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# **FIFG Processing Study**

## Study on the impact of FIFG measures on the fish processing industry

<b>SUMMARY REPORT</b>
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## 1. Introduction

This report is a summary of the full European report, which collates and discusses the findings from the Member State reports produced by the consortium partners for the 14 Member States under study<sup>1</sup>.

The intention of this “Study on the impact of Financial Instrument for Fisheries Guidance (FIFG) measures on the fish processing industry” is to evaluate the impact of FIFG funding on the fish processing sector, in European Community Member States during the 1994 to 1999 programme (final deadline for uptake of funds was two year later - 31/12/01). The funding relates to the assistance under area of assistance number 6 which had the objective to improve competitiveness in the processing sector.

The objective is to collect, collate and analyse data that will allow an assessment of the impact of the community financial support provided under the FIFG measure (EC Regulation 2468/98) area of assistance 6 to the fish processing industry.

The study was undertaken to address 5 distinct tasks:

**Task 1:** *Analysis of the evolution of the sector during the period of implementation of the FIFG measures under Regulation 2468/98*

**Task 2:** *Verification and update of the inventory of the fish processing projects/enterprises supported by FIFG Regulation 2468/98. Collection of relevant related information. Classification of these projects by type of activity and size of enterprises.*

**Task 3\*:** *Assessment of the extent to which the Community support has improved the competitiveness of the enterprises, has contributed to the employment and the economic activity of the sector and region.*

**Task 4\*:** *Analysis of the allocation of the Community financial support. Assessment of the adequacy of the allocation. Contribution of the Community support to overcoming the problems facing the sector.*

**Task 5:** *Outlook for future development: evolution of the sector in the medium term.*

\* tasks 3 & 4 conducted for Denmark, France, Germany, Italy, Portugal, Spain and the UK only.

## 2. Methodology

The consultants used available secondary data in order to describe the processing sector in each Member State. This, along with primary data collection in the form of a processor survey undertaken for Member States with major processing sectors<sup>2</sup>, contributed to the evaluation of the impact of FIFG funding on the processing sector in each Member State.

Due to limited secondary data being available, the consultants have based the overview on the only consistent and comparable Europe-wide data sets available, ‘Prodcom’ and ‘Combined Nomenclature’. These datasets record manufactured products rather than the companies

<sup>1</sup> all economic discussions and graphs use non-deflated prices

<sup>2</sup> Denmark, France, Germany, Italy, Portugal, Spain, the United Kingdom

manufacturing those products. By collating the processed seafood product groups listed in these datasets over time, the scale and evolution of the companies producing those products in each Member State can be inferred. Additional data sources from Member States were used where available to present information more specific to the processing companies such as number, size and employment.

The study has concentrated on an analysis of processed seafood products. Unprocessed fish is not analysed in depth, but trade in whole fish is taken into account in section 3.1. These products can be defined as fishery or aquaculture products that have undergone some form of processing and are intended for human consumption. Although the majority of products are of marine origin, some are from freshwater species such as trout and eel and these are included where significant to a Member State (Finland and Austria).

**Table 2.1 Equivalence of Prodcom / Combined Nomenclature**

<b>Prodcom category</b>	<b>Prodcom code</b>	<b>Combined nomenclature equivalent</b>
Extracts and juices	<b>15.13.12</b>	160300 – extracts and juices of meat, fish, crustaceans or other aquatic invertebrates
Fish, other than whole fish, fresh or chilled	<b>15.20.11</b>	030270 – fresh chilled livers and roes 030410 fish fillets and other fish meat, fresh or chilled
Fish, other than whole fish, frozen	<b>15.20.12</b>	030380 – livers and roes frozen 030420 – frozen fillets 030490 – fish meat (not fillets) frozen
Dried, salted or smoked fish	<b>15.20.13</b>	0305 – fish dried, salted or in brine, smoked fish
Preserved fish	<b>15.20.14</b>	1604 – prepared or preserved fish, fish eggs
Aquatic invertebrates frozen dried or salted	<b>15.20.15</b>	030611 – frozen rock lobster 030612 – frozen lobster 030613 – frozen shrimp and prawn 030614 – frozen crabs 030619 – frozen crustaceans other than above, 030729 – scallops frozen, dried, salted, in brine 030739 – mussels frozen dried, salted, in brine 030749 – cuttlefish and squid frozen dried salted, in brine 030759 – octopus frozen dried salted in brine 030799 – aquatic inverts, frozen dried salted, in brine
Preserved crustaceans, molluscs and other invertebrates	<b>15.20.16</b>	1605 – crustaceans, molluscs and other aquatic invertebrates, prepared or preserved
Fats and oils of fish and marine mammals	<b>15.41.11</b>	1504 – fats and oils of fish or marine mammals

Source: Eurostat

As the processing sector is the focus of this review, the trade in whole, unprocessed fish is not analysed in-depth. The trade in live seafood is not recorded for the purposes of this study as this trade goes from merchant to retailer, by-passing the processing sector. The Prodcom figures for total production in a number of instances are therefore smaller than national statistics as the trade in unprocessed fish is included in national statistics. Changes to raw material supplies are highly significant to the processing sector and are discussed in the report.

Although the six-figure identification is a comparatively broad category, allowing for interpretation within the categories, it is evident that Member States have recorded trade relating to these categories in different ways. An average data error of around 10% is apparent, illustrated by the total value of Intra-Community trade in 2000, which is calculated as €5.2 billion regarding imports and as €5.7 billion for exports; approximately a 10% difference. More major anomalies have also been found between trade data provided by Eurostat and by Member State Authorities. These anomalies are

inadvertently masked by the different categorisation chosen by Member State authorities and the industry.

Existing data sources and reports were used as background to the primary research conducted as part of this task. These included FIG and PESCO Evaluations, and “Study of public subsidies in the fisheries and aquaculture sectors in the Member States” – all of which involved several members of the team.

There then followed a survey of beneficiaries (see chapters 5&6) and interviews with the competent authorities in each Member State to ascertain programme performance, management and adequacy of support. Primary data collection was based on in-depth interviews with the relevant personnel in the delivery agencies and computer-assisted telephone interviews (CATI) of beneficiaries.

Administration of the FIG programme was devolved to a greater or lesser extent in the Member States surveyed. In the case of a devolved set-up, interviews were undertaken with those responsible for the FIG programme in the main processing regions.

The final aspect of programme evaluation involved a workshop convened in Brussels on the 28<sup>th</sup> March 2003. The workshop, involving the project partners and the Commission, allowed those undertaking the evaluation in each Member State to appreciate the trends and drivers for change in other Member States.



### 3. Overview of the European processing sector

#### 3.1 Companies and Employment

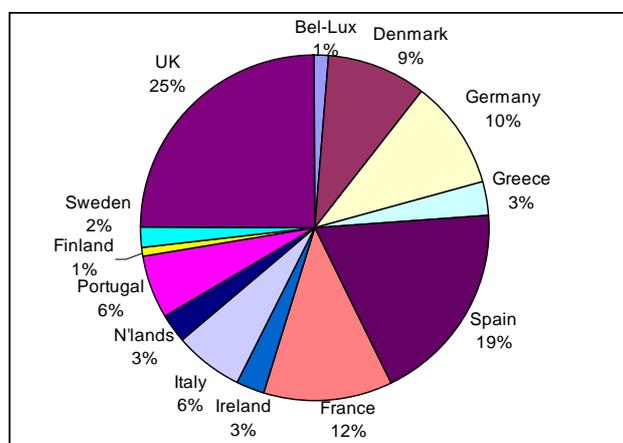
There are almost 100,000 employed in over 3,000 processing enterprises in the EU (see table 3.1).

Most Member States have seen a reduction in the number of processing companies in recent years, although collation of data related to the number of fish processing companies is only undertaken sporadically, making the identification of trends difficult. The criteria defining a fish processor also vary between Member States and between surveys within Member States, making comparison difficult. The average number of employees per processing enterprise has increased from 30.4 in 1994 to 37.8 in 2000, an indication of consolidation in the industry.

The European processing sector remains for the most part in contraction and consolidation due to supply shortages and competition from cheaper imports. This situation may persist for some years to come as trade barriers such as tariffs and import licences, which to an extent currently protect intra-Community seafood trade, are reduced or stopped through international trade agreements. Third countries, such as China, previously suppliers of raw material only are increasingly taking advantage of their low labour costs and processing for export as processing units achieve EU quality standards.

Some European trading companies are using the comparative advantages of countries outside the EU. In extreme cases EU-sourced raw material is exported out of the EU for low-cost part-processing in countries such as China and Poland before being returned to the EU for finishing.

**Figure 3.1 Proportion of fish processing employment by Member State, 1999**



Source: Eurostat

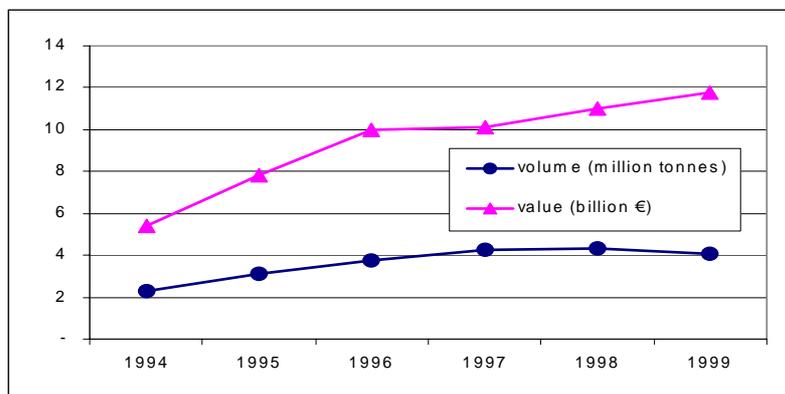
Many employment opportunities in processing remain temporary in nature, often associated with fishing seasons or seasonal peaks in demand, which makes accurate quantification of sector employment difficult. The data gathered and presented in figure 3.1 shows that the major employers are the UK, Spain, France, Denmark and Germany.

Employment in the fish processing sector is not recorded on an annual basis, making it difficult to define trends. It appears that overall employment in EU processing has not altered significantly since the mid-90s. Individual Member States have seen employment in the processing sector reduce (noticeably in The Netherlands and Portugal) and increase (The UK, Spain, Ireland and Sweden) between 1994 and 1999. Variations in totals could, however, be partly attributable to changing methods of collation by Member State authorities.

## 3.2 Production

Based on the Prodcom categories selected to represent processed fish products, the European Union's total production increased by 41% in volume terms and 76% in value terms during the review period 1994 to 1999. Production in 1999 was valued at approximately €12 billion from about 4 million tonnes of product.

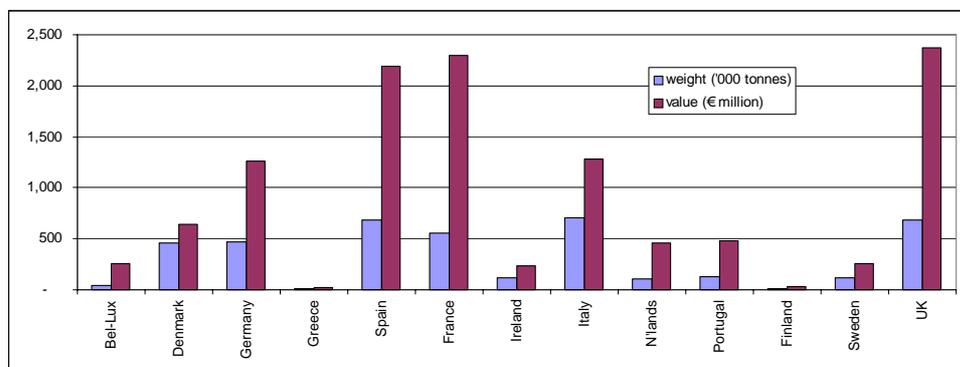
**Fig 3.2 Total production of processed fish products in the EU (volume and value) 1994 to 1999**



Source: Eurostat

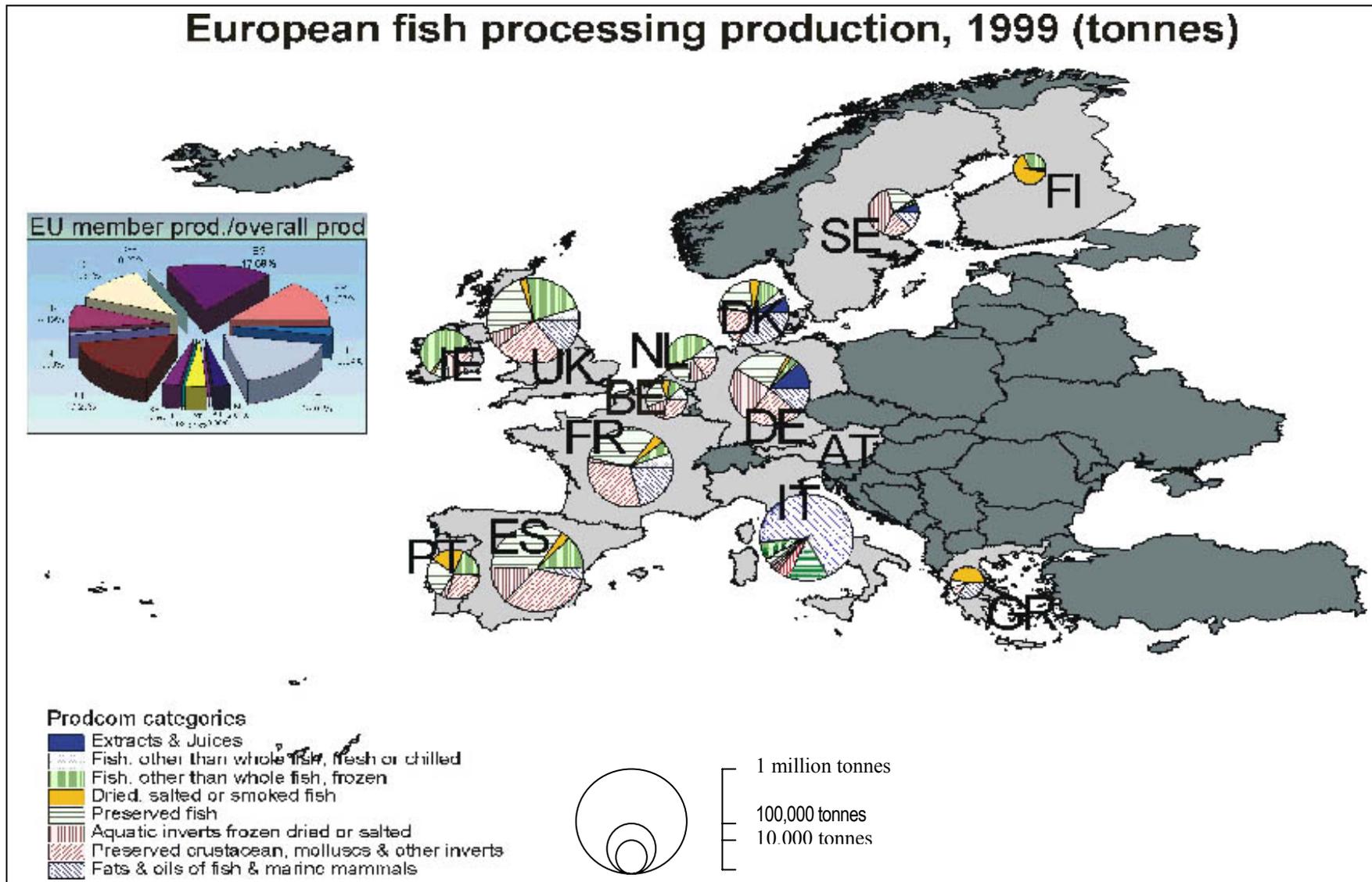
Figure 3.3 illustrates the scale of the processing sectors in Member States. The UK, France and Spain account for 20, 19 and 18 per cent of production value respectively.

**Figure 3.3 Production (volume and value) for all Prodcom categories by Member State, 1999**



Source: Eurostat

Map 1. European fish processing production by Member State, 1999 (tonnes)



### 3.3 Main sub-sectors

To present a quantified overview and illustrate the recent evolution of the sector, comparable data are required that is recorded on an annual basis for every Member State. Such data do not exist for the processing sector. Analysis of sub-sectors is therefore based on analysis of product type, which is assumed to reflect the type of activity being undertaken by European processors.

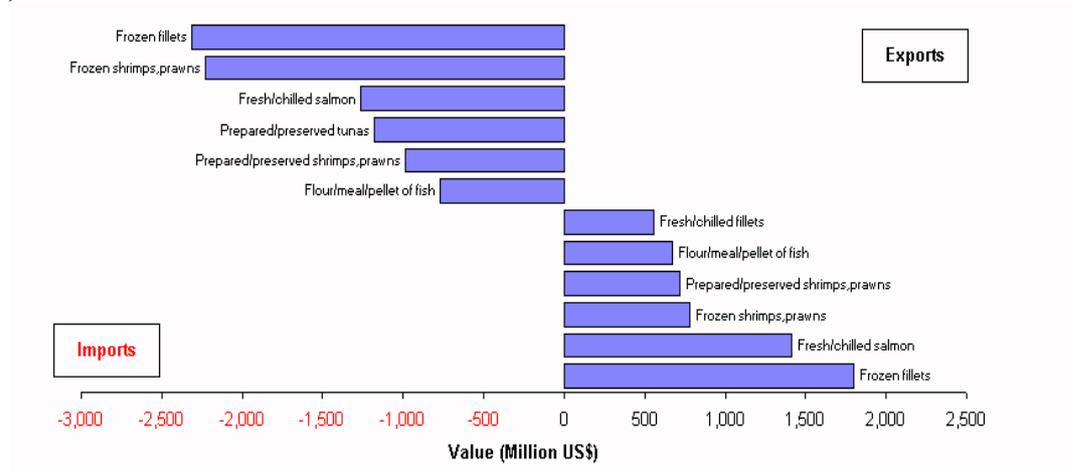
Figure 3.4 illustrates the major commodities traded by Europe in 1996 as reported by FAO, classified under the Harmonized System Commodity Classification. The chart shows the major import and export commodities in Western Europe in terms of the value of trade (excluding aquatic plants and some inedible fishery products). 1996 is the most recent year for which FAO presents this data.

Frozen fillets and frozen shrimp & prawns represent the bulk of imports. These are generally processed further and re-exported, mainly within the EU, and therefore also feature prominently in the export commodities (frozen fillets and prepared/preserved shrimps, prawns).

'Frozen fillets' consists of frozen whitefish block imported from Norway, Iceland and Eastern European countries. Imports are also coming from further afield, such as vessels operating in the Southern Ocean, to complement supplies from North Sea, Barents Sea and Bering Sea fisheries. The major processing regions of the UK and Germany focus on the production of products derived from this group of commodities, which are sourced from the cod, Alaskan pollock and New Zealand hoki fisheries. Blocks of skinless and boneless whitefish are sawn into retail portions and combined with a variety of sauces to produce ready-meals. Enrobing in batter or breadcrumbs is also a popular product form for frozen fillet.

Fresh and chilled salmon is relatively new to this list of major commodities. Trade has developed as a result of increasing Atlantic salmon aquaculture production in Norway, Scotland and more recently Chile.

**Figure 3.4 Imports and Exports of Major Fishery Commodities in the EEA by value, 1996**



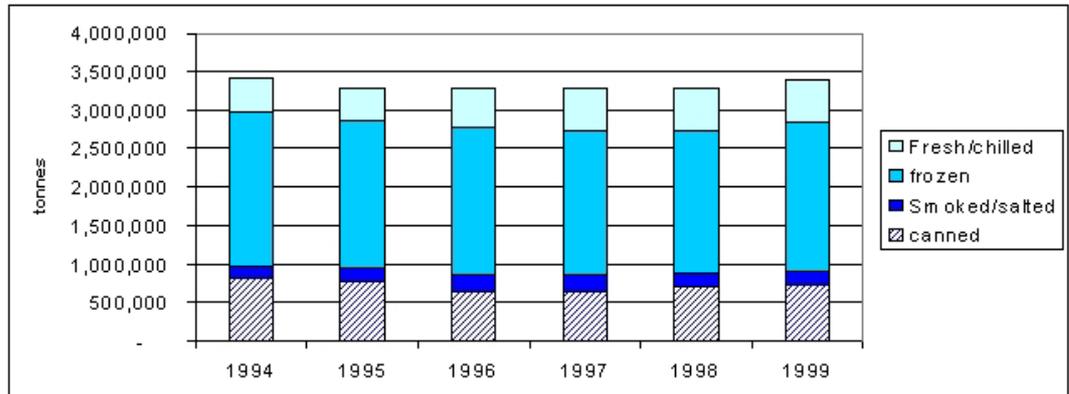
Source: FAO Regional Fisheries Characteristics, <http://www.fao.org/fi/fifacts/plots/WEuro/weste12.asp>

The EU remains highly dependent on imported tuna. Historically this supplied the major tuna canning sectors in Spain and Italy. In recent years EU canneries have faced stiff competition from countries in Asia with far lower production costs. The result has been a marked decrease in the production of tinned seafood in the EU, including both large pelagics (tuna) and small pelagics (sardine, mackerel, herring). European consumers have also begun to favour 'fresh' (both wet fresh

loins, and product previously frozen) tuna fillet as a healthy alternative to meat, maintaining EU demand for imported tuna.

For Europe as a whole (Figure 3.5) there has been a 12% decrease in canned production in volume terms, a 20% increase in the production of fresh processed products, a 16% increase in smoked/salted products and 3% decrease in frozen products between 1994 and 1999.

**Figure 3.5 Volume of processed seafood products by EU companies, 1994-1999**

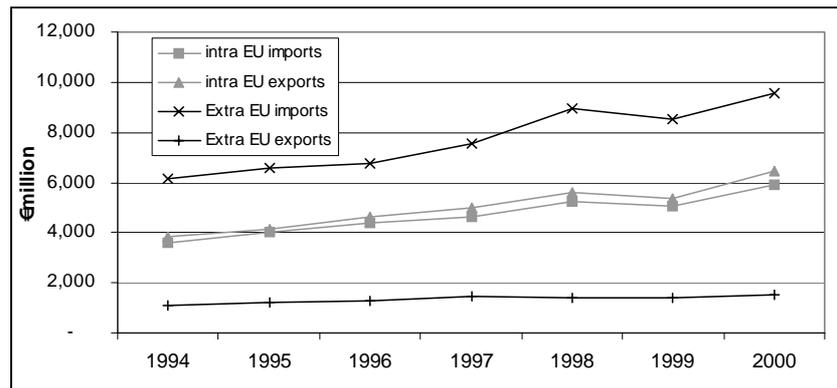


Source: FAO

### 3.3 Trade

There has been a significant decrease in EU landings (down by 23% in volume terms between 1994 and 1999 and down 16% in value). The EU processing sector has made up this shortfall in supply with more imports. Extra-Community imports of processed seafood rose from €6.13 billion in 1994 to €9.55 billion in 2000 (a 36% increase). In addition, the EU processing sector imported approximately €4 billion worth of unprocessed seafood products (fresh or frozen whole fish) in 1999<sup>3</sup>.

**Figure 3.6 Value of Extra & Intra Community Trade 1994 -2000**



Source: Eurostat

As can be seen from the two value lines for intra-Community exports and imports, which should be the same figure, the data exhibits a margin of error averaging around 10% each year. The upper value is considered the more realistic of the two based on total trade in fisheries products (sum of all Prodcom categories) collated by Eurostat.

<sup>3</sup> Based on total imports of fishery products to the EU in 1999 (Eurostat) minus imports of Prodcom categories in 1999.

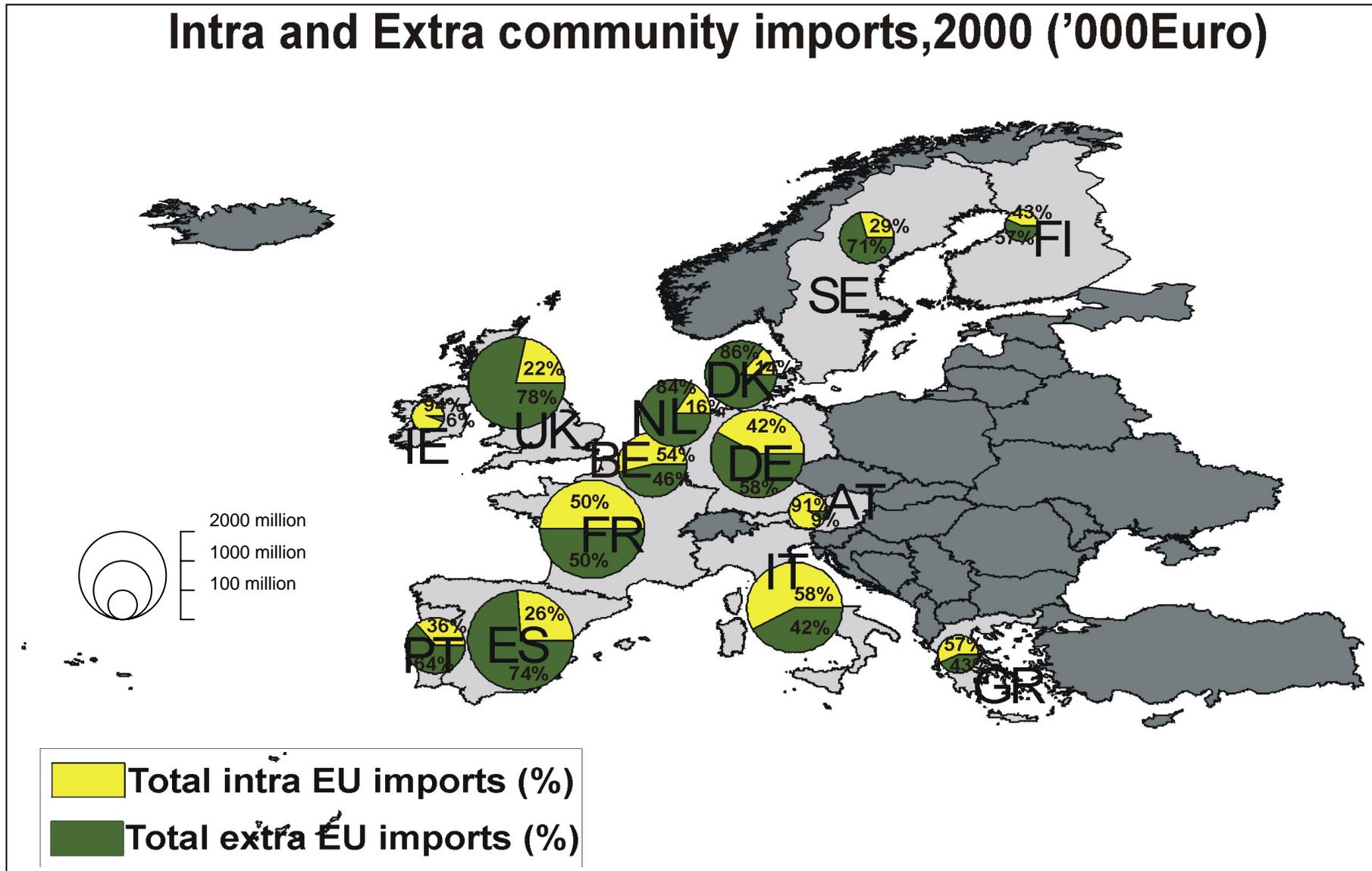
Intra-Community trade in processed products increased by around 39% from 1994 to 2000 to €5.7 billion. This brings total EU imports of processed seafood products in 2000 to over €15 billion.

86% of the value of EU exports is derived from intra-Community trade, which totalled €6.6 billion in 2000. Less than €900 million of processed seafood products were exported in 2000.

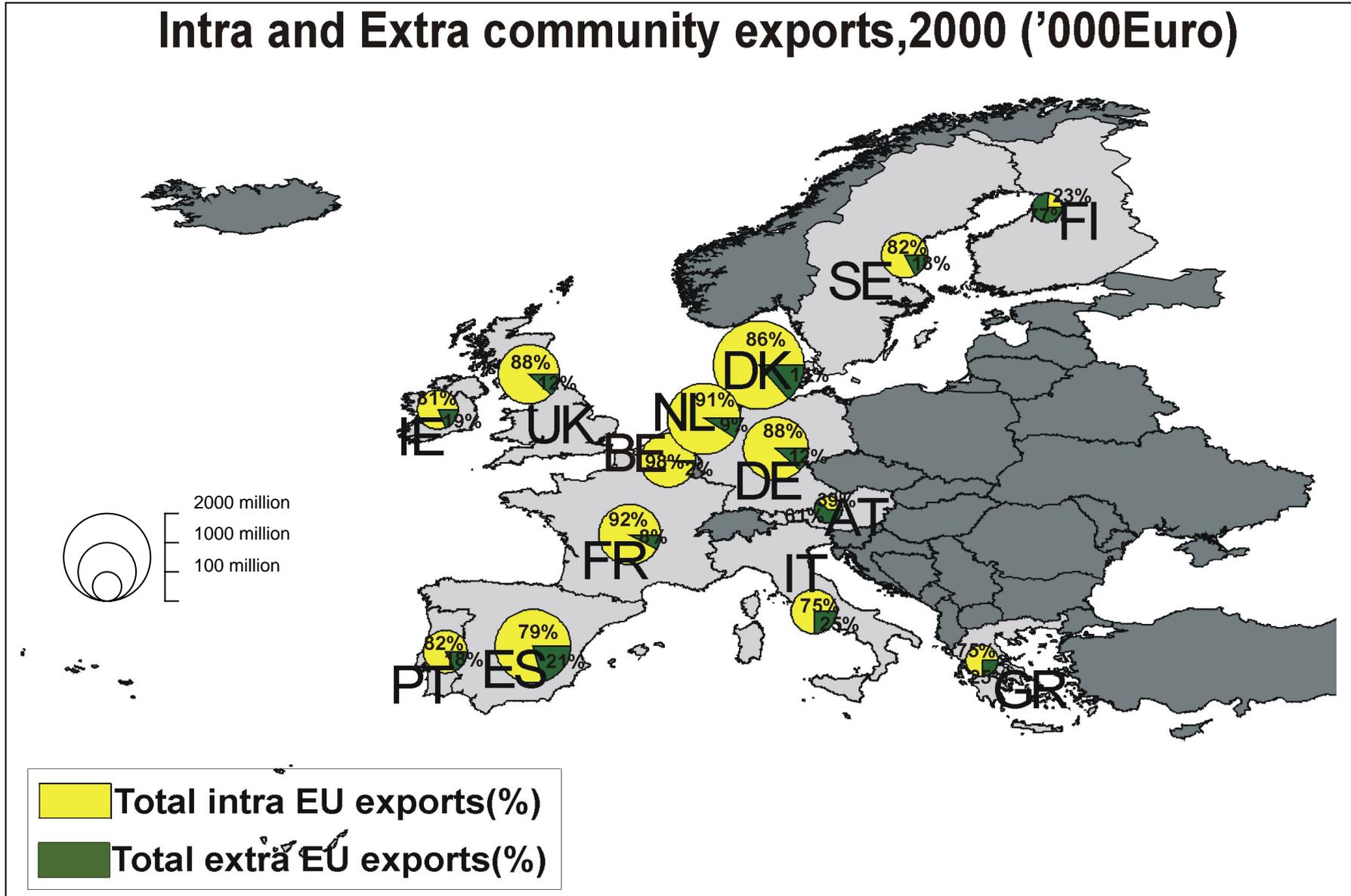
Most Member States in the European Union have seen increases in demand for seafood products. In conjunction with reduced landings and increased Extra-EU competition, this has contributed to an ever-widening seafood trade deficit between the EU and third countries. Only the continued development and increased production of the European aquaculture sector has been such as to counter this trend, creating a source of raw material for processors and new products for consumers from within the EU.

Table 3.1, following the maps, summarises the major national indicators for the processing sector in each Member State in 1999 (the most recent complete data set). Further details are presented throughout the report and have been used by the team for analysis of the European processing sector in later stages of the study.

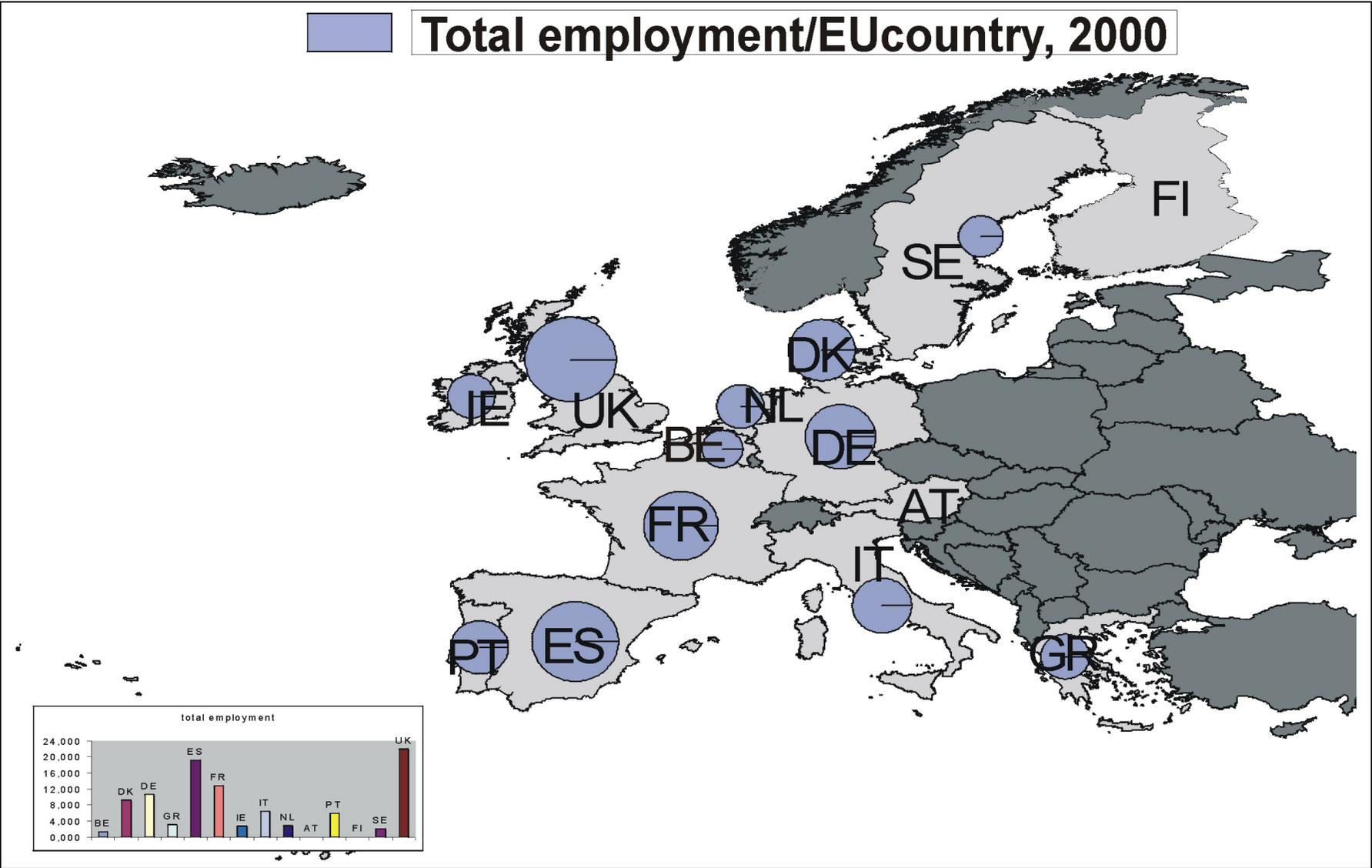
Map 2. Intra and Extra EU imports by value, 2000



Map 3. Intra and Extra EU exports by value, 2000



Map 4. Employment in fish processing in EU Member States, 2000



**Table 3.1 Scale indicators for the processing sector in each Member State, 1999**

Indicator	Bel-Lux	Denmark	Germany	Greece	Spain	France	Ireland	Italy	N'land	Austria	Portugal	Finland (d)	Sweden	UK	Total
national production (tonnes)	44,772	454,679	470,749	10,095	683,597	557,900	116,693	707,688	111,359	500 (b)	123,971	13,085	117,619	685,731	4,097,938
national prodn. (m Euro)	252	641	1,259	25	2,195	2,704	234	1,286	459	20 (c)	481	36	258	2,374	12,223
Imports (tonnes)	140,092	476,116	600,047	100,287	916,232	598,363	17,232	258,879	311,863	31,736	268,484	37,998	186,975	514,213	8,748,519
exports (tonnes)	93,059	786,742	182,712	18,568	613,071	297,055	156,750	40,682	225,925	1,562	66,093	9,660	89,787	212,053	4,203,720
Import value (m Euros)	695	941	1,591	196	2,187	2,041	125	1,031	746	128	819	71	430	1,750	12,751
Export value (m Euros)	344	1,632	520	46	1,123	559	161	126	873	5	191	18	202	600	6,402
Trade balance (m Euro)	-350	691	-1,071	-150	-1,064	-1,482	36	- 905	127	-123	- 628	-54	- 228	- 1,148	-6,349
Apparent consumption (tonnes)	118,359	109,245	763,293	85,243	955,806	677,710	171,899	925,885	100,808	46,469	326,362	31,571	192,974	982,063	5,487,687
Production / consumption (%)	38	416	62	12	72	82	68	76	110	1	38	41	61	70	75

Indicator	Bel-Lux	Denmark	Germany	Greece	Spain	France	Ireland	Italy	N'land	Austria	Portugal	Finland (d)	Sweden	UK	Total
Investment (m Euro)		57		11	79	72	23						13	30	285
Investment / production (%)		6		45	<1	3	10						2	1	3.3 (av.)
Production as % of GDP						0.17			0.02			0.2	0.01	0.22	
Total employment	1,300	9,200	10,408	2,900	19,121	11,815	2,645	6,420 (a)	2,747	100	5,823	655	2,066	22,235 (e)	97,435
No. companies	62	547	104	205	503	127	85	393 (a)	39		115	146	178	541 (e)	3,045
Ave. no. employees / company	21	17	100	14	38	93	31	16	70		51	4	12	41	32
Production / employment (m Euro per employee)	0.19	0.09	0.12	0.01	1.15	0.23	0.09	0.20	0.17	0.20	0.08	0.05	0.12	0.11	0.33

Source: Prodcom

Notes:

Data on national production, imports, exports and apparent consumption are all from Prodcom. They may not, therefore, agree with data in individual Country Reports, which may be from national sources. Prodcom data has been used here to allow comparison between countries using a standard dataset.

(a) 1997 data

(b) from FAO FishStat

(c) 1997 data – approximate value, from BMLF

(d) 1998 data

(e) 2000 data

## 4. The Programme of Community support to the sector

The overall aim of area of assistance number 6 of the 1994 to 1999 FIFG programme was to ‘improve the competitiveness of the European fish processing sector’

Approximately €1.7 billion was invested in the European processing sector through the 94-99 FIFG processing measure via over 4,000 projects. These totals exceed anticipated FIFG allocations<sup>4</sup> by at least 25% and anticipated private investment by more than 30%.

Statistics for number of enterprises are sporadic and unreliable. However, if we use the best-estimate total of approx. 3,000 enterprises it can be noted that the FIFG processing measure has assisted over 1,000 companies (approx. 35% of companies in the processing sector), discounting multiple projects.

Although highly variable between Member States, investment averages out to 3.3% of production value (see Table 3.1). If we compare total investment through the programme period (€1.7 billion) to total production for those years, which amounts to over €56 billion, it equates to around 3% of the European processing industry’s turnover. Investment through the FIFG programme therefore represents the great majority of investments made during the programming period 94-99. It can be inferred that very little investment occurred in the sector without a contribution from FIFG.

State support associated with this measure varied between Member States from a high of 22% in Austria and 18% in Portugal to a low of 4.5% in Ireland, 5% in Denmark & the Netherlands and 5.4% in the UK.

Projects have been supported under the four FIFG processing and marketing measures as shown in table 4.1. Here ‘marketing establishments’ refers to physical market structures such as auction halls and other fish trading areas rather than marketing effort, which is not considered in this evaluation.

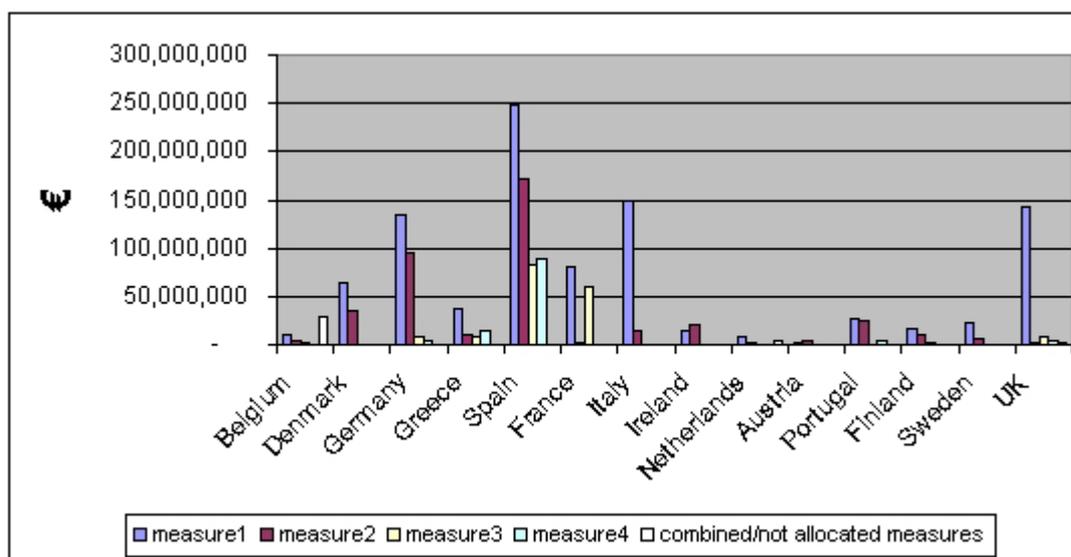
**Table 4.1 – Measures supported within the FIFG programme to processing and marketing of products**

<b>Measure 1</b>	<b>Output indicators</b>
Increase in processing capacity (new production units and/or extension of existing units)	<ol style="list-style-type: none"> <li>1. tonnes/year of fresh or chilled products</li> <li>2. tonnes/year of preserved or semi-preserved products</li> <li>3. tonnes/year of frozen or deep-frozen products</li> <li>4. tonnes/year of other processed products (smoked, salted, dried or prepared dishes)</li> </ol>
<b>Measure 2</b> Modernisation of existing processing units, but without any increase in production capacity	<ol style="list-style-type: none"> <li>1. number of facilities brought up to health and hygiene standards<sup>1</sup></li> <li>2. number of units brought up to environmental standards</li> <li>3. number of units receiving production improvement systems (quality, technological innovation)</li> </ol>
<b>Measure 3</b> Modernisation of existing marketing establishments	<ol style="list-style-type: none"> <li>1. number of facilities brought up to health and hygiene standards<sup>5</sup></li> <li>2. number of establishments brought up to environmental standards</li> <li>3. number of establishments receiving information systems</li> </ol>
<b>Measure 4</b> Construction of new market establishments	<ol style="list-style-type: none"> <li>1. sq.metres of usable area<sup>2</sup></li> <li>2. number of new market establishments<sup>3</sup></li> <li>3. sq.metres of chill facilities<sup>3</sup></li> </ol>

<sup>4</sup> Most member states provided anticipated funding based on approved applications prior to the actual draw-down of funds

<sup>5</sup> Unlikely to apply to projects completed after the end of 1995, since all premises were due to have met the required standards by then.

Fig 4.1 Total investment in projects per measure per Member State



**Measure 1** This had the largest take-up with around 57% of total investment. This high proportion is to be expected with capital-intensive projects to increase capacity. It accounts for an even greater proportion of total investment in Italy, the UK and Sweden (91%, 88% and 79% respectively). Only Belgium shows low levels of investment under measure 1 (23%) and this is the result of most projects being recorded under combined measures 1&2.

**Measure 2** -Modernisation of existing processing units accounts for 24% of investment – more significant in Austria, Ireland and Spain. This measure only accounts for 1& 2% of total investment in France and the UK respectively, indicating modernisation only is not in demand in the processing sectors of these Member States.

**Measure 3** – modernisation of marketing establishments – shows highly variable uptake with only 10% of overall investment. For many Member States (Denmark, Italy, Ireland, Netherlands, Austria, Portugal) no investment took place under this measure. Only France shows a significant proportion of investment (42%) under measure 3 as a result of the large number of applications from the mareyage (trader) sector to support improvements in their establishments. Elsewhere it appears that the funding was targeted more specifically at fish processors, with only a few projects to improve auction markets being supported.

**Measure 4** – construction of new marketing establishments has the lowest take-up of around 7% of the total. Only Greece and Spain show higher take-up levels than this average with 21% and 15% respectively. In Greece the interest is sparked by the need for additional infrastructure to package aquaculture production.

For those Member States able to describe the sector in terms of type of processor, the great majority of beneficiaries are secondary or mixed primary/secondary processors. In Portugal 98% were secondary or mixed processors, in the Netherlands 84% and in Spain 79%. For the UK 66% were secondary processors and 23% primary with the remainder made up of traders, markets and

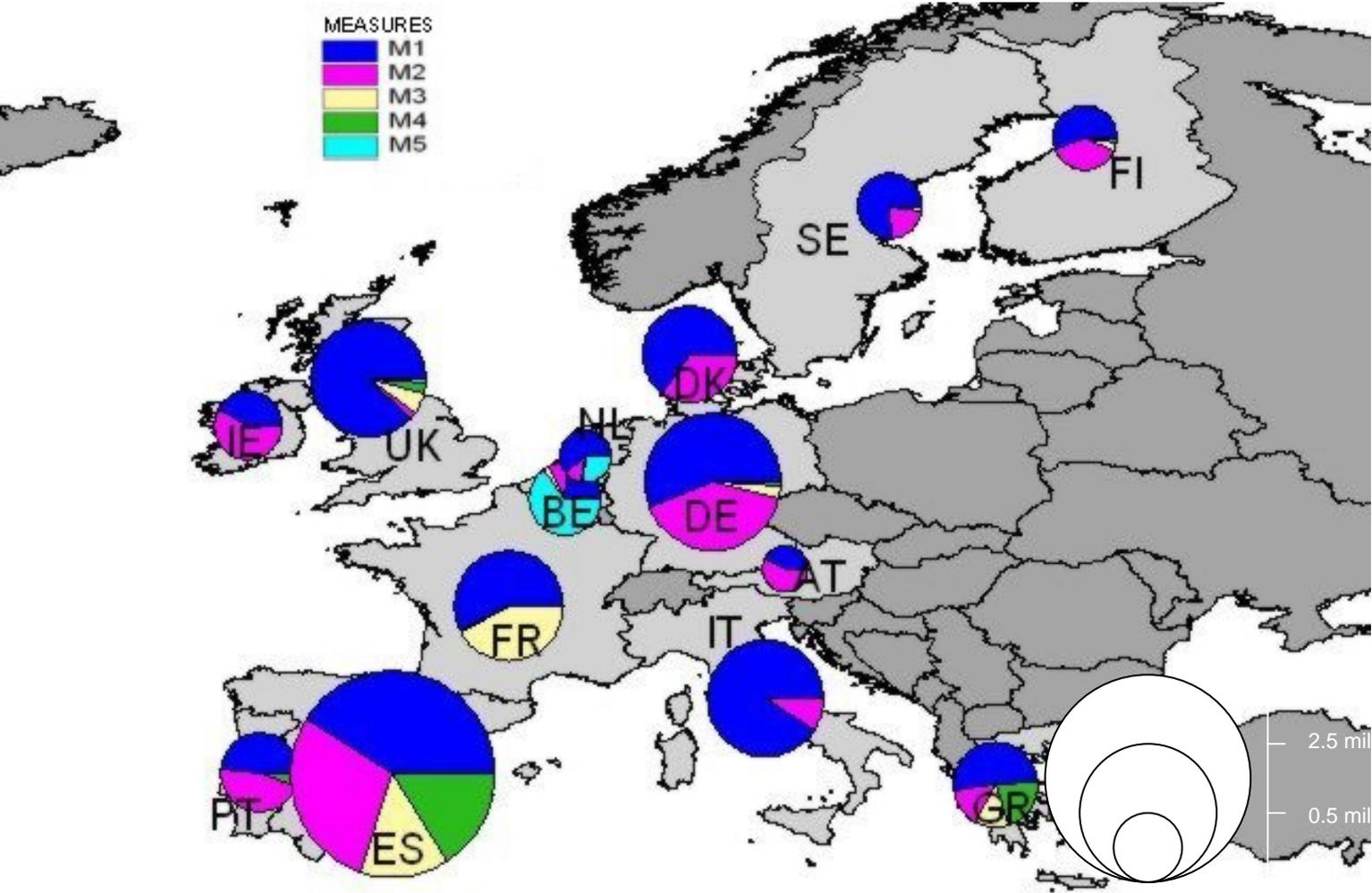
<sup>2</sup> "Usable area" will be defined in a way that makes the best use of the available information in each case.

<sup>3</sup> Output indicators 2 and 3 of Measure 4 are UK indicators, not on the Commission's list.

aquaculture companies. Denmark had secondary processors making up 55% of beneficiaries with a comparatively high proportion (37%) being primary processors.

It is evident that it is secondary processors that have mainly used the programme. As investment through the programme represents almost all sectoral investment during the period, it can be assumed that investment in the primary sector during this period has been minimal as well as there now being fewer processors that are purely doing primary processing. This illustrates a shift in emphasis for the European sector towards value-added.

Map 5 Scale of total investment under FIFG by measure\* for each Member State



\*Measure 5 = combined measure 1& 2 (Belgium & The Netherlands only)

## 5. How the programme has addressed identified problem areas

Problems facing the industry are primarily focused on employment, raw material supply and competition from extra-EU imports. To an extent these issues are all interconnected – particularly the costs associated with employment and raw materials leading to processor concerns over their ability to compete with third country imports.

Most potential coping strategies can be assisted in some way through FIFG area of assistance number 6, but the bulk of funding went to projects focusing on increases in processing capacity. This structural support to what has amounted to consolidation rather than expansion of the sector has allowed companies to incorporate many of the strategies listed above.

Over 60% of companies interviewed claimed the funding had contributed to improvements in their business and 56% claimed they had become more profitable as a result. The comment that the beneficiary is more competitive as a result of funding does, however, usually relate to comparisons with national and other European competitors.

It should also be recognised that a significant proportion of respondents (over 40%) in the Member State did not see signs of improved profitability and competitiveness as a result of funding. This can be attributed to a number of factors including:

- The remedial nature of some projects such as investment in modernisation to conform to new health and hygiene regulations.
- The difficult times being faced by many in the industry – primarily in this instance relating to raw material shortages and competition from imports.

Respondents in a number of Member States (France, Portugal, Italy) suggest investments were initiated to comply with regulations. There is however the likelihood those projects to increase capacity, that largest category of funded projects, would inevitably contribute to modernisation and achievement of regulatory standards. Modernisation of facilities to conform to regulatory requirements could also be seen as improving one's competitive position.

Responses regarding product development were variable throughout Member States. Product innovation appears most prevalent in Germany and Denmark where 50% of the companies interviewed stated the programme had resulted in new products to some extent. There were also sectoral differences with secondary processors showing more innovation which to be expected, as they have more scope to do so.

Most companies receiving funding increased employment over the programme period – not always as a direct result of funding, but as most projects were to increase capacity, this increase is expected. Overall employment in the processing industry has remained relatively stable around 100,000 so increases appear to be consequences of consolidation going on throughout the sector.

Job losses due to automation were reported to be minimal suggesting such structural change has already occurred.

There is little evidence of the processing sector absorbing the employment reductions seen in the catching sector. France and Italy are the only Member States surveyed where any respondents stated they had retrained fishermen in the processing sector and then only coincidentally. Of French respondents only one company stated they had unsuccessfully attempted to retrain ex-fishermen.

## 6. Programme performance

Overall the 1994-1999 FIG programme of support to the processing sector has provided a necessary catalyst to accelerated change within the industry during a period of restructuring. The result has been to assist the more pro-active and forward looking companies in the sector to expand and consolidate production, taking up the slack left by less efficient and generally smaller companies that left the industry during this period.

In the key area of competitiveness, the impact of the programme has been more mixed. The various sub-sectors of the industry have, almost without exception, reacted positively to the changing economics of the industry by rationalising their raw material supply chains to incorporate part-processed product from lower labour cost economies outside the Community. Similarly there has been a noticeable shift in industry activity along the value chain, with fewer companies focusing on primary processing, and more companies combining primary with secondary processing – where they can arguably show comparative advantage over many third-country industries. Such moves also reflect general downturns in the volume of fish, and particularly whitefish, being landed directly to EU ports.

Smaller companies that are traditionally dependent on local landings have failed to, or are unable to, remain competitive in an industry of falling margins and lower cost imports. In addition, the majority of company owners and managers recognise that they are not in a position to compete with the growing muscle of third country producers on the basis of labour costs, and must therefore focus on productivity (scale, skills and technology) and quality (traceability, food safety, product guarantees, and security of supply). There is considerably less evidence that the 1994-1999 FIG programme achieved focused gains in these areas – except in the development of economies of scale and the technological improvements that came with the expansion of existing plant and facilities.

Despite differences in Member State interpretations of indicators it can be assumed that the increased processing capacity as a result of FIG projects now makes a significant contribution to overall European processing capacity.

The scale of FIG contribution to this doubling of production over the programming period is impossible to quantify, but is likely to be sizeable considering this was also a period of consolidation for the sector in many Member States and around 35% of enterprises applied for funding.

For all Member States surveyed, 39% of the respondents suggested that the funding was necessary to realise the project. This could be considered low, but is understandable given the degree to which beneficiaries were responding to regulatory changes and therefore obliged to implement changes.

Significant amounts of additional private sector investment as a result of FIG funding is not evident, with investment levels remaining similar to those estimated in the 1993 study, suggesting leverage is low. The choice of FIG funding by some beneficiaries, due to higher contribution level making the structural fund more attractive than other available funds, supports this conclusion.

There is clearly a lack of additionality<sup>6</sup> associated with this measure in many Member States. This issue is a concern for financial monitoring at a national level rather than for programme evaluation.<sup>7</sup> It should be a priority for Member States to ensure government expenditure is not simply substituted for structural funding, but additional to it.

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<sup>6</sup> Additionality refers to the aim for Structural Fund expenditure to be fully additional to national government expenditure

<sup>7</sup> The MEANS Collection "Evaluating socio-economic programmes", vol.5. European Commission

The implementation of the FIGG programme area of assistance number 6 appears broadly satisfactory with mainly positive responses to the various aspects enquired about. Timeliness of funding is the one area where the majority provided negative responses.

There is a need for more targeted assistance to those groups in a less favourable position to apply or seek third party assistance, i.e. smaller companies.

There is concern over the timeliness of the process. It was here that beneficiaries from most Member States complained of significant delays. On a number of occasions respondents stated that this resulted in cash-flow problems and the need for bridging loans.

The extent to which delays were caused was sometimes dependent on the type of project. For example, a new build would require far more approval from other authorities than modernisation of an existing building.

Promotion of the programme can be judged to be broadly successful, but the time taken to produce promotional material and implement dissemination strategies contributed to low take up in the first half of the programme.

Further guidance on the use of targets (setting levels, interpretation of indicators, monitoring etc.) should be provided by the Commission to allow for greater detail in comparison between Member States.

## 7. The adequacy of Community support

All Member States surveyed found that funding was broadly adequate – supply was well matched to demand and where supply exceeded demand, reallocations could be made to benefit other measures.

There is a suggestion that allocations in some of the Member States were larger than required (Italy, Portugal). As reallocation between funds was permitted and indeed carried out, this situation could be rectified and could not be seen to impact negatively on availability of FIGG funds in other measures.

**Table 7.1 Adequacy and appropriateness of funding measures**

	<b>Adequate funds</b>	<b>Appropriate</b>
Denmark	<b>Yes:</b> Budget determined each year.	<b>Yes</b> Improved competitiveness mainly through process development
France	<b>Yes:</b> perceived good coverage of mareyage sector	<b>Yes:</b> Compliance with regulations by those in marketing
Germany	<b>Yes:</b> many multiple projects so sufficient funds to assist all in sector	<b>Yes:</b> 80% now feel more competitive
Italy	<b>Yes:</b> all admissible projects approved	<b>Yes:</b> objectives satisfied
Portugal	<b>Yes:</b> underspend resulting in re-allocation at various times	<b>Yes:</b> specific objectives achieved
Spain	<b>Yes:</b> 4.2% of available funding not	<b>Yes:</b> 72% changed business practices with improved production, QC, logistics

	spent	& networks
UK	<b>Yes:</b> 40% of companies funded for expansion at a time of consolidation – good coverage	<b>Yes:</b> competition for funds suggest high interest
<b>Overall</b>	<b>Yes – sufficient companies supported overall to achieve sector objectives (increased competitiveness)</b>	<b>Yes – majority of respondents achieved programme objectives</b>

The funding is considered to be appropriate in relation to the stated objectives whether they be the overall objective of 'improved competitiveness' or more specific Member State objectives.

## Overall

While necessary to accelerate structural change in the sector, area of assistance number 6 of the 94-99 programme can be seen as a relatively blunt tool with a focus on increased capacity and consequently using very basic indicators relating to volume increases in capacity. These are inadequate to assess whether the overall objective of improved competitiveness came about.

Based on the survey results it appears that beneficiaries did improve competitiveness for the most part. It is also apparent that at the time of implementing the programme, the information relating to the processing sector was patchy at best. This suggests it would have been difficult to propose more targeted measures specific to various needs, which vary according to Member States.

## 8. The role of future support

In most Member States the process of consolidation is now well advanced, and the argumentation for further public support to this process is weak. But the sector's competitive position *vis a vis* non-European producers remains weak, and continuing modifications will be needed to exploit those areas where the European sector has opportunity to develop any comparative advantage.

It is clear from our researches that the 1994–1999 FIG programme of support to fish processing has accelerated adaptation to the changed supply, economic and market conditions that affect the sector. The commitment of FIG funds on a European basis has favoured investment in production over market infrastructure, and investment in new production capacity over modernisation of existing capacity. But to what extent has necessary restructuring been completed, and thus the rationale for broad-based public investment in sectoral change been removed?

The extent to which restructuring has been achieved differs between countries, and between sub-sectors in the same country. The rationale for further support for investment in new production capacity is weak, and private and commercial sources of funding should now suffice for this purpose. There are, however, a number of other elements of restructuring that warrant further support.

In particular:

- the industry as a whole still struggles to meet the increased quality standards required by the market,
- smaller businesses, and particularly those involved in primary processing, are poorly equipped to re-structure to re-establish profitable operation,
- there is still much of the industry that cannot realistically compete head-on with processors from economies with more favourable wage characteristics; these enterprises must look to scale, system integration, technology, branding and proximity to market to maintain comparative advantage.

### Key elements of any future programming

Key thrusts to any future programme should include:

- Support to local communities:**
  - Retention of viable primary processing capacity
  - Support to those involved with the local first hand sale of fish to deliver the quality of fish that processors require (qualities of freshness, traceability, grade, standardisation of product definition, consistency of specification, and regularity of supply)
- Meeting the **quality standards** required by the market:
  - Support to the achievement of the above-statutory-minimum quality standards that clients require
  - Modernisation of plant and processes (without specific support to increased production capacity)
  - Introduction of improved process and quality management systems
  - Support to automation, improved process information systems, and product traceability systems

- ❑ Stimulating cross-border and **product chain integration** through outward investment:
  - Provision of improved scope and standards of information about sector structure and operation sufficient to encourage / stimulate capture of scale and operational efficiencies through cross-border integration and co-operation
  - Provision of improved scope and standards of information about supply chain / product chain developments / opportunities sufficient to encourage / stimulate increased investment by EU interests in upstream and downstream businesses outside the EU
- ❑ Supporting **improved working conditions** within the processing sector:
  - Investment in skills development within the processing workforce
  - Support for the development and application of modifications to the work environment / work scheduling / personnel management that lead to improvements in the retention of staff / reductions in staff turnover
- ❑ Support to achievement of **environmental improvements**:
  - Support to co-operative approaches to water / waste water management
  - Support to improved on-site management of water / waste water
  - Support to innovations leading to improved whole-life management of packaging
  - Support to changes in process, process management and product design that result in reduced waste
- ❑ Support to **new products and markets** of fish processing businesses:
  - Encouragement of product innovation and development that responds to wider market requirements
  - Encouragement of market research as a basis for product design and development
  - Support to achieving improvements in business management and strategic planning.

### **Some policy considerations**

At a policy level, there remain a number of areas that require some attention:

- ❑ Greater policy focus should be given to supporting sustainable businesses than to directly stimulating employment;
- ❑ Improved facilitation of access to funding by smaller companies: giving small businesses equal opportunity to adapt to changing business environment in the sector through seminars, market information, direct targeting of small businesses by programme managers with one to one contact and more assistance on application.
- ❑ Greater policy focus should be given to supporting existing businesses than to supporting new start-ups, and to recognising the track record of management as a clear eligibility criterion.



Table 8.1 Preferred options regarding future support for the processing sector in each member state.

Member State	Preferred scenario	Comments
Austria	Continued or Targeted support	<ul style="list-style-type: none"> <li>- Modernisation of small-scale units &amp; group marketing</li> </ul>
Belgium	Targeted support	<ul style="list-style-type: none"> <li>- Based on market trends</li> <li>- Processing of fish other than local species from stocks in bad shape</li> <li>- Innovation of products and packaging suited for large scale distribution</li> <li>- Development of high quality products, that are healthy and environmentally safe</li> <li>- Improve trace ability and documentation through the harvesting, processing and distribution chain</li> </ul>
Denmark	Targeted support	<ul style="list-style-type: none"> <li>- Automation of repetitive work functions</li> <li>- Focus on implementation of cleaner technology and environmental management</li> <li>- Development of high quality products, which in addition are healthy and environmentally secure .</li> <li>- Introducing labelling to document and ensure product standards.</li> <li>- Improve traceability and documentation through the harvesting, processing and distribution chain.</li> <li>- Improve the economic control systems in the industry.</li> <li>- Develop information systems that can integrate information from quality and environmental control systems as well as economic control systems.</li> </ul>
Finland	Targeted support	<ul style="list-style-type: none"> <li>- Development of human capacity for structural change. This relates to both the business aspects, to product development and to ability to handle requirements from new markets including health, environmental and quality aspects of production.</li> <li>- Organisational restructuring, initially through development of mechanisms for horizontal and vertical integration.</li> <li>- Development of products based on Baltic herring and sprat for the expanded European Union market.</li> </ul>
France	Targeted support	<ul style="list-style-type: none"> <li>- Support to SMEs (application assistance, beneficial match funding levels)</li> <li>- Tackling raw material supplies, product development and environmental</li> </ul>

		<p>performance</p> <ul style="list-style-type: none"> <li>- Clearer programme objectives and targets</li> </ul>
Germany	Targeted support	<ul style="list-style-type: none"> <li>- Further transitional aid for primary processors</li> <li>- For secondary processors encourage a focus on technology development /adaptation, quality and logistics rather than volume.</li> </ul>
Greece	Targeted support	<ul style="list-style-type: none"> <li>- Continuous harmonization of the enterprises with the demands of the markets</li> <li>- Support of innovation</li> <li>- Development of products of higher added value</li> </ul>
Ireland	Continuation	<ul style="list-style-type: none"> <li>- Certain sectors still lagging behind others</li> <li>- Modernisation &amp; restructuring process ongoing</li> </ul>
Italy	Continuation	<ul style="list-style-type: none"> <li>- Large-scale tuna mostly restructured</li> <li>- Small-scale coastal sector still needs assistance on management systems, supply chain efficiencies, processing &amp; marketing of domestic product</li> </ul>
Netherlands	End support (if the same for all member states)	<ul style="list-style-type: none"> <li>- Positive and negative impacts, but would create fair competition if across the whole of the EU</li> <li>- Dutch sector is more closely tied to wider food sector importing and re-exporting</li> <li>- Greater co-operation is necessary to achieve economies within the supply chain</li> </ul>
Portugal	Targeted support	<ul style="list-style-type: none"> <li>- Consolidation of the modernisation processes, through promotion of access to state-of-the-art technologies and to “best practices”;</li> <li>- Stimulation of the ability of SMEs to grow through innovation and technological development, inducing diversification of processing activities and improvement of applied research for actual product innovation and development;</li> <li>- Improvement of conformity to legislation – H&amp;H and environment;</li> <li>- Training (e.g. technology, quality control and marketing);</li> <li>- Improvement of marketing efficiency and higher control of the supply chain (stimulation of commercial synergies between enterprises, in particular increased co-operation between processors to counterbalance difficulties of SME facing powerful buyers).</li> </ul>
Spain	Targeted support	<ul style="list-style-type: none"> <li>- Consolidation so far limited but more expected (particularly in small-scale canneries)</li> <li>- Support to the smaller traditional operators in further modernisation: quality &amp; systems</li> </ul>

		<ul style="list-style-type: none"> <li>- Targeting markets beyond the domestic market</li> </ul>
Sweden	Continued or Targeted support	<ul style="list-style-type: none"> <li>- Development of new products identified as healthy, environmentally acceptable and of high quality.</li> <li>- Development of labelling schemes for the above.</li> <li>- Development of products based on Baltic herring and sprat for the expanded European Union market.</li> <li>- Rationalisation of the supply chain through better logistics and organisation.</li> <li>- Development of better online market mechanisms</li> <li>- Development of better traceability and documentation through the harvesting, processing and distribution chain.</li> </ul>
United Kingdom	Targeted support	<ul style="list-style-type: none"> <li>- Target SMEs and primary processors where more sustainable business models are possible</li> <li>- Assisting those companies already involved in restructuring in the areas of management systems, quality management, market appraisal and skills development</li> </ul>

## 9. Conclusions & Recommendations

Taking into consideration the quantitative review of the evolution of the European processing sector and the evaluation of the impacts on the sector of area of assistance number 6 of the FIFG funding programme and programme management, the following conclusions can be drawn.

### Shift away from dependence on local landings

Problems facing the industry are primarily focused on employment, raw material supply and competition from extra-EU imports. To an extent these issues are all interconnected – particularly the costs associated with employment and raw materials leading to processor concerns over their ability to compete with third country imports.

There is general movement in the EU towards added value and away from primary processing, which for the most part can be done more cost-effectively outside the EU in regions with closer access to raw material and/or far lower labour costs. The fish processing sector is becoming less distinct from the wider food processing industry as:

- raw material sourcing is less associated with local landings
- consolidation of the sector results in integration with larger food processing companies
- moves towards certain added value products such as ready meals means fish is one of many ingredients used.

**Recommendation 1** – *The Commission should investigate whether the current and future needs of fish processors are best supported through a structural instrument specific to the fisheries sector, or through a more generic instrument, which would consider them as part of the agri-food sector. It should also investigate to what extent overlaps already occur between existing structural funds.*

### Sector consolidation now well advanced

Processing companies have attempted to maintain economic viability by:

- developing economies of scale;
- sourcing cheaper imported raw material,
- increasing efficiencies through automation and logistical improvements,
- adding further value through processing and
- ensuring stringent customer quality demands are met.

Most of these can be assisted in some way through FIFG area of assistance number 6, but the bulk of funding went to projects focusing on increases in processing capacity. This structural support to what has amounted to consolidation rather than expansion of the sector has allowed companies to incorporate many of the strategies listed above.

Member States sectors are at differing stages of development including the consolidation of sector seen in the more industrialised member states.

**Recommendation 2** – *The Commission should provide guidance to Member States in determining whether structural aid for increases in capacity remains appropriate for a Member State in future support programmes.*

## The FIG Programme

The overall aim of area of assistance number 6 of the 1994 to 1999 FIG programme was to 'improve the competitiveness of the European fish processing sector'.

Over 60% of companies interviewed claimed the funding had contributed to improvements in their business and 56% claimed they had become more profitable as a result. The comment that the beneficiary is more competitive as a result of funding does, however, usually relate to comparisons with national and other European competitors.

It should also be recognised that a significant proportion of respondents (over 40%) in the Member State did not see signs of improved profitability and competitiveness as a result of funding. This can be attributed to a number of factors including:

- The remedial nature of some projects such as investment in modernisation to conform to new health and hygiene regulations.
- The difficult times being faced by many in the industry – primarily in this instance relating to raw material shortages and competition from imports.

Respondents in a number of member states (France, Portugal, Italy) suggest investments were initiated to comply with regulations. There is however the likelihood that those projects to increase capacity would inevitably contribute to modernisation and achievement of regulatory standards. Modernisation of facilities to conform to regulatory requirements could also be seen as improving ones competitive position compared to others.

Responses regarding product development were variable throughout member states. Product innovation appears most prevalent in Germany and Denmark where 50% of the companies interviewed stated the programme had resulted in new products to some extent. There were also sectoral differences with secondary processors showing more innovation – to be expected as they have more scope to do so.

**Recommendation 3** - *Less emphasis should be placed on funding increased production capacity (though such funding is still required in some Member States). For most Member States the emphasis in programming should move towards achieving improvements in operational efficiencies, quality improvements, innovation and adding value.*

## Employment

Most companies receiving FIG funding increased employment over the programme period – not always as a direct result of funding, but indirectly due to increases in capacity. Overall employment in the processing industry has remained relatively stable around 100,000 so increases seem to be consequences of consolidation going on throughout the sector.

Job losses due to automation are reported to be minimal suggesting such structural change has already occurred.

There is little evidence of the processing sector absorbing the employment reductions seen in the catching sector. France and Italy are the only member states surveyed where any respondents stated they had retrained fishermen in the processing sector (but even this was only coincidental). Of French respondents only one company stated it had, unsuccessfully, attempted to retrain ex-fishermen.

Employment trends are pointing to the use of more third country workers in European processing operations as Europeans become less willing to accept the associated work conditions even in traditional fish processing regions.

**Recommendation 4** – *The Commission should determine whether emerging employment issues and diversification in fishing-dependent communities should be addressed through a future aid programme, or through a fisheries specific structural aid instrument.*

## Impacts

Despite differences in Member State interpretations of indicators it can be assumed that the increased processing capacity as a result of FIGG projects now makes a significant contribution to overall European processing capacity.

The scale of FIGG contribution to this doubling of production over the programming period is impossible to quantify, but is likely to be sizeable, considering this was also a period of consolidation for the sector in many member states and around 35% of enterprises applied for funding.

**Recommendation 5** – *Further guidance on the use of targets (setting levels, interpretation of indicators, monitoring etc.) should be provided by the Commission to allow for the placing of greater confidence and detail in undertaking comparisons between member states.*

For all member states surveyed, 39% of the respondents suggested that the funding was necessary to realise the project. This could be considered low, but is understandable given the degree to which beneficiaries were responding to regulatory changes and therefore obliged to implement changes.

Significant amounts of additional private sector investment as a result of FIGG funding are therefore not evident, suggesting leverage is low. The choice of FIGG funding by some beneficiaries, due to the higher contribution levels making the structural fund more attractive than other available funds, supports this conclusion.

There is clearly a lack of additionality associated with this measure in many Member States. This issue is a concern for financial monitoring at a national level rather than for programme evaluation. It should be a priority for member states to ensure government expenditure is not simply substituted for structural funding, but additional to it.

**Recommendation 6** - *Member States should present a robust assessment of additionality to the Commission prior to making allocations under the various FIGG measures.*

## Programme management

The implementation of the FIGG programme area of assistance number 6 appears broadly satisfactory with mainly positive responses to the various aspects enquired about.

Timeliness of funding is the one area where the majority of programme beneficiaries provided negative responses. It was here that beneficiaries from most member states complained of significant delays. On a number of occasions respondents stated that this resulted in cash-flow problems and the need for bridging loans. The extent to which delays were caused was sometimes dependent on the type of project. For example, a new build would require far more approval from other authorities than modernisation of an existing building.

**Recommendation 7** – *Member State programme managers should inform potential beneficiaries to consider the cash flow implications of the timing of project implementation against the likelihood of delays. This should also be prompted by a question within the application process to beneficiaries.*

**Recommendation 8** - Member State programme managers should provide targeted assistance or facilitate third party assistance to small businesses that are less able to commit the time to, or less familiar with, the application process.

All Member States surveyed found that funding was broadly adequate – supply was well matched to demand and where supply exceeded demand, reallocations could be made to benefit other measures.

The funding is also considered to be appropriate in relation to the stated objectives whether they be the overall objective of 'improved competitiveness' or more specific Member State objectives. Nonetheless, take-up in the early parts of the programme was unnecessarily slow.

**Recommendation 9** – Preparatory work should be undertaken by programme managers prior to programme launch to avoid delays in programme start-up. This can include preparing how the programme will be promoted and managed (including earmarking the resources necessary to carry out those tasks )

## Overall

Overall the 1994-1999 FIGG programme of support to the processing sector has provided a necessary catalyst to accelerated change within the industry during a period of restructuring. The result has been to assist the more pro-active and forward looking companies in the sector to expand and consolidate production, taking up the slack left by less efficient and generally smaller companies that left the industry during this period.

While necessary to accelerate structural change in the sector, area of assistance number 6 of the 94-99 programme can be seen as having been a relatively blunt tool with a focus on increased capacity. This bluntness was evidenced in the use of very basic indicators relating to volume increases in capacity, which did not provide for a sufficiently accurate or detailed indication of project and programme performance. These are inadequate to assess whether the overall objective of improved competitiveness came about.

Further, little effort has been made to assess actual performance against planned performance so that programme monitoring is inappropriately focused on project / programme aspirations rather than outcomes. Once again, from both policy and prudent management perspectives these systems suggest that there is rather more blind faith in the programme processes than is perhaps appropriate or sensible.

In part this may be a reflection of the rather limited awareness and familiarity of policy-makers and programme managers with the fish processing sector. It is apparent that at the time of implementing the programme, the information relating to the processing sector was patchy at best. This is reflected in the limited depth of information presented in the last major Commission-funded profiling of the sector (the 1993 study) and the poor quality, consistency and availability of data collated to inform this current study. This situation requires urgent remedy.

**Recommendation 10** – In determining whether fish processing should remain a distinct sector associated with fisheries, appropriate arrangements for the regular collection of statistical information should be made i.e. as a recognised sub-sector of the agri-food processing sector or as a sub-sector of the fishing sector.

Despite the limited availability and quality of data and knowledge related to the fish processing sector, based on the survey results it appears that beneficiaries did improve competitiveness for the most part. This suggests it would have been difficult to propose more targeted measures specific to various needs, which vary according to member states.

**Recommendation 11** – *As more structural change is expected in the sector, support to fish processors should continue with the current arrangements allowing Member States to determine which aspects should be the focus of support.*

The process of consolidation is underway in almost every corner of the EU processing sector and is resulting in the formation / evolution of a smaller number of generally larger businesses, with a handful of very large businesses forming in most member states. The corollary of this process is that significant numbers of businesses are failing or being absorbed / bought-out by larger food companies.

But increasing scale is not the only model for the economic development of the sector. In each member state industry there is a section comprising smaller companies selling high quality products into niche markets - from fresh processed fish to a broad range of high value smoked and cured products. Such companies can still employ smart production and management systems, use automation wherever feasible, and above all focus on good product design, branding and marketing.

Given the high priority given to job creation in these often peripheral regions, where such small businesses can be encouraged to move towards more sustainable business models then this should be encouraged.

**Recommendation 12** – *in future programming, particular attention should be given to helping small businesses in remote areas. An industry segment that was not much in evidence in the take-up of 1994 – 1999 programme funding, needs assistance to develop, thus ensuring that at least some components of traditional industry, typically located in peripheral areas and dependent on local landings, survives into the future.*

## Annex 1: Country Report Executive Summaries

### Austria

Austria does not have any coastline or fishing fleet and there are no commercial inland fisheries, although recreational fishing is an important industry and tourist attraction. The fisheries industry is very small and collection and availability of dis-aggregated data on the industry, its production, turnover, products and employment is very limited. Austria does, however, have an inland freshwater aquaculture industry, supplying both food fish and fish for recreational fishing. Total aquaculture production of all species in 1997 amounted to 3,021 tonnes worth 12.3 million Euros.

Agriculture as a whole contributed only 2.2 per cent of GDP in 2000 and aquaculture and fisheries product production is only a fraction of this, making it's contribution to the Austrian economy very small.

The aquaculture industry employs around 800 people, only about 300 of which are full-time employees, while the processing industry employs only about 100.

Austria is a net importer of fisheries products, with 88 per cent of imports originating in the EU, mainly from Germany. Austria's main export customers are, however, outside of the EU – only 7 per cent of Austria's fisheries exports are to other EU Member States. Austria's main export customers are Eastern European countries, especially Croatia and Hungary.

Apparent consumption of fresh fish has remained relatively stable over the study period, while consumption of processed products has fallen.

The majority of FIG projects have funded improvements and modernisation of existing processing premises, without increasing production capacity. Projects have concentrated on improving hygiene, implementing environmental measures and introducing quality systems and innovative technology. Together, these types of project account for 77 per cent of all funded projects.

Future support should target additional modernisation and group initiatives such as marketing to encourage some economies of scale within this tradition sector.

### Belgium

Statistic	1994	1995	1996	1997	1998	1999	2000
Nat prod ('000tonnes)	25	28	37	40	45	29	n/a
Nat prod (% of GDP)	0.011	0.014	0.016	0.019	0.017	0.018	0.012
App consump. (1000tonnes)	95	107	101	109	109	118	102
Nat sales (M. Euro) a)	n/a	n/a	500	n/a	n/a	700	n/a
Trade balance (M. Euro)	-270	-317	-265	-281	-300	-350	-382
Sector investment (M. Euro)	9	7	8	n/a	7	8	n/a
Total employment (000's)	n/a	n/a	1.4	1.3	n/a	n/a	1.3
Number of companiesn/a	n/a	70	65	n/a	n/a	62	n/a
Average empl/company	n/a	n/a	20	19	n/a	n/a	21

a) Total sales of the Belgian fish processing sector was estimated at 500 million euro in 1996 (WES, 1999) and around 700 million euro in 1999 (LEI-estimation). No date is available for the other years on national sales, employment and number of companies.

Sources: LEI, HVB, and Eurostat

Statistics for 2001 were not available.

The Belgian fish-processing sector now consists of about 60 companies, employing an estimated 1,300 people. Value of production is around €200 million. It increased by about 50 to 75% in the years 1994-1999 but declined sharply in 2000. Volume of exports fluctuated around a level of 100.000 tonnes per year. Value of exports increased by 73% since 1994, mainly due to higher prices. Belgium has a negative trade balance of about 300 million Euros. Belgian fish processors are very dependent on imported fish as production of processed fish products covers only about 40% of apparent consumption. Local sources cover only 8% of the raw materials needed.

In Belgium, 64 projects in the processing industry were supported by FIG. Total financial assistance provided by FIG programme amounts to 7.6 million euros, corresponding to a total support of 10.1 million euros and total investments of 44 million euros.

About 75% of the projects involved new production units and/or expansion of existing units. Modernisation of existing processing units was the target of 65% of the projects. These percentages are due to the Belgian authorities categorising many projects as both measure 1 and 2 – new production units and modernisation of units. Measures 1 and 2, or combinations of 1 and 2 collect 96 per cent of total support. Measures 3 targeted for commercial premises, gathered only 4 per cent of funding and measure 4 nothing.

66 per cent of the projects refer to primary processors and 33 per cent to secondary processors, however spend per processor type is more evenly split showing secondary processor projects were larger. Classification of enterprises by size categories discloses a strong concentration on small companies 0-19 employees that represent altogether 69 percent of total.

Most projects (85%) were located in 'Vlaanderen' while 'Wallonië' accounted for 15%.

The following trends and factors are likely to affect the future developments of the sector:

- Further substitution of local landings by imported raw materials and farmed fish
- Concentration of processing companies in EU
- Increasing market share of EU multiple retail chains
- Focus on product innovation and consumer concern
- Co-operation in distribution chain
- 

Future targeted support to the sector would ensure beneficial development. Target areas should relate to market trends and be selected after consultation with the fish-processing sector.

## **Denmark**

In the period from 1994 until 2001 the Danish fish-processing industry has been going through some changes. This has been the result of general structural changes, economic conditions and the demand situation both in terms of consumers, customers and legislative requirements set out nationally and internationally.

Denmark is the largest producer of fish and shellfish products in the EU and also one of the world's biggest net exporters. The total value of the exports has increased by 26% from 1994-1999. An increase can particularly be noted in the export value of fresh and chilled fish where the export quantity remains unchanged. Export has increased by almost 50% during the same period indicating that the export value per tonne has decreased.

During the period the supply situation of raw materials has changed significantly. Despite the fact that Denmark has a significant catch and landing of fish from Danish and foreign vessels, the Danish fish-processing companies are very much dependent on the supply of raw materials from both landings and import. In the nineties the supply situation became more problematic. The production is within a wide range of product groups based on raw material primarily from whitefish, pelagic and demersal fish species and crustaceans. The production is in general characterised by low value adding. This has the effect that the Danish fish production is very sensitive to the supply of raw materials and price settings.

From 1993 to 1999 the domestic consumption of fish products per capita increased from 20 to 23 kg per year.

The export is primarily targeted to the European market and especially to countries within the EU. Germany, Italy, Spain and France are important markets and strong business relations have evolved over decades. Especially low value added products and semi-processed products that constitute a large part of the total exports have well established market positions. The only significant competitor on these markets is Norway, which is not a member of the European Union. Denmark has a surplus of more than 0.5 billion Euro per year on its trade balance for fish products. The position of Denmark in having a very large import of raw and semi processed materials that are processed and re-exported, mainly to the European Market, is not threatened by other countries within the EU.

The structure of the Danish fish-processing industry is reflecting the wide variety of fish processed. The fish-processing industry in general is characterised by a wide range of products and the individual companies to a large degree by niche products. The structure of the Danish fish-processing sector is also characterised by the dominance of small and medium sized companies, SMEs.

During the last 20 years the Danish processing industry has evolved significantly, and import has become an increasing part of the basis for production. This is especially the case regarding prawns from Greenland and Norway and aquaculture salmon from Norway.

The supply situation has in general major effects on the structure of the Danish fish-processing industry. Companies processing whitefish has in the nineties experienced extreme difficulties in gaining sufficient value of the production. The result has been that several of the whitefish processors have gone out of business and contributed to a change in structure of the processing industry in general.

The production of fresh or chilled products has in the period decreased by almost 40%. This has partly been caused by both the supply and market situation with increased scarcity and competition for raw materials. On the other hand the production of frozen fish products has increased significantly over the period. This has partly been based on the increased supply of frozen products (raw material) world-wide and the ability of this group of companies to gain competitive advantages in the world-market. The smoking and salting sector has been consolidating in a competitive market, where the increases of the market power in the retail market, with the demand for fewer suppliers, have caused the tendency to fewer, but larger companies. Both the filleting and the canning sub-sectors have declined. However, the filleting companies constitute the majority of that development. One reason for this is that the filleting companies have a very low value adding to the product in the production process. In addition the companies are in a very competitive environment.

Denmark is one of the countries operating within the fishmeal production sector. The main species that the production is based on is sandeel, sprat, pout and to some extent horse mackerel. The supply of raw materials originates from a large fishing fleet fishing for species aimed at fishmeal production. The development of the fishmeal sector has been characterised by major rationalisation and economies of scale. The result of this process is that the remaining processing plants are operating as very efficient plants with focus on the quality of the fishmeal and oil, cost efficient productions and development activities in order to make the best use of the raw materials. The

development has put the Danish fishmeal processors in a strong competitive position on the world market. The value of the total annual production is 369 M. Euro (1998), and it is a very important contributor to the income in the fish-processing industry in Denmark.

During the period there has been pressure on the Danish fish-processing companies concerning the costs of production. This has partly been triggered by the supply situation, the introduction of new competitors due to globalisation and free trade that has been evolving during the period. The pressure that the companies have been facing in relation to cost effective productions has for most of the companies been addressed by rationalisation and by introducing more efficient production methods. This has been done both by increasing the utilisation of the raw material, by establishing a more uniform production process and by introducing automation. This strategy has been pursued by all processing sub-sectors, but especially the secondary processors have benefited from that strategy.

All projects supported by the FIG programme in the Danish programme have been under objective 5 of the programme and have been within measure 1 or 2.

The largest groups of companies that have received funds are wholesalers of fish and fish canning and filleting. The companies that have received funds from the FIG programme correlate to some extent with company size and tend to be the more established ones. The companies in Northern Jutland are the main receivers of funds. The assessment of the contribution of the adequacy of applied measures indicated that the majority of companies in each sub-sector have to some degree improved their competitiveness, employment and economic performance in the period from 1994 to 1999. The FIG programme has contributed to this development. According to the fish-processing companies the main achievement was within process development and consequent improved competitiveness. The objectives of the programme and the focus of the Danish programme holder have to a large extent been on activities providing novel products, environment, quality and employment.

In the period from 1994-99 the programme has to some extent resulted in the development of new products. Across sub-sectors 50% of the companies have benefited from this innovation. A more significant effect of the programme has been the development of new production processes where more than 90% have used the programme to strengthen competitiveness through modernisation and optimising of processes. This together with improved logistics, new ways of organising the production and new knowledge are the main results for the companies having received funding. It is also on these indicators that improved competitiveness has been appreciable. Across the sub-sectors the programme has to a large extent been used to follow a strategy where an increase in competitiveness has been achieved by focusing on the core business in a supplier role and improving the ability to provide quality at low cost. For the fishprocessing sector as a whole, about 65% have experienced an increased competitiveness through the programme.

The programme has also to a wide extent contributed to creating jobs across the processing industry. At the same time the programme has also contributed to securing existing jobs. This is the result of the companies having maintained and gained competitiveness through new products, new processes and focus on optimising production.

The programme has contributed to economic performance of the companies across the sub-sectors. About 2 out of 3 companies have been able to increase both the turnover as well as the profit on basis of the support received. This indicates that the projects funded have to a large extent contributed to maintaining and increasing competitiveness, both within value adding and within optimising of the production through efficiency measures and automation.

The promotion and implementation of the programme involved relevant organisations and was supervised by a monitoring committee. In general small companies seem to have had more difficulties in applying under the programme than the medium and large sized companies. For smaller

companies it appears that the funding procedure for the programme concerning the information provided, the understanding of the application and the time used in the application process to a large extent was not felt to be appropriate. The medium or larger companies often have the in-house knowledge and resources to allocate to the application procedure. For this group the assistance from the national programme holder was found adequate and helpful in the process.

In general the programme has supported the fish-processing sector as a whole and each of the sub-sectors within primary and secondary production and fish trade. The strongest focus has been on improving the competitiveness by introducing new processing facilities. Almost nine out of ten companies have introduced a more effective production based on automation, improved handling and optimisation. The majority of the companies have in consequence experienced improvement in the competitiveness enabling them to sustain production, employment and economic performance.

At the same time the majority of the processing companies have gained new knowledge based on the programme, knowledge that has been used to improve products, ways of organising production and sustain positions on the markets both within and outside the EU. The programme has been adequate to support the business strategies of the companies and to guide them in a competitive direction. This means that the programme to a large extent has sustained the companies in their core business with a focus on the process technology and a role as supplier of low value added products and semi-processed products. Considering the competitive environment that the Danish fish-processing sector operates in this seems to be a reasonable focus for the programme.

The programme has not been supporting the fish-processing sector and the sub-sectors sufficiently in developing a more value adding production. Only half the fish-processing companies have experienced development based on the programme. The Danish processors have gained a strong position on low processed products. However, the conditions for competing are undergoing a change, both due to scarcity of fish resources and the entry of new processing countries. This situation is putting major pressure on the Danish fish processors' ability to compete on a variety of parameters, including value added productions. The programme has not focused sufficiently on that issue, and the result is that the programme has not provided as many new products and diversification as could have been achieved.

Another area where the programme has not been supporting the fish-processing sector and sub-sectors sufficiently is the environmental issues and the introduction of new health and hygiene routines. The Danish programme had introduction of environmental routines as one of the main priorities. However, the implementation of the programme shows that only about half the companies have used the programme for improving activities related to the environment. The mismatch between the programme and the needs has multiple explanations. In general the Danish companies are to a wide extent focusing on the environmental aspects, and they have to some extent already improved facilities. Further the Danish authorities have set up requirements that the companies have to comply with regardless of the funding programme. Finally focus for the Danish companies has changed more to focus on health routines.

Overall, the FIG programme for the period 1994-1999 has had a positive impact on the development of the processing industry. The production facilities have been rationalised and efficiency has been improved substantially. The programme has to a large extent been able to support the companies in their core business focusing on production facilities for semi-products and low value adding products. On these parameters the programme has contributed to sustaining and enhancing the competitiveness, employment and economic performance. On the other hand the programme has not focused sufficiently on the development of new products, new markets and introduction of environmental and health and hygiene routines.

The major problem the Danish fish-processing industry is facing in the years to come still include increased efficiency in production and there is a particular need to improve the economic control systems in the industry, that integrate the information obtained through the implemented quality and

environmental control systems.. In addition the processing industry will face increased difficulties to attract skilled labour.

The industry will continuously be challenged by increasing demands for reducing pollution and improving the conditions for the workforce. Implementation of cleaner technology will be required in the future as well as automation of several of the functions presently undertaken by workers in order to avoid wearing down of workers, and to adjust to a situation of scarcity of labour.

The future trends in relation to the fish processing industry together with the problems that the industry is faced with are challenging the industry. The support during the two periods from 1994 till 2006 has and will provide assistance to the industry both in relation to meeting these challenges and to sustaining competitiveness, employment and economic performance. The funding programme has contributed to the structural changes needed in order to be able to meet the future challenges. However, despite the funding programme the fish-processing industry still needs adjustment to present and future needs and requirements from customers and legislation and to the development in the fish resources. This process will last beyond the expiration of the ongoing funding period ending in 2006.

One scenario is a continuation of the FIG funding programme that has been applied during the period from 1994 to 1999 and has continued with the programme ending in 2006. This scenario will have some general effects for the Danish fish-processing sector. In general the focus will be maintained on the core business of processing activities. The Danish processing industry has a strong position within these activities and a continued support will enable the industry to further strengthen that position. The result of this is that the economic performance is maintained both for the primary and secondary processing companies, at least in the short term. In addition support will in the short term contribute to maintaining the present level of employment across the sector. Another effect of full continuation of the support is that the sector and sub-sectors will be maintained in their present structure of operation. The result of this is a sector with only minor structural development both horizontally and vertically. Through a full support programme for the entire processing sector the economic performance and thereby the employment across the sub-sectors can be sustained in the short-term perspective. On the other hand it may have a tendency to lock the sector in a position with only minor structural changes. The effect of this could be a sector without the necessary dynamic to develop and strengthen the sector performance in the medium and long-term.

Another scenario is a winding up of the FIG funding programme that has been applied during the period from 1994 to 1999 and has continued with the programme ending in 2006. In general the strong focus will be maintained on the present core business in the short term. However, without the possibility of achieving support to the general core business activities the sector will not to the same extent as with support be maintained in the same business. In this scenario several businesses will not be able to stay competitive due to present poor economic performance and lack of ability to invest further in improved competitiveness. The sector in general will experience major structural changes with the introduction of this scenario. Considerable decline in the number of businesses and the employment must be expected. This is especially the case for a large number of the small sized companies that will be affected and not be able to stay in business. This will most likely be experienced both within the primary and the secondary production. However, companies with some value adding and operating with relatively scarce resources will suffer most. One effect of this will most likely be that the financial assets, manpower and knowledge will be concentrated in larger units. Concerning the medium sized companies and the small companies operating with highly specialised productions and value added products the scenario will have some effect on the ability to proceed with the research and development activities that is the basis for their competitiveness, at least in the short-term perspective. The investigations of the effect of the funding programme for these companies revealed that some major development activities would not have been initiated without the support. On the other hand a considerable proportion of the normal development activities would have been initiated independent of the possibility for support.

The benefit of winding up the support is that the structural changes are accelerated towards a sector that is operating purely on basis of the market needs, and at the same time is operating with units having the resources to comply with the future challenges. On the other hand the result will also be surplus of manpower and loss of diversity within the sector. The majority of the fish processing companies are located in areas very dependent on the fish related activities, and winding up all support could be expected to have major socio-economic consequences for those regions.

A third scenario is based on a continuation, but targeted FIG for the Danish processing industry within selected areas. The targeted support should facilitate improvement in efficiency and competitiveness; implementation of cleaner production technology, value-adding production or high-price products. Examples of such areas which could be targeted are automation of work functions which are repetitive and wear down the work force, focus on implementation of cleaner technology and environmental management, development of high quality products, which in addition are healthy and environmentally secure, introducing labelling to document and ensure product standards, improve traceability and documentation through the harvesting, processing and distribution chain, improve the economic control systems in the industry and to develop information systems that can integrate information from quality and environmental control systems as well as economic control systems.

The benefits of applying targeted support is to sustain the profitability of a majority of the fish-processing sector across the sub-sectors in the short and medium term perspective. At the same time it will support structural changes and ensure dynamic development of the sector, which is crucial in order to maintain competitiveness in the long-term perspective.

**Table a. general indicators for the Danish fish processing industry**

	<b>Statistic</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
1	National production	492287	456839	491439	458219	441539	454679	487639	
2	National production (% of GDP)	0,15	0,21	0,2	0,2	0,17			
3	Apparent consumption ('000 tonnes)	175.8	73.8	90.1	97.8	120.5	109.2	126.1	
4	National sales (M.Euro)	555,1	453,6	1008,7	417,5	456,7	640,5	466,3	****
5	Trade balance (M.Euro)	634.5	649.6	558.3	559.6	680.4	724.6	643.8	
6	Sector investment (M. Euro)**	na	31,2	38,0	na	-22,3	56,7		
7	Total employment (000's)	8.5*	10.5	11.8	9.9	9.7	10.1		
8	Number of companies	376*	639	567	578	544	521		
9	Average employment/company	22*	16.4	20.8	17.1	17.8	19.3		
10	Landings ('000 tonnes)	2229	2360	1934	2137	1906	1813	1928	1903

Source Danish Statistical Service database <http://www.dst.dk>

\*based on kob database, excluding aquaculture, including primary and secondary fish processing includes (DBB93 #) 15.20.10 to 15.2030 and 51.17.10 + 51.38.10

\*\*Net sector investment

## **Finland**

### **1. Sector structure and performance**

The Finnish processing industry is characterized by small production units and a wide range of product groups based on raw material from primarily pelagic, whitefish and salmon. The production is characterised by low value adding to the raw material. This has the effect that Finnish fish production is very sensitive to the supply of raw material and price settings.

The value and volume of production has decreased by 15% in the period 1994-2000. The decrease has been on several product categories, but especially in frozen fish (15.20.12).

Finland does not have the structure to support a large domestic supply of raw material. Therefore the Finnish imports of fish and fish products account for an important part of the raw material requirements of processing businesses. The value of the imports has been relatively stable in the range of 55 million Euro during the period 1995-2000. However, the imports of preserved fish has increased. The volume of fish imports has increased by 36% during the period to a total of 36.228 tonnes in 1999. This covers all the product groups except for aquatic invertebrates and fats and oil. Norway remains the main supplier of imported fish followed by Sweden.

Finnish exports are concentrated on a few countries: Russia, Japan, Sweden and Estonia. The main export country in 1995 was Japan followed by Russia and Sweden. In 1995 the two first mentioned countries account for nearly 85% of all export while Sweden accounts for about 5%. During the period till 2000 the export pattern has changed. Japan and Russia are still the main export markets but have reduced their share to only 65% of the total export. Especially the Russian market has experienced a decrease. The export to Sweden and Estonia has increased significantly during the period and in 2000 these two countries account for nearly 25% of the export. Germany has become a new export market for Finnish fish products.

In 1999 the volume and value of the exports is less than 25% of the imports. The main export article is the relatively low priced herring. The size of the fish processing companies in Finland is a barrier to exports; the many small companies do not have competencies to go out on the export markets and are therefore focusing on the domestic market.

After the entry into the EU in 1995 the market situation for the Finnish fish processing sector has changed. The opening of a new large intra community market has provided the processing industry with the opportunity of broadening the market focus. However, the Finnish processing sector is going through a transition period where these opportunities are far from fully exploited.

Intra EU Imports to Finland have increased by more than 50% since Finland became a member of the European Union, from less than 20 million Euro in 1995 to more than 30 million Euro in 2000. At the same time the export has also been increasing but on a very low level compared to the imports.

Due to the low export value of the herring products and imports of higher processed products Finland is having a significant trade deficit on fish products. The trade deficit has increased since Finland became a EU member country in 1995 and culminated in 1998 at 53.5 million Euro. The deficit has come down to 44 million Euro in 2000.

In Finland around 280 companies are processing fish for human consumption. Most of them are relatively small and involved in both primary and secondary type industry. The majority of companies are producing from 1 tonne to 50 tonnes per year. Only 7 companies are processing more than 1,000 tonnes per year. In 1999 the 9 largest producers processed more than 50% of the national total.

Almost half of the companies are situated in the Western Finland region. Companies in this region are processing 70% of the national production.

The number of wholesale companies in Finland is around 100 and fishmongers around 200. The structure of the wholesale market is very decentralized and most of the companies are small and independent.

The major species for the Finnish processing industry are herring, trout, sprat, whitefish, cod and salmon. These species origin both from lakes, marine waters and from imports. The main species produced is herring with almost 20,000 tonnes per year followed by rainbow trout with about 10,000 tonnes. The other species groups are only of minor significance.

Before entering the EU the Finnish fish processing companies were operating in an environment of low competition and a stable market situation. After the entry this situation has changed and the

processing industry has been facing increased competition, both on the domestic market, on the previous main markets and on the new intra community markets. The Finnish processing industry is still in the process of transition to become a competitive industry that can meet the standards for production and marketing that characterize the new competitive environment.

The transition towards a situation where competitiveness, employment and economic performance can be sustained requires major structural changes. This includes both production processes, products, market focus and the fulfilment of legislative requirements related to hygiene and emissions. One major problem facing the Finnish processing sector is the lack of knowledge to deploy in the structural changes. This includes knowledge related to management of the transition and the companies in the new competitive environment. Skilled man power to address the challenges in relation to health, environment, value adding productions and products, economic and market development is also in short supply.

The FIG programme has supported the Finnish fish processing industry in the development of the sector during the period from entry into the EU until 1999. The programme has supported projects within a wide range of activities with the aim of improving sector performance, competitiveness, employment and economic performance. On basis of the guidelines for the programme set out by the Council decision, the programme has been implemented and executed by the Finnish authorities.

## **2. FIG support to the sector 1995-1999**

The FIG programme 1995-1999 has supported the fish processing industry in the structural development with the aim of improving sub-sector competitiveness, employment and economic performance. On basis of the guidelines for the programme set out by the Council decision, the programme has been implemented and executed by the Finnish authorities.

The Finnish FIG programme come under objective 1 (regions in particular need to catch up economically) and 5 (modernisation of fisheries structure), and projects supported come under measures 1 through 4. Measure 1 refers to new production units, measure 2 to modernisation of existing production units without increase in capacity, measure 3 to the modernization of commercial premises, while measure 4 refers to construction of new premises.

In total 637 projects at 441 different companies (about 90 % of the total number) have been funded during the programme period. 162 of the projects have been funded under objective 1 and of these the majority of projects has been within measure 2 followed by measure 1. The majority of projects (475 in total) have been funded under objective 5. Also here the majority of projects comes under measure 2 and 1.

The inventory of FIG projects shows that the total costs of the supported projects are 3.3 million Euro for objective 1 projects and close to 26 million for objective 5 projects. The funding support vary from 45% to 47% of the total costs for objective 1 projects and from 37% to 39% for objective 5 projects. The funds received for each project have been relatively low compared to other countries with an average of only 45,000 Euro per project.

## **3. Outlook for future development**

The Finnish fish processing sector need to further develop the production facilities in order to gain competitiveness in the future. Therefore focus will be on the ability to utilise, rationalise and modernise the production capacity further.

The environment and working conditions will be of importance as well. The Finnish processing plants have been able to meet the requirements set out by the EU. However, the emission of wastewater, smell and noise will have to be addressed further due to still increasing legislative and customer requirements. Concerning the working environment there is a need for the development of new

technologies and new working routines that can reduce the wearing-down of workers and make jobs in the sub-sector more attractive.

The low value adding and the limited variety of species processed is making the industry very sensitive towards changes in the supply and demand situation. Therefore focus on investment in product development including new species, increased added value and improvement of the production facilities is needed.

The structure of the Finnish processing industry with the many small and not very differentiated companies with little horizontal or vertical integration will be a problem with the opening markets and the increased competition for raw materials. Sub-sector restructuring in terms of increased integration and diversification will be a major challenge in the future.

Three scenarios each of them representing different FIG approaches to the future evolution of the Finnish fish processing sector have been established. Each of them will have different implication for the sector and the ability of the fish processing companies to sustain and develop their business.

The continuation of a full support FIG programme beyond 2006 (scenario 1) will contribute to sustaining sector performance in the short and medium term perspective and securing employment in dependent regions. The winding up of all FIG support to the processing sector (scenario 2) will have major impact on the sector and will result in major structural changes in the medium and long term such as decline both in number of companies and employment. In that scenario the processing industry will face severe problems in being able to compete in the medium and long term perspective. The applying of targeted support to the key areas of the processing sector (scenario 3) will contribute to sustain competitiveness. At the same time the development and dynamics of the sector is maintained resulting in sustained employment and a sector of economically sound companies.

Despite that the sector has gained some structural and development benefits on the core business as a result of the programme period from 1995 until 1999 and further with the programme period expiring in 2006 there are still many main issues to be addressed for the Finnish fish processing sector in order to maintain a competitive sector in the medium and long term perspective. There are several challenges that arise both from market conditions, legislation and from supply of raw material. Many of these challenges are putting the processing sector under severe pressure if operating on pure market condition. Basically because some of the challenges, like legislative requirements concerning health and environment, have a major effect on the companies' ability to maintain economic performance, introducing scenario 2 with a winding up of all support would make these challenges oversized compared to the case with introduction of a full or targeted support programme.

**Table a. general indicators for the Finnish fish processing industry**

	Statistic	1994	1995	1996	1997	1998	1999	2000
1	National production (tonnes)	26,299	6,866	12,465	13,371	13,257	13,085	10,521
2	National production (% of GDP)	0,2	0,2	0,2	0,2	0,2	0,2	n.a.
3	Apparent consumption (tonnes)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	National sales (M.Euro)	48.2	n.a.	n.a.	n.a.	n.a.	n.a.	41.7
5	Trade balance (M.Euro)	n.a.	-30.5	-26.2	-30.3	-53.5	-35.8	-44.0
6	Sector investment (M. Euro)	n.a.	3.1	2.7	5.4	4.3	n.a.	n.a.
7	Total employment (processing)	n.a.	1,100	1,107	1,066	1,326	1,250	1,200
8	Number of companies	n.a.	275	270	260	255	270	280
9	Average employment/company	n.a.	4	4,1	4,1	5,2	4.6	4.3

## France

France, like its European partners, suffers from a large deficit in fisheries products as the national production cannot supply the national demand. This situation has induced a restructuring of the processing sector, which has had to adapt to new imported raw materials. Such modification has increased due to the growth of fish consumption in France.

In 2000, the fish processing sector was composed of about 398 companies; 60% of them with less than 20 employees, according to the survey realised by AGRESTE and INSEE.

The estimated number of companies of the sector is around :

- 400 fish wholesalers
- 130 processing companies
- Total employment for the activity is around 14,000 with 90% of employees are working for 130 large companies.
- Total turnover for the sector is over €2.7 billion in 2000

The table below summarises Eurostat Prodcom data for processed fish products. Lines that are not filled correspond to data that do not appear within Prodcom database. Though, these are available through national French statistics. These are not indicated in this chart, as an important discrepancy can be observed between the two data sources.

	Statistic	1994	1995	1996	1997	1998	1999	2000
1	National production (tonnes)	nd	406,786	603,835	770,161	552,200	611,172	462,045
2	National production (% of GDP)	nd	0.12	0.15	0.16	0.15	0.17	0.10
3	Apparent consumption for processed products (tonnes)	nd	498,290	924,476	1,011,351	684,777	677,710	nd
4	National sales (M €)	2,424	1,960	1,890	2,192	2,361	2,492	2,730
5	Trade balance (M €)	-1,263	-1,297	-1,305	-1,378	-1,760	-1,482	nd
6	Sector investment (M €)	81	67	49	73	66	72	72
7	Total employment	13,746	10,927	10,853	11,318	11,264	11,815	12,730
8	Number of large companies	144	135	126	133	123	127	130
9	Average employment	95	81	86	85	92	93	98

SOURCES1.Eurostat2.Eurostat/OFIMER3.OFIMER4.AGRESTE/INSEE

For the sampled companies it can be observed that economic situation of fish wholesalers, especially the small ones, is less favourable than for processors (*secondary processing*).

From the global data provided by DPMA, it seems that an important number of projects were implemented in the last two years of the FIG program (1998, 1999), in relation with the regional delegation given to DRAM.

For the two sub-sectors (*“marketing” and “processing”*), a very good coverage has been achieved, since 383 projects were funded for €19.77M (*fish wholesalers and auctions*) for a national estimated number of 400 fish wholesalers; and 99 were funded on the *“processing”* sub-measure (*for a national estimated number of 130 processing companies*) but for a financial amount of €31.3M, showing an evidence of much more important individually projects in this sub-measure than in the *“marketing”* sub-measure.

With the exception of some big processing companies that used FIG funding for processing capacity projects, most of projects were linked with hygiene compliance legislation and result in a global improvement of competitiveness of companies on a national level. Most of companies have underlined that this improvement could not have been achieved (*or later, or smaller*) without FIG funding.

The major trends that have been identified for the future are:

- A growing market for many years
- A reduction of fish landings
- A need for a better valorisation of fish by-products
- An evolution towards quality improvements and controls
- An increase of quality labelling of fish products
- The increasing power of multiples chain stores, with consequences for reduced margins, and a need to increase size of companies (economies of scale), etc
- Consumers demand more convenient food products, even though fresh fish consumption is still very important in France.
- Labour costs is an important problem
- Even if not a priority now, environmental concerns are a growing issue in France

Assessing the impact of continued Community support with three different scenarios:

- Continued support (*i.e. no change*)
- Removing structural Community financial support
- Targeted support to specific types of projects (*for example, projects corresponding to a specificity of the fishery products sector, or evolutions encouraged by government*)

In our opinion the best scenario for business, and SMEs in particular (*an essential component of the French sector*) would be:

scenario 3 : targeted support, BUT with targeted assistance to SMEs in developing strategies to tackle reduced raw material supplies, added value to by products and better environmental performance. Better assessment of objectives and setting targets should also be encouraged.

## **Germany**

Despite the small size of the German fishing fleet, there is a relatively important fish processing industry mainly consisting of large secondary processors dependent upon imported raw material. The reduction of the distant-water fleet and decrease of fish production forced processors to turn to others foreign sources.

Norway is the most important trading partner, followed by Denmark. The great dependence of the processing industry on imports gave rise to concerns that there could be insufficient raw material supply for further processing. For instance in 2000, Germany had only supplied approximately 29 % of its fish consumption.

The German fish industry and wholesalers have successfully maintained increased market prices for certain fish products in response to higher world market prices for raw fish. Additionally, an increased demand for fish convenience products has boosted total turnover.

Production from the fish processing industry had reached a level of 561,000 tonnes in 2000.

Information on processing companies varies between sources. According to different sources, there could have been, between 1996-1998, between 97 and 111 processing companies employing more than 10 employees and 60 companies employing less than 10, so it is possible to summarise this evaluation with about **160** fish processing industries employing approximately 11,000 people) of which ::

- **100** companies employ more than 10 employees

- **60** companies employ less than 10 employees

Almost 50 % of all the employees of the German fish processing industry were concentrated along a 60 km stretch of coastline between Bremerhaven and Cuxhaven).

In 2001, the turnover of the fish processing industry, exceeded 2 billions Euro for the first time due to the increasing market prices. The fish processing sector contributes around 0.07 % to national GDP each year.

**Table a. general indicators for the German fish processing industry**

	Statistic	1994	1995	1996	1997	1998	1999	2000
1	National production (000 tonnes)	No data	497	571	552	475	478	561
2	National production (% of GDP)	No data	0.071	0.069	0.063	0.064	0.064	0.064
3	Apparent consumption (tonnes)	387626	954106	1027200	1047672	831508	763293	997974
4	NATIONAL SALES (M.EURO)	1,720	1,808	1,842	1,843	1,923	1,960	1,838
5	Trade balance (M.Euro)	-988	-995.5	-999.8	-1,013.6	-1,139	-1,071.9	-1,203.5
6	SECTOR INVESTMENT (M. EURO)							
7	Total employment (000's)	11,5	12,1	11,8	11,3	10,7	10,4	10,6
8a.	NUMBER OF COMPANIES		111	110	103	97	104	99
8b.	Number of companies	(*)	359	(*)	(*)	317	334	314
9	Average employment/company		109	107	110	110	100	107

7. Source: "Gemeinschaftsprogramm "fischerei" Deutschland auserlab ziel 1" Table 5: "Zahl der Beschäftigten in der deutschen Fishwirtschaft Employment Data in the German fish economy

8a. companies employing more than 10 people

8b. according to PRODCOM

(\*) data non reliable

Of the 517 projects approved, the number finally completed and funded under area of assistance 6 amounted to **491** with a total investment value of €240.7 million with FIGG support of €52.7 million. Just over 410 were jointly funded with national aid, of which 73 received more than €100,000 of FIGG funds over the 6-year period (1994-1999). With more than 500 projects the majority and a wide range of companies in the German industry were reached and a number of companies received funding for several projects.

Secondary processing dominates the German sector and also the projects receiving funding. Few primary processors remain in Germany and so accounted for only a small proportion of projects. With the consolidation that has occurred in the German sector, defining the type of processor becomes more difficult as companies are likely to carry out a variety processing activities. It is also evident that various other companies, whose primary activity may not be processing, have been assisted under this area of assistance.

In Germany 40 Interviews were undertaken to assist in evaluation of programme impact and management. The ratio of the sampling was proportional to the total number of projects for each measure.

The evaluation period 1994 to 2001 brought for the German fish processing sector:

- Investments resulting in changes in factory layout and processing methods
- Besides hygiene and quality management, value-adding techniques were implemented
- Substantial increases in exports to EU countries with less relevant losses in exports to 3<sup>rd</sup> countries
- Turnover increase and partly rising profits
- Increase in hourly and employee productivity

It is very likely that these desired changes were connected to the investments supported by FIG. Some of these investments would undoubtedly have happened without FIG support. Although 73% of the producers and 45% of traders would have invested without the FIG support, nearly all of them claim investments would have been lower and implementation later.

Considering all available information, the probability that FIG support has led to a higher productivity in the evaluated sector must be stated relatively high.

The implementation of the program can be evaluated as adequate for and in Germany. Program communication was good. Applications were understandable or, where needed, sufficient assistance was provided.

The measures were slightly oversupplied (take-up being between 98% and 90% of the available funds), but the high degree of companies reaching objectives suggests applications under the four measures were realistic and appropriate.

Anticipated developments include:

- More competition for raw material – higher prices
- Increased & more complex legislative pressures (above EU standards in some areas)
- More difficulty in credit (Basel 2 banking agreement)
- Greater quality demanded from customers
- Increase in consumer demand for fish
- Employment in processing expected to reduce further before stabilising

The main response by companies in the processing sector is diversification of the business in some way to avoid competing head to head with cheaper third country imports.

Overall future support for the German Industry should be more targeted than the existing programme focus on transitional support for primary processors and for secondary processors support for technology development /adaptation, quality and logistics than on quantity.

## **Greece**

The seafood processing sector in Greece consists of small or medium capacity units. These enterprises are mainly involved in the production of frozen and salted seafood and secondarily in the production of canned and smoked fish products.

The total production of processed seafood for the year 2001 amounted to 45,539 tons with a total value of €126.12 million. This is an increase of 37% in value terms since 1994. Main gains have been in frozen fish production as a result of aquaculture production (mainly mussels, bass and bream) enhancing raw material supplies.

Along with production, the imports of processed seafood have also increased significantly over the last few years and, in the year 2000, 78,522 tons were imported, whose value amounted €220.50 million. The main suppliers are the countries of the European Union, as well as Norway and Iceland. During the same period, processed seafood exports corresponded to 32,676 tons and €50.41 million. The principal destinations of the Greek exports are the EU countries.

Apparent consumption increased significantly between 1994-2000. The national production is able to cover only half of the apparent consumption (49.98% for the year 2000). At the same time the commercial deficit increased significantly, and in 2000 it rose to €170 million.

From 1994 to 1998, several important investment plans were carried out in the Seafood Processing Sector, aiming primarily at the modernization of existing units and the conformation of units to the legal requirements in food safety and environmental protection. In addition, various investment plans for the foundation of new units were subsidized by public and private funds, with emphasis on the packing plants for fresh aquaculture products as well as on the increased capacity of existing plants. In this period, the total investment capital in the processing sector reached €70.74 million.

The methodology that is applied in Greece for the recording and the classification of the enterprises of the sector and their employees is very poor, which results in a serious lack of important data on an annual basis. For the year 2000 approximately 269 enterprises operated and offered employment to 3,100 people. This results in an average number of 12 employees per enterprise. The remarkable increase in the number of companies in the sector during the last 8 years is due to the foundation of many fresh seafood packaging units for the needs of the aquaculture industry (seabass and seabream). Operational Program also subsidized the establishment of the majority of these plants for Fisheries (EPAL).

In 2002 around 272 enterprises are involved in the Fish Processing industry, the majority of which are still considered of small or medium size. 45% of these companies are involved with in primary processing and the remaining 55% in secondary processing. This classification, in Greek terms, is usually defined as trading companies (45% of total), production plants for frozen seafood (29% of total) and processing plants (26%).

**Table GR.1 : Major Indicators of the Greek Fish Processing Industry**

Indicator	Units	1994	1995	1996	1997	1998	1999	2000	2001
national production <sup>1</sup>	tonnes	30,508	27,126	27,135	33,773	31,492	39,964	54,037	45,539
national production <sup>1</sup>	m Euro	80.36	89.71	76.29	110.78	103.28	114.10	101.49	126.12
imports <sup>2</sup>	tonnes	55,632	49,773.3	63,367.4	67,122.4	63,328.2	70,900.3	78,522.1	N/A
exports <sup>2</sup>	tonnes	17,330.7	21,012.0	24,780.0	33,506.9	31,703.3	35,442.1	32,676.5	N/A
imports <sup>2</sup>	m euro	104.75	140.16	179.33	204.48	200.19	204.95	220.50	N/A
exports <sup>2</sup>	m euro	44,74	55,73	64,36	66,37	61,27	66,19	50,41	N/A
apparent consumption	tonnes	68,933	56,597	65,440	67,200	62,877	73,930	108,123	N/A
prod/consumption	%	44.26%	47.93%	41.47%	50.26%	50.09%	54.06%	49.98%	N/A
trade balance	m Euro	-60.01	-84.43	-114.97	-138.11	-138.92	-138.77	-170.09	N/A
investment <sup>3</sup>	m euro	-	-	0.30	13.69	13.79	10.98	16.31	15.67
investment/production	%	-	-						N/A
production as % of GDP <sup>3</sup>	%	N/A	0.11	0.09	0.11	0.10	0.10	0.08	0.10
total employment <sup>4</sup>	#	N/A	N/A	N/A	N/A	2,900	N/A	3,100	N/A
Number of establishments <sup>5</sup>	#	N/A	N/A	N/A	N/A	205	N/A	269	N/A
average employees/est.	#	N/A	N/A	N/A	N/A	14	N/A	12	N/A
production/employment	m euro /employees	N/A	N/A	N/A	N/A	0.036	N/A	0.033	N/A

<sup>1</sup> Source: Ministry of Agriculture / General Directorate of Fisheries / DFE&IFP

<sup>2</sup> Source: Eurostat

<sup>3</sup> Source: Coordination consultant of the Corporate Program "Fishery 1994-1999"

<sup>4</sup> Source: Study of Greek Industry of Processed Fisheries and Aquaculture Products / Ministry of Agriculture - General Directorate of Fisheries - DFE&IFP

<sup>5</sup> Source: Ministry of Agriculture / Veterinary Service

## Italy

In the last few years, important changes affected the national fish and seafood Industrial processing sector. Several factors have brought about a production decrease, but also a certain reduction to competitiveness and productivity. In particular, the deterioration of the commercial parameters of trade provoked the increase of the raw material re-supplying costs. As a result, the unit cost of products coming from less developed countries is lower, hence more competitive, than that of similar products from the national industry.

Moreover, the dependence on external factors for raw material availability, has increased very recently, as well as the only internally produced raw material (baby clams) utilised by the industry.

A continuous process of re-adjustment and adaptation to external factors is under way in the national tuna processing industry (third largest in the world). Some phases of the industrial process are now done in factories located abroad, whilst national plants are utilised only for the more delicate final phases of the process. Such changes in the production system show that, on one hand, the sector is flexible and resilient but, on the other, they highlight weaknesses, which threaten the sector.

The absence of a national tuna fishing fleet makes the sector dependent upon imported foreign production. This represents to date, one of the most serious potential constraints to the development to the national tuna fish cannery industry .

In the following table is an indicators summary is given using available official and un-official data.

	Statistic	1994	1995	1996	1997	1998	1999	2000	2001 <sup>8</sup>
1	National production (tonnes) <sup>9</sup>	320,781	340,212	625,783	857,742	979,642	707,688	630,009	666,884
2	National production (% of GDP) <sup>10</sup>	n.a.	0,06	0,07	0,08	0,1	0,09	0,07	n.a.
3	Apparent consumption (tonnes)	494,881	534,298	835,123	1,073.112	1,197.548	925,885	838,839	n.a.
4	National sales (M.Euro)	628	595	890	1,007	1,403	1,286	984	n.a.
5	Trade balance (M.Euro)	-675,44	-671,66	-723,05	-805,22	-877,54	-905,19	-884,02	n.a.
6	Sector investment (M. Euro)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	Total employment <sup>11</sup>	n.a.	7,800	6,478	6,420	n.a.	n.a.	n.a.	n.a.
8	Number of companies	n.a.	n.a.	393 <sup>12</sup>	393 <sup>13</sup>	n.a.	n.a.	n.a.	n.a.
9	Average employment/company	n.a.	n.a.	16.5	16.3	n.a.	n.a.	n.a.	n.a.

A total investment of just over €165million was achieved under the FIGG programme area of assistance 6 through 163 projects, using €25.2 million FIGG funding.

<sup>8</sup> ISMEA estimate

<sup>9</sup> Prodcorn category data

<sup>10</sup> GDP figures have been calculated dividing the national GDP value (Banca d'Italia -relazione annuale sul 2001, maggio 2002 su dati ISTAT: Conti nazionali) by sector production per cent (Prodcorn figures)

<sup>11</sup> "Adozione del sesto piano triennale della pesca e dell'acquacoltura 2000 - 2002" Published on Official Journal (Gazzetta Ufficiale) n. 172 - 25 July 2000

<sup>12</sup> ISTAT dati del censimento intermedio industria ,1996

<sup>13</sup> ISTAT dati del censimento intermedio industria ,1996

The 1994-1999 programme and the successive (current) 2000-2006 programme have proved to be essential for the vivacity and transformation of the fishery processing sector. In Italy the contraction of the sector has been going on for years and this has partially stopped, recently, with the introduction of new technologies and the awareness that the Italian product can survive basing itself only on quality and on its uniqueness as "Italian Food".

The funding programme has increased the reactivity of the sector; stimulating the SMEs to invest in a series of innovative initiatives, which span from new technologies to the creation of new products, from the application of sanitary regulation and quality to improvement of the organization of production etc. The negative trend in employment has not only stopped but has turned around and become positive with the employment of new personnel. The large enterprises have invested in new products that would maybe have been transferred abroad, creating new jobs and new induced ancillary activities. This is all very positive but must not ignore the fact that the process of formalising and industrialising the sector is only just beginning. Many enterprises have started the process of consolidation but the sector is still fragile.

The necessary level of integration of the supply chain is still lacking. The supply and commercialisation infrastructures are still incomplete. Productive poles are lacking which would give the industry the possibility to make use of common services (currently present only in the Tuna industry). If public funding were to be stopped (FIFG or other) the promising progress made so far would disappear in the short term and it would in the medium/long term bring about the restructuring and probably the definite elimination of the entire sector, leaving perhaps some very local and artisanal businesses, with serious negative consequences for employment especially in the regions which are highly dependant on fishery.

## **Ireland**

The Irish fish processing sector has come on in leaps and bounds over the last thirty years, starting from an almost cottage scale industry focused on supplying the domestic market to a position where it now exports high quality products to markets around the globe. Key elements in its exports of processed product are smoked salmon, bulk processed fresh and frozen small pelagic products (whole, fillets, and roe), cooked vacpac mussels, cleaned and graded live mussels, processed crab, and a wide array of largely primary processed whitefish and farmed salmon.

But the industry is still evolving as more entrepreneurs seek to add value to the high quality of seafood that is landed to Irish ports, or husbanded and farmed around its coastline. In terms of the relative scale and value of processed output, in both volume and value terms, the small pelagic processing industry dominates. This is followed in importance by the processed salmon and mussel industries (almost totally dependent on farmed and husbanded product), with whitefish and crustacea (comprising nephrops and crab) taking up the rear.

The number of industrial units in the sector has changed little over the period 1994 – 1999, with the best estimate placing the scale of the industry at 136 units operating in 1999. The majority of firms are Irish owned and many are very small (45% employing less than 20 persons). Most processing companies are located in Counties Cork, Dublin and Donegal, while the industry as a whole is spread among 13 of the 26 constituent counties of the Republic of Ireland.

Employment across the sector has increased over the period, with an additional 429 persons employed in the sector in 1999 when compared to 1994 (a 19 per cent increase) according to Central Statistics Office (CSO) figures. But a more realistic figure derived from BIM survey suggests employment of 4,530 in 1999, compared to the 2,645 suggested by the CSO time series.

Gross output of the seafood production sector over the period 1994 - 2000 has increased in terms of value by 19 per cent, while output by volume (tonnes) produced has increased by only 2 per cent.

The Irish seafood processing sector is heavily dependent on export markets and the sector continues to make a significant positive net contribution to the nation's balance of payments of the order of 207M euro in 2000. This has grown from 180M euro in 1994, representing an increase of 15.4 per cent over the period.

Table a provides general indicators concerning the evolution of the sector.

### **The impact of the 1994-2000 FIFG programme of assistance**

The 1994-2000 FIFG processing measure is generally considered to have provided useful support to the upgrading and modernisation of the Irish processing and fish handling sector, but that a substantially greater scale of change will be required to bring the industry as a whole up to international best practice. As a generality, profitability is labouring under current economic conditions, and the limited financial resources available within the sector do constrain the scale and rate at which investment in change will occur.

### **Scenario 1 – Continuation of full support programme**

But these general comments apply to some sub-sectors of the industry more than others. The pelagic processing sector is a significant seasonal employer in the North West, and the short duration Celtic herring fishery in the south provides a valuable seasonal fillip to local whitefish and salmon processors. But the highly seasonal nature of supplies puts a huge burden on balancing the substantial capital requirements of plant and equipment against the costs of extended seasonal downtime. This is all the more difficult given that most seafood processing in Ireland is located in the extreme edges of what is already recognised as the peripheral areas of the Irish economy. Achieving a realistic balance between the pursuit of profits and the socio-economic dimensions of retaining a viable workforce is difficult. Simple structural support may not be sufficient to balance this complex equation. Nonetheless, continued support to capital investment would provide necessary leverage to the overall modernisation, upgrading and restructuring of this sub-sector to meet current and future requirements.

**Table a. General indicators for the Irish fish processing industry 1994-2000**

	<b>Statistic</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
1	National production (tonnes)	317,536	409,623	363,957	325,384	360,143	323,080	323,729
2	National production (% of GDP)	0.11	0.15	0.14	0.12	0.11	0.07	0.08
3	Apparent consumption (tonnes)	136,885	179,415	127,807	136,463	163,962	171,899	182,792
4	National sales (M.Euro)	No data	264	284	301	304	315	No data
5	Trade balance (M.Euro)	180	203	235	198	203	192	208
6	Sector investment (M. Euro)	11.6	13.5	14.8	10.2	14.4	22.3	No data
7	Total employment (000's)	2.2	2.7	2.8	2.8	2.8	2.6	2.7
8	Number of companies	83	90	89	92	83	85	No data
9	Average employment/company	27	30	31	30	33	31	No data

1. Source: Eurostat Prodcorn data, Central Statistics Office data

2. National production as % of GDP refers to the contribution that the fish processing sector (as defined as such by the Central Statistics Office) makes towards total GDP for each year.

3. Apparent consumption has been calculated as follows: (total landings aquaculture production imports)-exports= apparent consumption

4. Source: Central Statistics Office

5. Source: Central Statistics Office

6. Source: Census of Industrial Production, Central Statistics Office
7. Source: Census of Industrial Production, Central Statistics Office
8. Source: Census of Industrial Production, Central Statistics Office

Based on CSO figures. These figures do not accurately reflect the situation with respect to employment levels on a national total or average per establishment basis. This is detailed in a later section.

In marked contrast to the above, mussel and salmon processing operations, both products of the rapid evolution of the Irish aquaculture sector, are much further ahead in capturing best practice, and competing in global markets. These sub-sectors have combined investment in expansion of their existing export markets with upgrading of plant, equipment and process management. Both sub-sectors have made good use of the available support from the FIFG programme, but will be keen to take the next steps sooner rather than later. In a processing area where Ireland is moving towards international best practice, but has to work hard to overcome disadvantages of scale and market access, further public support would form an important component in sustaining recent gains.

For the whitefish sector matters are far less secure. Heavily dependent on export sales, and with access to valuable resources that should produce fish of prime quality, the Irish industry is still seeking to capitalise on these advantages. To date, much of the product of these fisheries is exported with minimal handling and processing – and rightly so. But the quality of this fish is still not of an overall high standard, and there are still opportunities for at least some added value processing prior to export. Once again the fish merchants and fishermen's coops that handle these products have used the FIFG processing measure support to good effect, but there is much still to be done. Continuation of the programme, with the accent on quality systems, market systems, and post-harvest handling, will do much to allow the further development of this sector.

Finally, the shellfish processing sector, aside from mussel processing and some nephrops processing, is relatively poorly developed. Once again there is a great trade in fresh live product shipped directly to market, but the relative wealth of shellfish resources found in Irish inshore and coastal waters, together with the husbanding and farming of hitherto under-developed species, does offer wider scope for processing. This might simply take the form of effective depuration of live shellfish, but might extend to the smarter presentation and packaging of live shellfish or a variety of cooked shellfish products. This is a relatively under-developed component of the industry, and continued support for start-ups, expansion, innovation, and modernisation will be essential to its secure growth.

### **Scenario 2 – Wind-up of support**

The evolution of processing at a scale beyond that of cottage industry is a relatively recent phenomenon in Ireland – early industrial scale processing only came with the emergence of a mussel packing industry occurring in the early eighties, and mackerel processing activity only in the early nineties. Whilst there are limits to the volume of raw material that can be made available locally, resource quality and the wealth of available species still provide fertile ground for added value processing – whether simply in improved handling systems or in the development of new products. To limit public support to the sector at a time when it is only part way through restructuring, and has so much as yet untapped potential, would set back the industry significantly.

### **Scenario 3 – Applying targeted support**

A cursory overview of 1994-2000 programme uptake, and the support to, and direction of, development provided by the various agencies of the State – the Department for Marine and Natural Resources (now the Department of Communications, the Marine and Natural Resources), Irish Sea

Fisheries Board (BIM), the Marine Institute and Enterprise Ireland – suggests that broad coverage of the development areas appropriate the sector has been largely achieved. In light of the development stage that has so far been reached by the processing sector, and the fact that in part of the industry restructuring is still proceeding, and in other parts opportunities have still to be taken up and advanced, we believe that there would be little to be gained through a finer focus than that already evident in the 1994-2000 programme.

## Netherlands

Statistic	1994	1995	1996	1997	1998	1999	2000
National production (1000tonnes)	99	100	104	117	121	111	119
National production (% of GDP)	0.03	0.03	0.03	0.03	0.03	0.02	0.02
Apparent consumption (1000tonnes)	71,178	81	73	79	n/a	101	125
Total seafood sales (mEuro)	n/a	1,622	n/a	n/a	n/a	n/a	2,425
Sales processed products (mEuro)	394	399	397	427	483	459	426
Trade balance (mEuro)	147	122	190	211	158	128	120
Sector investment (mEuro)	n/a	n.a.	n/a	n/a	n/a	n/a	n.a.
Total employment (000's)	n/a	7,000	n/a	n/a	n/a	n/a	7,500
Number of companies	n/a	400	n/a	n/a	n/a	n/a	400
Total employment (000's)*	n/a	2,773	n/a	n/a	n/a	n/a	2,747
Number of companies *	47	47	44	41	39	39	n/a
Average employment/company	62	59	61	64	71	70	n/a

\* PRODCOM companies

The Dutch fish-processing sector consists of 39 companies that employ 2,747 people. Total sales of these companies amounted to € 426 million in 2000. PRODCOM companies represent 14% of the total number of companies involved in fish processing and trading and they contribute 20% of the total Dutch seafood sales to domestic and export markets. About 400 companies are involved in fish processing and trade. These companies employ 7,500 people and their total sales amounts to € 2.4 billion. Most of these companies are small (less than 20 employees).

Production of the Dutch fish processing industry is considered to be stable. The values of production, imports and exports increased due to higher fish prices. Total Dutch seafood sales are 50% up since 1994 due to higher prices and increased imports and re-exports of fish from 3<sup>rd</sup> countries.

The main problems of the processing sector are the uncertain and limited local landings, difficulties with the transition from small-scale business to suppliers of modern retailers and the tight national labour market.

Main trends are: concentration of clients (the EU retail market), concentration in fish processing, substitution of local supply by imports and the increasing importance of consumer concern.

Between 1994 and 1999, 27 projects have been supported by FIFG under area of assistance 6. Total EU FIFG payments amounted to € 3.0 million. Nearly 60% of the projects concerned new production units and/or expansion of existing units. Modernisation of existing processing units was targeted with nearly 20% of the projects. Many projects aimed at both targets. Four projects refer to improvements of auctions. No budget was allocated for fish processing in FIFG 2002 – 2006.

The main effects of winding up the support programme can be listed as follows.

- Fewer companies will be able to invest in product and process innovations
- More companies across sub-sectors will experience difficulties in complying with the increasing demands from consumers and legislation in relation to health & environmental issues
- Fair competition between EU processors might be strengthened

A benefit of winding up the support is that the structural changes are accelerated towards a sector that is operating purely on basis of the market needs.

## Portugal

The fish processing industry in Portugal comprises 115 operating enterprises, with a total production of 152,000 tonnes and sales of 618 m Euro. The importance of the fish processing sector in the total GDP of Portugal is low (0.3 per cent to 0.5 per cent in the period 1994-99), while the importance of the value added of the sector is estimated to represent around 3 per cent of the GVAMP of the agro-industries.

Total employment in the fish processing industry is in decline – the total number of jobs decreased from 7,3 in 1994 to 5,8 thousand in 1999 – due to restructuring processes in the more traditional sub-sectors (e.g. canned products), which also influenced the decline in the number of businesses. Nevertheless, the national production and sales show significant growth in the period under analysis, disclosing a dynamic trend. Value added, however, has remained quite low (14% to 16% along the period) suggesting poor sophistication in production.

**Table a. General indicators for the Portugese Fish Processing Industry**

	<b>Statistic</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
1	National production (tonnes)	81,347	96,808	124,501	121,480	130,359	123,971	152,247	n.a.
2	National production (% of GDP)	0.3%	0.3%	0.4%	0.4%	0.5%	0.4%	n.a.	n.a.
3	Apparent consumption (tonnes)	236,735	251,870	311,413	297,153	326,451	326,362	332,981	n.a.
4	Sales (M.Euro)	385.4	434.9	399.9	424.5	467.1	617.7	n.a.	n.a.
5	Value added (% of total production)	14.4%	16.6%	15.6%	16.6%	14.8%	13.4%	n.a.	n.a.
6	Trade balance (M.Euro)	-365.1	-356.5	-371.1	-404.3	-553.4	-627.9	-564.6	n.a.
7	Sector investment (M. Euro)	37.7	27.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7a	Increase in tangible assets (M. Euro)	n.a.	n.a.	21.8	-16.4	6.2	17.7	n.a.	n.a.
8	Total employment (000's)	7.3	6.7	6.6	5.6	5.9	5.8	n.a.	n.a.
9	Number of companies	139	123	134	135	111	115	n.a.	n.a.
10	Average employment / company	52.2	54.2	49.0	41.1	53.1	50.6	n.a.	n.a.

Sources:

Eurostat – national production, apparent consumption, trade balance;

Portuguese Fisheries (Pescas em Portugal), 1986-1996, INE, DGPA; Structural Business Statistics - Agriculture and Industry (Estatísticas das Empresas - Agricultura e Indústria), 1996, 1997, INE; Structural Business Statistics (Estatísticas das Empresas) 1998, 1999, INE – value added, sector investment, tangible assets, employment, number of companies

National Accounts, INE; Economic Information (Informação Económica), DPP, III National Community Framework, Ministry for Planning - GDP

Total apparent consumption has grown steadily from 1994 to 2000 (it reached a peak of 332,000 tonnes in 2000), reflecting a national tendency for strong consumption of fish products. In the same

period national production in weight increased from 34 per cent to 46 per cent of domestic consumption, but the strong growth of consumption led to a worsening of the trade balance. The deficit in 2000 was around 565 m Euro. This was, however, a reduction of 10 per cent, compared to the situation in 1999.

The FIG programmes had an important impact in the expansion of processing capacity, in the modernisation of the industry and on the improvement of health and hygiene conditions of processing units. The programmes supported the overall increase of competitiveness of enterprises and helped to counterbalance the declining trend in employment.

The overall panorama resulting from the assessment of the adequacy and appropriateness of the FIG support suggests a good consistency of the FIG programmes with the needs for development of the Portuguese sector. Improvements achieved in the sector appear to be rather favourable, but they are yet insufficient on the light of the long-term sustainability of the sector.

Outlook for future development was based in three different scenarios resulting in the possible evolution patterns summarised hereafter:

Scenario 1 is based on the continuation of full supporting programmes, similar to those that have been applied in the 1994-1999 period and are currently on going for the period ending in 2006.

A broad supporting scheme aiming at general improvement of economic performance and competitiveness of the fish-processing industries is considered. This will probably result in a development pattern comparable to the one observed in the past: slow structural changes, key strengths maintained across the sub-sectors, strengthening of production processes and increased improvements on health, hygiene and safety conditions, slow developments in environmental performance, focus of enterprises on short-term strategies to take advantage from immediate market opportunities, employment levels secured in the short run.

Scenario 2 puts forward the winding up of the FIG support that was applied in the 1994-1999 period and is currently on going for the period ending in 2006.

Reinforcement of the competitiveness of the Portuguese fish-processing sector by building on existing strengths will rely entirely on the economic performance of the enterprises. A more competitive sector, able to sustain growth and produce a higher economic output will be confined to a small number of operators, which will cope to survive without any support. Significant reduction on employment will result.

Winding up support will drastically limit exploitation of commercial opportunities being brought about by the application of new and emerging technologies and will in general refrain assistance to SMEs with growth potential. In particular, barriers to growth will be increased in ultra-peripheral regions such as Azores and Madeira, currently disclosing important development gaps to be filled.

Finally, Scenario 3 is based in the continuation of FIG support, targeted for specific areas within the Portuguese fish processing and marketing activities.

This is the recommended scenario, because continuation of Community support appears to be crucial to overcome relevant weaknesses that should be selectively targeted. In particular, there is a need for support in the following areas:

- Consolidation of the modernisation processes, through promotion of access to state-of-the-art technologies and to "best practices";
- Stimulation of the ability of SMEs to grow through innovation and technological development, inducing diversification of processing activities and improvement of applied research for actual product innovation and development;

- Improvement of conformity to legislation – H&H and environment;
- Training (e.g. technology, quality control and marketing);
- Improvement of marketing efficiency and higher control of the supply chain (stimulation of commercial synergies between enterprises, in particular increased co-operation between processors to counterbalance difficulties of SME facing powerful buyers).

## Spain

In Spain there are approximately 520 enterprises in the processing sector with sales of €2.5bn in 2000 and an overall production of 932,000t. Of these processing enterprises, 167 are canning factories, 280 processing plants (these industries are those that process seafoods, and their activities include cutting up the fish, packaging, and the freezing of fish products, as well as industrial shellfish cookers and freeze-dryers), and 51 smoked and salted fish industries. The remainder include the oil and meat fish industries.

The activities of the processing industry of marine products have experienced a considerable reduction in the last ten years due to fundamental restructuring of the sector. The sales of the Spanish industry are a very important part of the total in the EU. The most important products are anchovy, sardine, mackerel, yellow fin tuna, albacore tuna; with tuna fish the most important in production terms (52%). The number employed in the processing industry is over 19,000, but most of these are on a temporary basis.

The most important characteristic of this sector is its fragmented nature. A multitude of small craft enterprises remain in existence with low production and low technological levels, compared with a small number of big enterprises having high production that dominates the market. The structure of small enterprises poses management problems, creating great difficulties in accessing channels of import – export.

Nowadays, the biggest problem of the processing sector is the high market quota that is reaching the products of the third countries.

**Table a: General indicators for the Spanish processing industry**

Statistic	1994	1995	1996	1997	1998	1999	2000
National production (tonnes)	447,553	487,422	521,782	550,730	669,067	683,597	724,162
National production (% of GDP)	3,620	3,470	3,437	3,576	4,103	3,896	3,847
Apparent consumption (tonnes)	752,690	782,690	804,115	813,496	1,032,079	955,806	985,257
National sales (M.€)	1,854	2,016	1,897	2,459	2,775	2,373	2,527
Trade balance (M.€)	-848	-883	-806	-899	-1,304	-1,064	-1,327
Sector investent (M.€)	40	62	67	70	106	79	102
Total employment (X 1,000)	18.33	17.85	17.26	17.66	19.01	19.12	19.11
Number of companies	517	506	534	499	564	503	527
Average employment/company	35	35	32	35	34	38	36

1. Source: Eurostat Prodcom data
2. Source: Spanish Statistical Institute
3. Apparent consumption has been calculated as (landings+aquaculture production+imports)-exports Source: Fishtat – FAO
4. Source: Spanish Statistical Institute
5. Source: Eurostat Prodcom data
6. Source: Spanish Statistical Institute
7. Source: Spanish Statistical Institute
8. Source: Spanish Statistical Institute
9. Based on Spanish Statistical Institute figures

Of 1,299 projects approved for funding, there were a total of 1,032 completed projects with an overall investment of €398.5million, FIGF funding of €173.16million and state funding of €44.46million.

Measure 1 – creation of new processing capacity - accounts for the highest investment (42% of total investment). It is evident that the majority of projects were in measures 2 & 3 (modernisation of processing and marketing facilities respectively), accounting for nearly half of all projects. The average size of project in expanding capacity in processing and marketing establishments is larger than those for modernising such facilities. Therefore, despite fewer projects under measure 1 than 2 or 3, most investment went towards new processing capacity.

Consolidation of the sector has not occurred to the extent expected as the number of companies has remained relatively stable. But this does suggest that most of the existing companies have remained viable despite the problems of raw material supply through reduced landings facing the traditional sector. It can therefore be argued that the primary objective of improving competitiveness was achieved. The secondary objectives relating to increased employment may have been achieved to a modest scale (increases representing around 3.6% of sector employment). The modernisation that was undertaken through the programme may have also inadvertently improved environmental performance through efficiency improvements.

While it is apparent that targets were often set too low or interpreted and recorded incorrectly, the findings suggest that the companies in the Objective 1 region met targets while those outside Objective 1 did not. Further modernisation of the sector is necessary outside Objective 1. Funding for this should remain available, but it is likely in the medium term that some of this processing capacity of the companies outside Objective 1 will be absorbed by those within Objective 1 as part of consolidation in the sector.

Developing a programme with more targeted support may be the most beneficial and cost-effective option. A future programme targeting smaller companies will avoid the high levels of funding necessary to support large company initiatives based on increasing capacity. At the same time it can still encourage the restructuring that appears to have been limited in the 1994-1999 programme.

Targeted support may also assist those companies still concentrating solely on the domestic market to look into markets elsewhere in Europe, but to avoid supply constraints this will mean that they need to break out of the continued reliance on Spanish-sourced supplies of raw material.

## **Sweden**

### **1. Sector structure and performance**

The Swedish processing industry is dominated by a handful of large companies located on the Swedish west coast. The production is within a wide range of product groups based on raw material from primarily pelagic, whitefish, salmon and crustaceans. The production is characterised by low value adding to the raw material. This has the effect that the Swedish fish production is very sensitive to the supply of raw material and the price settings. The production capacity is closely linked to the periodical supply of raw material. In several of the sub-sectors there is in the peak periods often a shortage of capacity, while in other periods there is surplus capacity.

The total value of the domestic production has been around 250 million Euro per year during the period 1996-1999 where a full data set on the production is available. The production by quantity has been stable around 117,000 tonnes with only minor changes between the different product categories.

Although the quantities of fish caught by Swedish fishers are sufficient to meet the needs of the industry the raw material does not always meet the demands made by industry as regards size and quality. Therefore import of fish and fish products account for an important part of the raw material supply to the processing industry. In addition to herring, large quantities of fresh or refrigerated salmon, frozen cod fillets and processed prawns are imported. The major part of the fish import in Sweden comes from the neighbouring countries, Norway and Denmark. Imports doubled in volume

during the period 1995-1999 to 190.000 tonnes. The corresponding increase in value was 50% to 430 million Euro.

Since Sweden's entry into the EU, the export value of fish products has more than doubled. The value of Sweden's exports of fish and fish products in 1999 was above 200 million Euro. Exports to EU countries accounted for 75% of this. In volume terms the export increased by 67%. Denmark, France and Italy are the most important export markets accounting for 40% of total exports in 2000. The major export products are canned herring and fresh cod, salmon and herring. Despite the increase in exports Sweden in 2000 had a deficit of about 150 million Euro on its trade balance of fish products.

The number of employees in the fish processing industry fell during the period prior to the entry of Sweden into the EU. Many businesses at that time decided to expand production within the Community, particularly in Denmark, in order to gain access to the EU internal market. A far-reaching rationalization and centralization within the industry also contributed to the decrease in the number of employees. In addition, that part of the industry that was dependent on Swedish-landed cod, were negatively affected by the drastic reduction in landings after 1991. Since Sweden's entry into the EU, the number of employees has increased. This is the combined result of increased exports and the decisions made by some processing enterprises to move their production units (back) to Sweden. In 2001, there were 2,095 employees in the fish processing industry, an increase by 32% since 1993.

Also the number of companies had a small decline prior to Sweden's joining the EU. but after becoming a member state the number of processing companies has increased from 136 in 1994 to 178 in 1999. The production plants across the sub-sectors largely meet the EU requirements in terms of hygiene and most of them are of a high technical standard.

In the period from 1994 until 2000 the Swedish fish processing industry has gone through some significant changes. During the period the supply situation of raw material became problematic because of reduction in the catch quotas. For the Swedish fish processing industry it became more difficult to obtain raw material, the price situation changed and production planning became more difficult. All together this was weakening the fish processing sector and affected the economic performance across sub-sectors.

The pressure that the companies have faced in relation to cost effectiveness has to some extent been addressed by rationalization and by introducing more effective production methods. Improved utilization of the raw material has been obtained, by establishing more uniform production processes and by introducing automation. However, the Swedish fish processing industry is still faced with low utilization of the production capacity.

At the same time the authorities were setting standards for the production of fish and fish products in relation to health and environmental concerns. The standards required that each fish processing company should provide a description of the process and identify the critical points in the process where health or environmental problems could arise. In addition the companies should provide guidelines to prevent problems in these critical points.

The standards contributed to the development of the sector into a more health and environmental orientated direction but for the companies it involved re-allocation of manpower and financial resources to deal with the requirements. Especially for the small companies this was a major task.

## **2. FIG support to the fish processing industry 1995-1999**

The FIG programme has supported the Swedish fish processing industry in the development of the sector during the period from entry into the EU in 1995 to 1999. The programme has supported a wide range of projects with the aim of improving sector competitiveness, employment and economic performance.

All projects supported in the Swedish programme have come under objective 5 except for a few projects funded under objective 1. All projects have been within measure 1 (new production units), 2 (modernisation of existing production units) or 3 (modernisation of existing production units). In total 254 projects have been funded by the FIG programme with a total cost of above 31 million Euro of which 40% has been paid from the FIG (30% EU and 10% national grant).

The overall objective of the assistance has been to enable the processing industry to develop in terms of both product quantity and quality. The assistance has also been intended to contribute to increasing the flexibility of the industry to facilitate its adaptation to changes in raw material supplies and product markets.

Since Sweden's entry into the EU, there has been an urgent need for investment in the processing industry. Businesses needed to invest in order to meet the increased hygiene requirements and to exploit the opportunities for increased exports. The demand for funds has far exceeded funds available. In total, the applications were in excess of 45 million Euro from the FIG for about 400 projects/applications. It was therefore necessary to draw up strict priorities. In April 1996, the monitoring committee decided that the following types of investment should be given priority:

1. Investments that involve new products (preferably from under-utilised fish species)
2. Investments that will result in more rational and cost-effective production
3. Investments that will improve working conditions, hygiene and the environment

The most common type of investment made have had the aim of fulfilling the EU's hygiene regulations. The assistance was predominantly allocated to improve the competitiveness of existing businesses. Only a few projects concerned new developments.

### **3. Outlook for future development**

The Swedish processing plants are in general able to meet the requirements set out by the authorities and the consumers. However, the outlet of waste, smell and noise will have to be addressed further due to still increasing legislative and customer requirements. In the future there will also be a need for development of new working routines that can reduce the wearing-down of workers and make jobs in the processing industry more attractive.

The low value adding production in general is making the industry very sensitive to the anticipated changes in the supply and demand situation. Therefore focus is on investment in product innovation and increased production value.

The need for sustaining market positions will be increased. New conditions for competing will arise in the coming years, both due to new competitors and increased customer requirements. Gaining access to attractive new markets e.g. in the enlarged EU and new market segments that can provide a satisfactory economic performance will be essential. Diversification into more value added products could also be a means to opening new markets both inside the EU and worldwide.

The Swedish fish processing industry is still in transition to meet present and future needs and requirements from customers, legislation and the development in the fish resources. This process will exceed beyond the expiration of the ongoing funding period. The funding opportunities for the fish processing industry beyond 2006 will strongly influence on the structure and performance of the industry. Therefore, three scenarios have been established depending on the character of a possible new FIG programme.

The three scenarios represent different approaches to the future evolution of the Swedish fish processing sector. Each of them will have implication on the sector and the ability for the fish processing companies to sustain and develop their business.

The continuation of full support programme beyond 2006 (scenario 1) will contribute to sustaining sector performance in the short and medium term perspective and securing employment in dependent regions. The winding up of all support to the processing sector (scenario 2) will have major impact on the sector and will result in major structural changes in the medium and long term resulting in decline in the number of companies and in employment. The applying of targeted support to key areas of the processing sector (scenario 3) will contribute to sustain competitiveness for the viable product areas and companies. At the same time the dynamics of the sector is maintained resulting in sustained employment and a sector consisting of economically sound companies.

Despite that the sector has gained significant structural strength as a result of the FIG programme from 1995 to 1999 and further through the programme expiring in 2006 there are still many critical issues to be addressed by the Swedish fish processing sector in order to remain a competitive sector in the medium and long term perspective. A new FIG support programme, full or targeted, would be very beneficial to the fish processing industry.

**Table a. General indicators for the Swedish fish processing industry**

	Statistic	1994	1995	1996	1997	1998	1999	2000	2001
1	National production (tonnes)	62,391	34,714	86,472	117,906	114,312	117,619	49,051	
2	National production (% of GDP)	N.a.	N.a.	N.a.	N.a.	N.a.	0,01	0,01	
3	Apparent consumption (tonnes)	N.a.	59,799	133,395	192,654	209,227	192,974	77,411	
4	Domestic sales (M.Euro)	N.a.	222	422	387	446	469	257	
5	Trade balance (M.Euro)	N.a.	-196,9	-154,8	-138,4	-194,7	-220,9	-153,2	
6	Net Sector investment (M. Euro)	N.a.	Na	n.a.	9,75	21,06	13,08	n.a.	
7	Total employment (processing)	1,623	1,586	1,890	2,006	1,991	2,066	2,064	2,095
8	Number of companies	134	135	134	155	169	178	180	177
9	Average employment/company	12.0	11.7	14.1	12.9	11.8	11.6	11.5	11.9

## United Kingdom

The UK fish processing industry has experienced a great deal of contraction and restructuring in recent years. The industry is currently composed of 426 companies, according to central government statistics and 541 companies, according to the Sea Fish Industry Authority's last survey of the processing industry in 2000.

Total employment in the industry has remained relatively stable at between 20,000 and 25,000 employees (depending on the source of the statistics). The importance of smaller companies has,

however, diminished since 1994 and larger companies with more than 50 employees account for the bulk of employment in the sector.

The industry is worth over 2 billion Euros in sales each year, but is of minor national importance to the economy, contributing around ¼ of 1 per cent to national GDP each year. It is, however, of vital importance to certain areas of the UK such as the Highlands and Islands and the Grampian region of Scotland and the North East of England. These are areas where the importance of fisheries to local communities has a long history, while the Highlands and Islands is the main salmon farming centre of the UK.

“Preserved fish products” (15.20.14), “aquatic invertebrates frozen, dried or salted” (15.20.15) and “fish other than whole fish, frozen” (15.20.12) together account for approximately two thirds of all products produced in the UK. “Preserved fish products” are by far the most important. These categories include products such as breaded and battered fillets, breaded scampi, fish fingers, ready meals and frozen fillets. Breaded and battered products are traditional UK products that sell well on the domestic market, while ready meals have experienced a marked increase in popularity in recent years in the “at home” market and to the restaurant and catering trade. Growth in the quantity and value of these products is expected to continue in the future.

The UK is a net importer of fish and fisheries products. The processing industry has become much more reliant on imports as its main source of raw materials, due to the fall in UK landings and the increased continuity of supply offered by imports. The strength of the Pound (£) on international markets also means that imports are relatively inexpensive. The main imports are gadoid species, traditionally demanded by the UK consumer and shrimp (warm and cold water varieties).

The main destinations for UK exports are its nearest EU neighbours – France, Spain and Holland. Much of the UK’s shellfish landings are exported with little or no processing and so are not registered under Prodcom codes, making total UK exports higher than illustrated by Prodcom data alone. An important UK export is farmed salmon.

UK apparent consumption of fish products has fallen since 1994 but this is largely due to a decrease in the amount of fresh products consumed. Apparent consumption of processed products has remained relatively stable and, given the increasing popularity of ready meals containing fish and shellfish, is likely to increase in the future.

Table a. presents some summary information relating to the structure and operation of the UK fish processing industry for the years 1999 to 2000. No data were available for 2001.

The 1994-1999 FIG programme of support to the processing sector provided financial assistance to 217 companies (about 40 per cent of the sector) through 248 projects. Ninety per cent of these projects involved increases in processing capacity, and were approved under Measure 1 of the programme.

At a time of considerable change in the industry, this assistance has proved instrumental in accelerating company moves to meet the challenges posed by increasing globalisation of the seafood trade, and changed raw material supply conditions. As a result of programme support beneficiary companies have been able to capture economies of scale through expansion, to control costs through efficiency gains, to modernise plant and processes, and to strengthen quality management systems. These companies have also, as a result, expanded their workforces.

But on a sector-wide basis, such progress by what may be judged to be sector leaders has not seen an expansion in overall production and employment, but simply a restructuring, taking up the slack as weaker companies have gone out of business. It remains the case that take-up of programme assistance was particularly poor amongst smaller companies, and particularly those employing fewer than 10 persons, and those engaged in primary processing activity only. Contraction in the number

of businesses in these sub-sectors will continue. Of note, however, except at the larger end of the company spectrum, acquisition and merger has played a very minor part in industry restructuring.

### **Scenario 1 - Continuation of full support programme**

If the full programme of support were continued as in the 1994-2000 programme, one would expect the distribution of take-up to remain much the same, the same companies to apply for and receive support for restructuring activity, and these companies to improve their abilities to successfully compete in an increasingly challenging market place. It is likely that there would be substantially fewer companies seeking to expand production capacity, and rather more attention given to improving quality and management systems.

Without modification of the programme, takeup by those companies employing fewer than 10 persons will be limited, particularly takeup by those engaged in primary processing only. This sub-sector, typically located in traditional port areas around the UK, will collapse with the concomitant loss of significant numbers of jobs (say 150 businesses employing an average of five person each – 750 people). The lost capacity will, in all likelihood, be taken up by larger companies, but only some of the labour will be re-employed within the sector.

### **Scenario 2 - Wind up of support**

A winding up of support in its current form is likely to have only limited impact on the sector. The rate at which companies adapt to and engage with the new market and raw material supply conditions will slow down significantly, and at the extreme some companies may experience difficulty in maintaining current market position. This could reasonably be described as normal business.

Of greater concern, however, would be the possibility that the heavy focus of the last programme on capital support to increased production may have encouraged companies to focus on expansion without also developing and strengthening the smarter management and operational systems needed to fully capitalise on such development. The survey of beneficiary views on programme impact suggest that there may be some justification for such fear. Failure to shore up these weaknesses could, thus, undermine the beneficial impact of investment under the 1994-2000 programme.

### **Scenario 3 - Applying targeted support**

If a more targeted programme of support were to be designed and delivered, the analysis suggests that its focus should be on boosting the skills of processing company managers – in the areas of strategic planning, financial planning (for expansion), quality management, organisation of production, process control, market appraisal, and personnel management and skills development. Such focus should have two strands.

One would be targeted at companies that have already embarked on programmes of change and growth, where the focus should be on adding value to, and sustaining, the progress that has already been achieved.

The other should be targeted at companies that have not as yet embarked on change. A particular focus of this initiative should be smaller companies, and particularly companies in the primary processing sub-sector, with a view to identifying those companies (or indeed managers) capable of restructuring to a more sustainable business format. Where such companies have been identified, they should be given the support to make the changes.

To deliver on this second strand of support would require a different approach to that adopted in the 1994-2000 programme. In particular it requires a rather more hands-on form of support to such companies. This lends itself to a programme rather than project based format, based on national,

regional or sub-sector umbrella programmes where development expertise can be partnered with those companies that meet a fairly narrow set of eligibility criteria.

**Table a. General indicators for the UK fish processing industry**

	Statistic	1994	1995	1996	1997	1998	1999	2000
1	National production (tonnes)	614,884	526,152	623,482	666,446	713,593	685,731	no data
2	National production (% of GDP)	no data	0.29	0.26	0.24	0.23	0.22	no data
3	Apparent consumption (tonnes)	1,412,636	1,447,246	1,331,541	1,300,468	1,096,180	1,159,575	no data
4	National sales (M.Euro)	no data	2,222	2,143	2,450	2,601	2,733	2,972
5	Trade balance (M.Euro)	- 762	- 755	- 831	- 979	- 1,089	- 1,148	- 1,293
6	Sector investment (M. Euro)	no data	41	43	28	30	30	33
7	Total employment (000's)	no data	19.6	no data	no data	no data	no data	22.2
8	No. companies	no data	719	no data	no data	no data	no data	541
9	Average employment / company	no data	27	no data	no data	no data	no data	41

1. Source: Eurostat Prodcum data.

2. National production as % of GDP refers to the percentage contribution that fish processing makes towards total GDP in each year. Source: Annual Business Inquiry, National Statistics Office.

3. Apparent consumption has been calculated as (landings + aquaculture production + imports) – exports. Source: FAO

4. National sales = total turnover. Source: Annual Business Inquiry, National Statistics Office. £ Sterling have been converted to Euros. See Section 1 for more explanation.

5. Source: Eurostat Combined nomenclature data.

6. Sector investment = net capital expenditure. Source: Annual Business Inquiry, National Statistics Office

7. Source: 1995 Survey of the UK Sea Fish Processing Industry, Seafish & 2000 Survey of the UK Sea Fish Processing Industry, Seafish. Data for 1994 and 1996 – 1999 is available from the National Statistics Office, but is unreliable. See section 2.2 for more explanation.

8. Source: 1995 Survey of the UK Sea Fish Processing Industry, Seafish & 2000 Survey of the UK Sea Fish Processing Industry, Seafish. Data for 1994 and 1996 – 1999 is available from the National Statistics Office, but is unreliable. See section 2.2 for more explanation.

9. Based on 1995 and 2000 Seafish figures.