b>	<b>6366</b>

Source: IFREMER/CEMARE/CEP calculation

**Table 18: Relative importance of species fished under agreements (excluding tuna) and according to several criteria**

Contribution in volume		Contribution in value		% supply of market		Demographic weighting* EU	
Species	% of total	Species	% of total	Species	% of total	Species	% of total
Sardine	35,5 %	Southern shrimp	21%	Sardine	10-20%	Cod	73%
Sardinella	16,5%	Hake	20,4%	Octopus	>12%	Redfish	56%
Cod	9,7%	Octopus	17,5%	Redfish	9%	Haddock	53%
Octopus	7,4%	Cod	9,6%	Demersal	7%	Saithe	53%
Hake	6,8%	Sardine	8,6	Southern shrimp	5,5%	Halibut	48%
Mackerel	6,2%	Redfish	4,8%	Mackerel	5%	Demersal	31%
Redfish	4,4%	Demersal	4,5%	Cuttlefish	< 5%	Cuttlefish	31%
Southern shrimp	3,9%	Cuttlefish	2,9%	Halibut	< 5%	Southern shrimp	29%
Demersal	2,7%	Northern shrimp	2,5%	Hake	4%	Octopus	26%
Cuttlefish	1,7%	Halibut	1,5%	Cod	3%	Squid	26%
Saithe	1,4%	Mackerel	1,3%	Saithe	2%	Salmon	26%
Haddock	1%	Salmon	1%	Haddock	2%	Crab	13%
Squid	0,9%	Squid	0,8%	Crab	1%	Hake	13%
Halibut	0,9%	Saithe	0,7%	Northern shrimp	0%	Sardine	10%
Northern shrimp	0,4%	Haddock	0,7%	Herring	0%	Mackerel	8%
Herring	0,4%	Crab	0,2%	Salmon	0%	Northern shrimp	4%
Crab	0,2%	Herring	0,1%	Squid	0%	Herring	4%

\* Demographic weighting: the index of the number of European consumers buying the species

Source: IFREMER/CEMARE/CEP.

**Table 19: Added value and jobs linked to northern agreements in third countries**

	DVA	IVA	Total VA	Direct jobs	Indirect jobs	Total jobs
<b>Estonia</b>	0,68	1,22	1,90	111	256	367
<b>Russian Federation</b>	0,00	0,00	0,00	0	0	0
<b>Greenland</b>	Not affected by reciprocity					
<b>Faeroes</b>	2,99	6,57	9,56	134	296	430
<b>Iceland</b>						
<b>Latvia</b>	0,31	0,48	0,79	53	112	165
<b>Lithuania</b>	0,39	0,71	1,10	74	134	208
<b>Norway</b>	47,96	91,13	139,09	2014	3829	5843
<b>Poland</b>	0,42	0,35	1,00	33	69	102
<b>Sweden</b>	1,99	1,27	3,26	111	178	289
<b>Total</b>	<b>54,73</b>	<b>101,74</b>	<b>156,47</b>	<b>2530</b>	<b>4874</b>	<b>7404</b>

Source: IFREMER/CEMARE/CEP

**Table 20: Averages for value added and jobs linked to the southern agreements and the Argentine agreement, by third country**

Third country	DVA	IVA	Total VA	Direct jobs	Indirect jobs	Total jobs
<b>Angola</b>	4,48	2,28	<b>6,76</b>	22	0	<b>22</b>
<b>Cape Verde</b>	0,10	0,14	<b>0,24</b>	0	0	<b>0</b>
<b>Comores</b>	0,08	0,09	<b>0,17</b>	0	0	<b>0</b>
<b>Ivory Coast</b>	4,23	6,11	<b>10,34</b>	494	1 903	<b>2 397</b>
<b>Gambia</b>	0,05	0,02	<b>0,07</b>	1	0	<b>1</b>
<b>Guinea</b>	0,53	0,40	<b>0,94</b>	12	0	<b>12</b>
<b>Guinea-Bissau</b>	3,15	1,66	<b>4,82</b>	53	0	<b>53</b>
<b>Equatorial Guinea</b>	0,10	0,50	<b>0,59</b>	0	0	<b>0</b>
<b>Madagascar</b>	0,55	3,24	<b>3,79</b>	50	1 318	<b>1 368</b>
<b>Morocco</b>	24,07	12,04	<b>36,11</b>	922	0	<b>922</b>
<b>Mauritius</b>	0,04	2,66	<b>2,70</b>	0	160	<b>160</b>
<b>Mauritania</b>	8,72	5,08	<b>13,80</b>	307	0	<b>307</b>
<b>Sao Tomé</b>	0,09	0,16	<b>0,25</b>	0	0	<b>0</b>
<b>Senegal</b>	4,38	4,75	<b>9,13</b>	456	1 127	<b>1 583</b>
<b>Seychelles</b>	2,0	6,24	<b>8,24</b>	93	751	<b>844</b>
<b>Total southern</b>	<b>52,29</b>	<b>45,37</b>	<b>97,96</b>	<b>2 411</b>	<b>5 259</b>	<b>7 670</b>
<b>Argentina</b>	11,1	8,3	<b>19,4</b>	540	811	<b>1 351</b>
<b>Total</b>	<b>63,69</b>	<b>53,67</b>	<b>117,36</b>	<b>2 951</b>	<b>6 070</b>	<b>9 021</b>

Source: IFREMER/CEMARE/CEP

**Table 21: Breakdown of costs of compensatory measures for jobs in Member States (€million)**

Member States	Temporary cessation of activity and financial compensation		Socio-economic measures			Total
	Ship-owners' compensation	Crews' compensation	Early retirement	Premiums + five years of activity	Premiums + six months of activity	
<b>Germany</b>	0,46,36	3,85	7,10	16,16	3,88	31,45
<b>Belgium</b>	0,02	0,18	0,33	0,75	0,18	1,46
<b>Denmark</b>	1,43	3,86	7,13	16,22	3,89	32,53
<b>Spain</b>	20,20	87,96	162,45	369,47	88,67	728,75
<b>Finland</b>	0,00	0,28	0,51	1,16	0,28	2,22
<b>France</b>	1,71	10,46	19,32	43,94	10,55	85,97
<b>Greece</b>	0,20	0,81	1,50	3,41	0,82	6,73
<b>Ireland</b>	0,00	0,13	0,23	0,53	0,13	1,08
<b>Italy</b>	0,40	0,58	1,07	2,44	0,59	5,07
<b>Netherlands</b>	0,11	0,60	1,10	2,50	0,60	4,90
<b>Portugal</b>	1,70	13,36	24,68	56,13	13,47	109,34
<b>United Kingdom</b>	0,47	2,69	4,96	11,18	2,71	22,10
<b>Sweden</b>	0,17	1,89	3,49	7,94	1,91	15,40
<b>Total</b>	<b>26,88</b>	<b>126,64</b>	<b>233,87</b>	<b>531,91</b>	<b>127,66</b>	<b>1046,94</b>

Source: IFREMER/CEMARE/CEP

**Table 22: Amount of Community aid by Member State according to calculation assumptions (€million)**

Member State	Scrapping with digressive scales	Scrapping with single scale	Transfer	Joint venture
<b>Spain</b>	448,3	481,8	265,6	424,9
<b>France</b>	3,4	3,6	1,9	3,2
<b>Greece</b>	7,2	7,6	4,2	6,8
<b>Italy</b>	18,3	19,3	11,3	18,1
<b>Netherlands</b>	48,4	48,4	24,2	38,7
<b>Portugal</b>	34,8	36,2	19,4	31,1
<b>United Kingdom</b>	48,9	48,9	24,5	39,2
<b>Total</b>	<b>565,4</b>	<b>601,7</b>	<b>329,2</b>	<b>526,7</b>

Source: IFREMER/CEMARE/CEP

**Table 23: Average compensation over the period by third country for southern agreements (€million) (see Table 3)**

Third country	Average 1993-1997	Third country	Average 1993-1997	Third country	Average 1993-1997
<b>Angola</b>	10,75	<b>Guinea</b>	1,45	<b>Mauritius</b>	0,46
<b>Cape Verde</b>	0,48	<b>Guinea-Bissau</b>	6,93	<b>Mauritania</b>	28,56
<b>Comores</b>	0,28	<b>Equatorial Guinea</b>	0,16	<b>São Tomé</b>	0,72
<b>Ivory Coast</b>	0,51	<b>Madagascar</b>	0,73	<b>Senegal</b>	9,35
<b>Gambia</b>	0,29	<b>Morocco</b>	90,13	<b>Seychelles</b>	4,18

Source: IFREMER/CEMARE/CEP from DG XIV financial data