



**2010 survey  
of the UK seafood  
processing industry**

**summary report**

Seafish  
August 2011

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## 1. Introduction

This short report concerns the collection and analysis of data relating to the performance of the UK seafood processing sector in 2010.

Seafish is often asked by government and the industry, including fish processors and supermarkets, for updated information on the UK seafood processing sector. This report provides an update on the information collected for the 2008 surveys of the UK seafood processing industry.

Similar reports were published in 1986, 1995, 2000, 2004 and 2008, and the series can therefore be used to identify and analyse trends. The inclusion of salmon processors allows the reconciliation of estimates of employment for salmon processing and non-salmon fish processing and removes doubt about double counting of jobs in firms which process both salmon and sea fish.

## 2. Processing units and employment

### 2.1 Industry overview

The number of processing plants in UK seafood processing continues to fall. This is mirrored by the decrease in the number of full time equivalent jobs (see table 1.1). The number of processing units now stands at 384, a 20% reduction on the number of units in 2008. The reduction in employment has not been as acute, there were 14,331 FTE jobs in the seafood processing industry in 2010, compared to 14,660 two years ago i.e. a reduction of only 2%.

The average full time equivalent positions per processing unit have increased, reversing a downward trend since the turn of the century. This suggests the industry in 2010 is more consolidated than it has been in recent times.

UK seafood processing industry population: FTEs and processing units					
Seafish processors	1995	2000	2004	2008	2010
No. of UK FTE jobs	19,659	22,256	18,180	14,660	14,331
No. of processing units	719	541	573	479	384
Average FTEs per unit	27	41	32	31	37

Table 1.1 UK seafood processing industry population: FTEs and units

The reduction in seafood processing units does not suggest businesses are no longer trading, although there may be an element of this. In addition to closures, some businesses no longer meet the definition of 'seafood processor' as used in this research. At least part of the reduction in units is the result of industry dynamics in which businesses are changing their practices, moving away from processing activity towards seafood trading, retail or specialising as importers or

exporters. Other processors may have had seafood as part of their overall food business, and decided to reduce this activity or withdraw from seafood altogether. In addition some processors that previously handled seafood as a core business are now focussed on salmon as the principle species. These processors no longer form part of this seafood analysis but are covered under the salmon processing section later in this report.

## 2.2 Industry characteristics

In recent times, the industry has been characterised as having a small number of large multi-unit businesses, and a large number (or long tail) of small single unit businesses, and this latest research continues to support that. However the evidence suggests this polarisation has been tempered somewhat, with the 2010 results suggesting the industry is less fragmented than in recent years.

The decline in processing units over the last two years can be seen in both smaller and larger processing units with the mid-sized processing units (26-50 FTEs) remaining relatively stable. The most marked decline in processing units has been amongst small units, particularly those employing between 1 and 10 FTEs - representing a 26% reduction in units over the last two years.

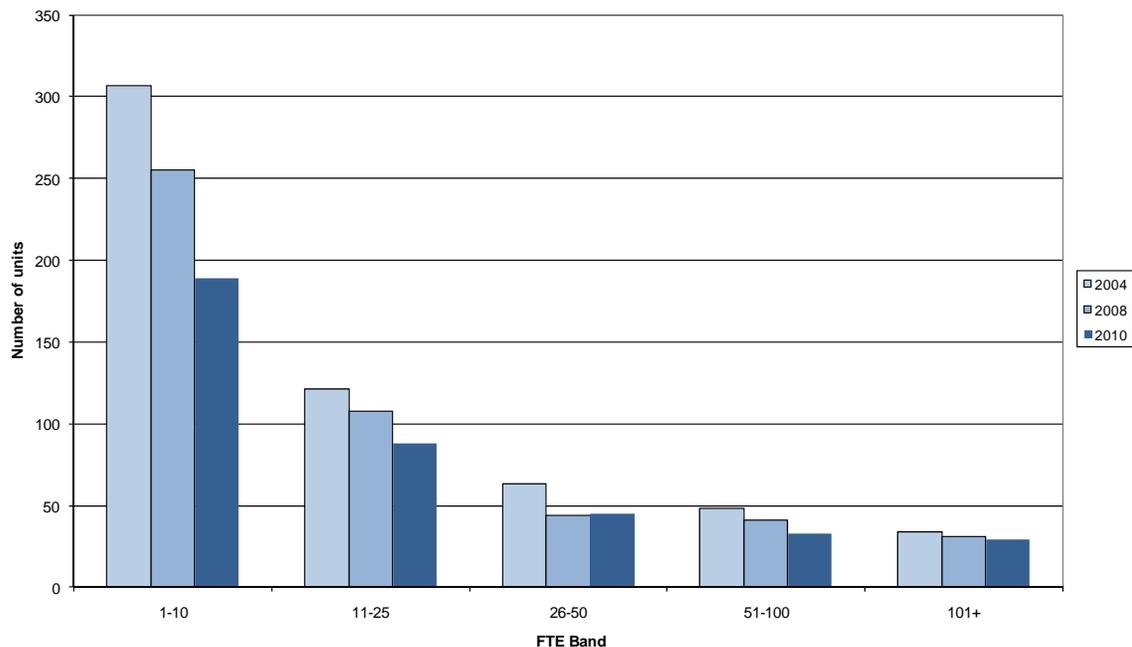


Figure 1.1 Number of processing units by size (FTE band)

The share of employment across all sizebands has remained relatively stable since 2004. The large number of smaller units account for less than 10% of industry employment, whilst representing nearly 50% of total business units. In

contrast the largest units are responsible for over 50% of total employed in seafood processing and 8% of all business units.

Over the last two years, a declining share of total employment can be seen across most processing unit sizes. This reflects the general downward trend in full time equivalent jobs over this period. However, the largest processing units have seen an increase in the share of total employment from 47% to 55% in the last two years.

A contrasting picture emerges when these trends are examined over a longer time period of ten years. Over this period, the largest processors show a marked decline in the share of industry employment, whilst other processing unit sizes show an increase.

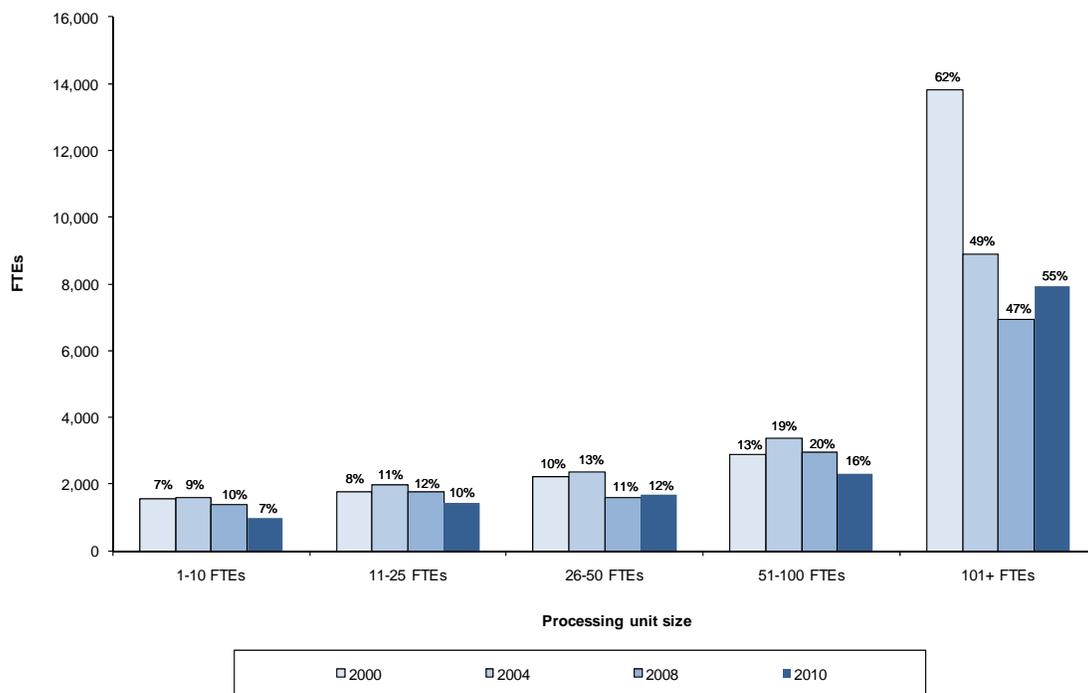


Figure 1.2 Industry employment by processing unit size

### 2.3 Structure by species processed

Since 2000, the profile of those employed in processing different species has seen very little change. Mixed species processing continues to be the mainstay of employment in the sector, pelagic processing the minority.

The share of employment shows the reliance on mixed species processing has increased slightly in the last 2 years continuing a ten year trend. Mixed species processing now accounts for 59% of total seafood processing employment and

47% of all processing units. Corresponding figures for 2008 were 58% of total employment and 45% of processing units.

The most dramatic reduction has been in shellfish, where the share of shellfish processing employment declined from 24% to 18%. This corresponds with a similar fall in the share of processing units handling shellfish; falling from 26% to 21% of total units since 2008. Employment in demersal processing, however, has increased from 13% to 17% since 2008 and the share of processing units now stands at 29% of total units.

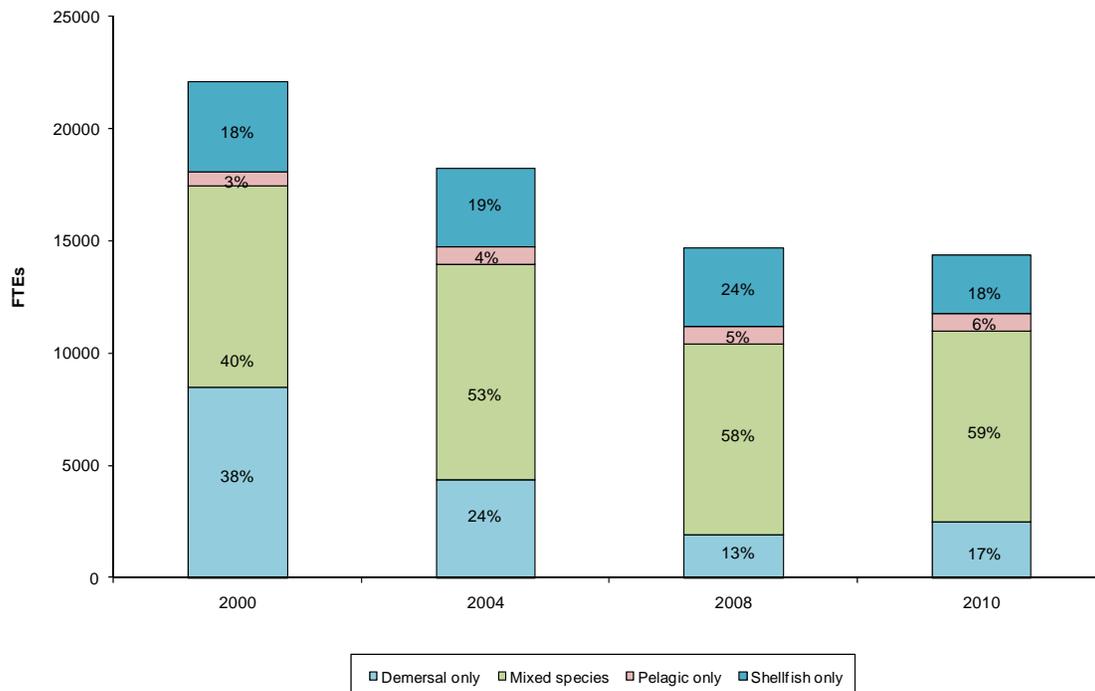


Figure 1.3 Industry employment by species processed

#### 2.4 Structure by process type

The overall profile of unit by process type has changed little since 2000 with primary and mixed processing accounting for the majority of activity and secondary processing the minority. As of 2010, units processing mixed species are the most prevalent, returning to the longer term profile over the last ten years. For the first time since 2004, primary processors are no longer the most prevalent type of processing unit.

The share of employment in different process types in 2010 reveals a sharp change in the last two years. Primary and secondary processing have both experienced an increase in the share of FTEs, whilst the share of employment in mixed processing has fallen.

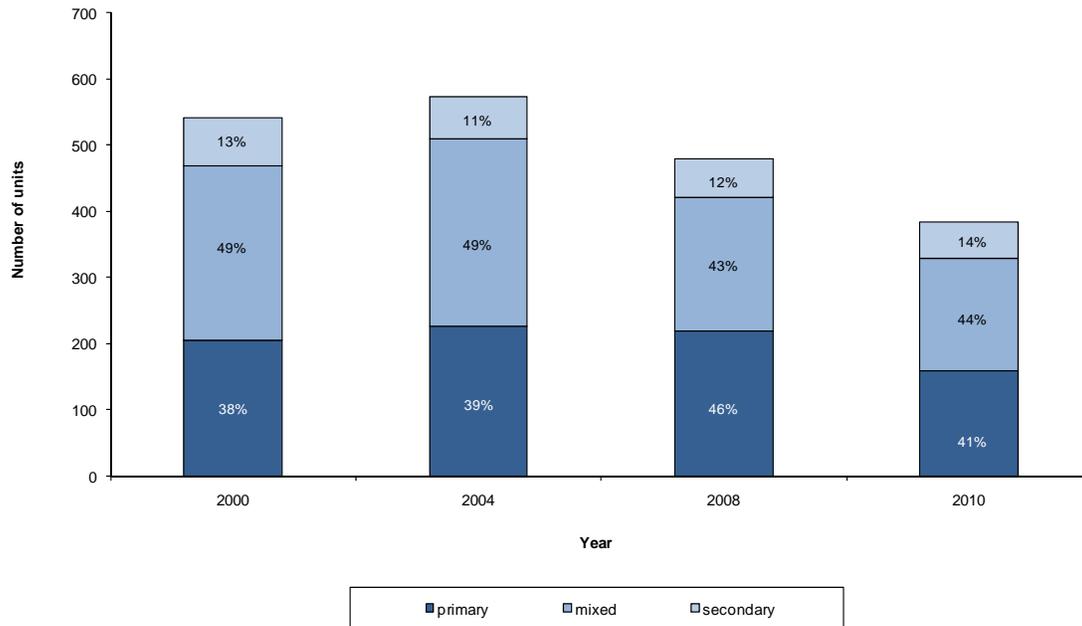


Figure 1.4 Proportion of seafood processing units by process type

Since 2008, the reduction in processing units has been most keenly experienced amongst primary processors; a reduction in the number of units from 220 to 159 (27%). This has meant that the share of this group in total processing units in 2010 has fallen markedly. In 2010 41% of units were engaged only in primary processing, employing an average 16 FTEs and accounting for 18% of seafood processing employment.

Mixed processing units accounted for 44% of all seafood units and 49% employment, employing an average of 41 FTEs. Secondary processing units represent 14% of business units, and 34% of total seafood employment, and at 81 FTEs per unit are generally larger units when compared to primary or mixed processing units.

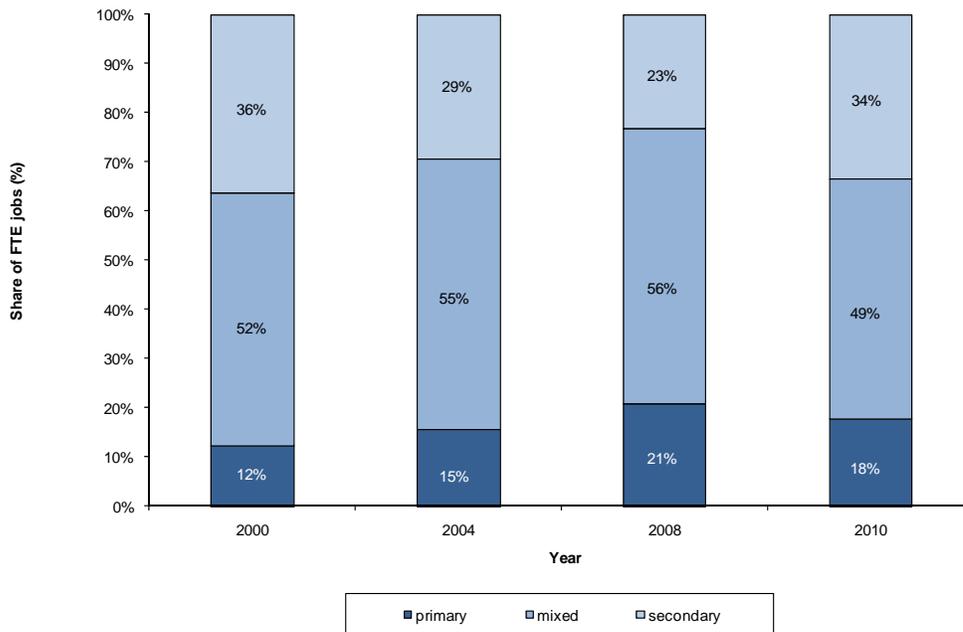


Figure 1.5 Proportion of industry employment by process type

### 3. Company ownership

The ownership profile reflects the typical characteristics of the seafood processing industry; the mainstay of the industry is represented by units established as limited companies and partnerships. Moreover, a profile in which one in five units is a sole trader and one in every 12 units is a subsidiary reveals the degree of polarisation in the industry i.e. large number of very small sole trader companies and a small number of very large companies with multiple units.

The share of processing units operating as limited companies continues to increase, albeit marginally (56% from 55% in 2008), as has the share of sole traders (20% from 19% in 2008). The number of units operating as subsidiaries of a larger company has fallen slightly since 2008, from 10% to 8%.

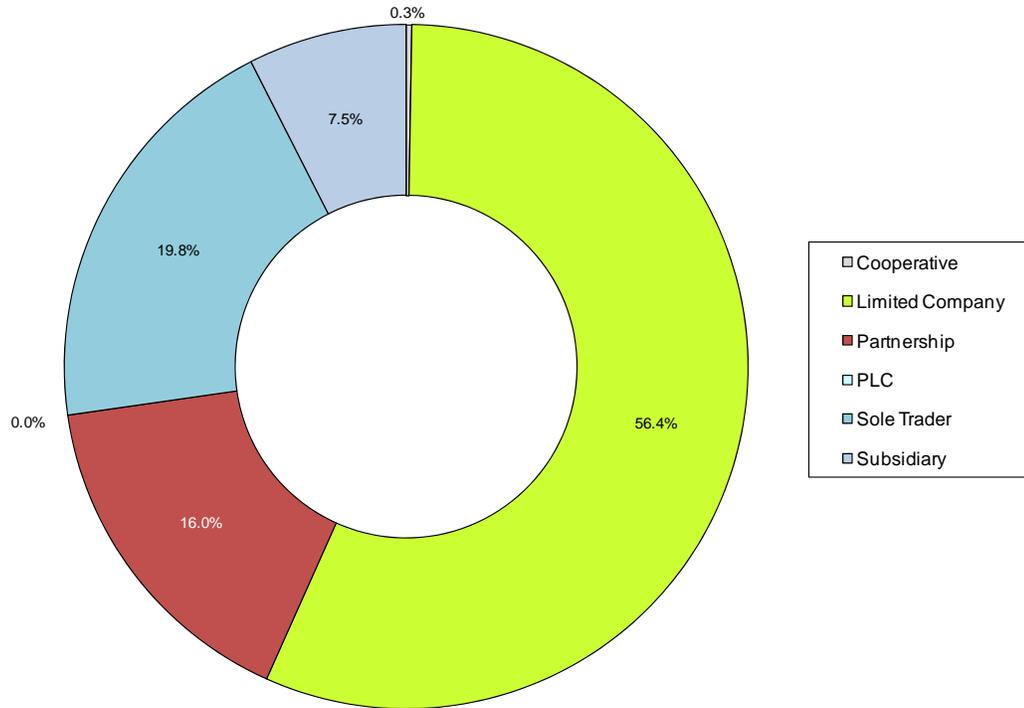


Figure 1.6 Ownership type of processing units (N=374)

#### 4. Age of firms

In 2010, almost half of all processing units have an age profile of between 16 and 50 years. Processing units that are very old (over 100 years) or are recent start-ups are in the minority; 4% or 11% of all units respectively.

The age profile of seafood processing units remains broadly unchanged since 2004 and similar to that of 2008. However, in the last two years the largest reduction is experienced amongst units in the 16 to 25 year age category.

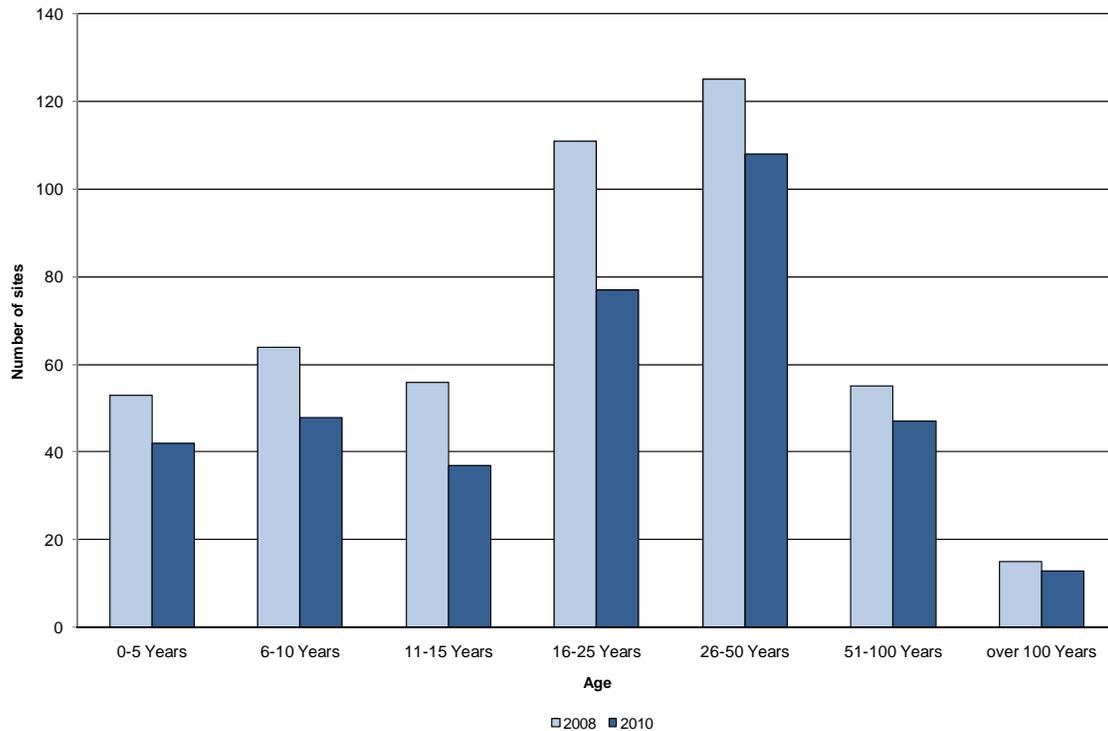


Figure 1.7 Age of processing units

## 5. Geographical distribution

The profile of seafood processing units by region reveals the characteristic distribution of processing activity across the UK, this research confirms past findings in this regard. The results reveal the dominance of processing activity in the Humberside and North East of Scotland (Grampian) areas and rather modest levels of processing activity in more rural outlying areas such as Northern Ireland, Highlands and Islands and South West England.

Humberside and Grampian processing activity reveal primary processing to account for a larger share of their seafood processing units. In contrast, rural outlying areas engage in a much greater number of mixed processing units as a share of their overall processing activity. Concentrations of secondary processing units are found in the Humberside, North England and South/Midlands/Wales regions.

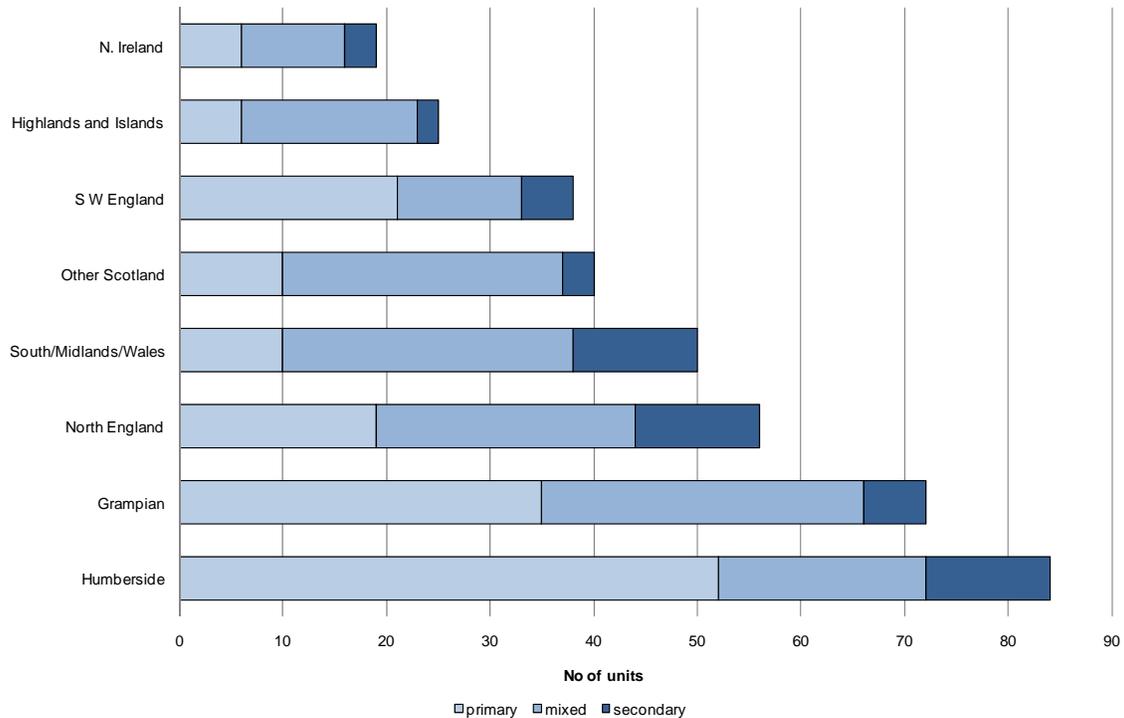


Figure 1.8 Seafood processing units by region

As with findings in 2004 and 2008, secondary and mixed processing accounts for a much larger share of processing employment across all regions.

The profile of seafood processing employment again reflects the characteristic dominance of processing activity in the Humberside and North East of Scotland (Grampian) areas and much smaller scale processing activity in more rural outlying areas such as Northern Ireland, Highlands and Islands and South West England.

A much larger share of processing employment in Humberside and Grampian is accounted for in secondary and mixed processing, with primary processing responsible for a relatively small share of employment. This stands in contrast to the share of processing units in these regions, revealing a tendency for larger numbers of primary processing units to employ relatively small numbers compared to the smaller number of mixed and secondary units having much larger workforces.

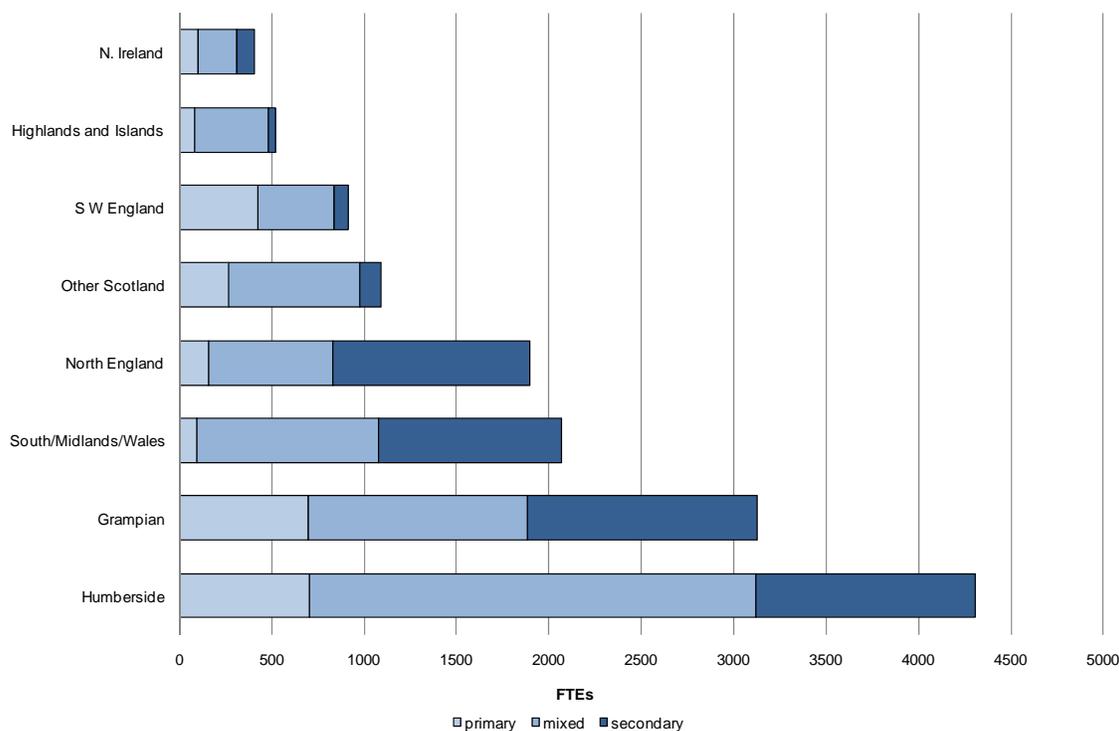


Figure 1.9 Industry employment by region

## 6. Salmon industry structure

### 6.1 Processing units and employment

The number of processing units, that predominantly process salmon, has sharply reduced in the UK in the last two years (see table 1.2). This reduction is accompanied by a fall in the number of salmon processing full time equivalent jobs across the UK.

The number of salmon processing units in the UK now stands at 54, a 24% reduction on the number of units in 2008. At the UK level, the reduction in employment has been less marked; there were 4,223 FTE jobs in the salmon processing industry in 2010, compared to 5,223 two years ago (a reduction of 19%).

Overall, the reduction in salmon processing units and employment has resulted in an increase in the size of salmon processing units by employment. The UK average FTEs per unit in 2010 now stands at 78 FTEs. This continues a trend since 2004 in which the average number of employees at salmon processing sites has increased.

UK salmon processing industry population: FTEs and processing units							
Salmon processors	2001 (Scotland)	2004 (Scotland)	2008 (Scotland)	2010 (Scotland)	2004 (UK)	2008 (UK)	2010 (UK)
No. of FTE jobs	4,728	3,849	4,073	3,737	4,462	5,223	4,223
No. of processing units	145	55	48	43	76	71	54
Average FTEs per units	33	70	85	87	59	74	78

Table 1.2 UK salmon industry population: FTEs and units

However, these developments are not replicated to the same extent in Scotland. At 10% the reduction in processing units since 2008 is less pronounced, and units in this area show a decrease in salmon processing employment of 8%. The average size of salmon processing units by employment continue to exceed the UK average; in 2010 salmon processing units in Scotland employed an average 87 FTEs as compared to a UK average of 78 FTEs.

## 6.2 Salmon industry process types

Recent years show a continuation of the trend in salmon processing observed since 2004 in which mixed and secondary processing units account for the majority of salmon processing activity. In 2010, a minority of salmon processing units were engaged only in primary processing.

The reduction in salmon processing units is most keenly experienced amongst primary processing units. The share of total processing units held by this group has fallen markedly; a reduction of almost 50%.

In contrast, the share of mixed and secondary processing in the overall total of salmon processing units has increased considerably from 54% to 56% and 23% to 31% respectively.

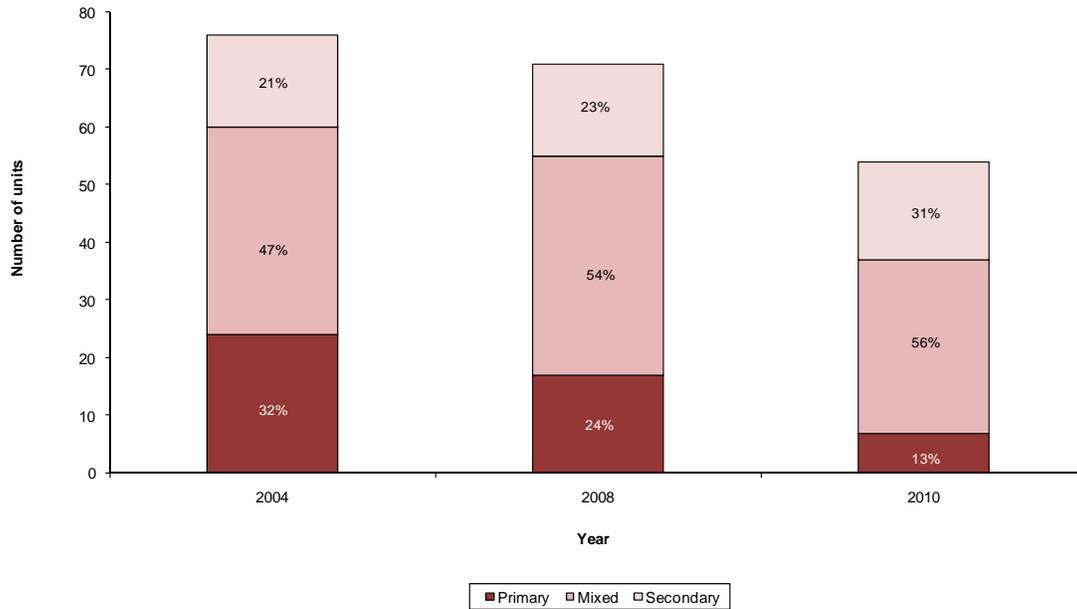


Figure 1.10 Salmon processing units by process type

The share of employment in different process types in 2010 maintains a broadly similar profile seen in the salmon processing industry since 2004. Units engaged in mixed processing of salmon account for the majority of employment.

Secondary processing has experienced a slight increase in the share of FTEs at the expense of primary processing. Mixed processing units employ on average 111 FTEs, primary processing units account for on average 59 FTEs, whilst secondary processing is responsible for an average 29 FTEs. This compares with average employment per unit in 2008 of 109 FTEs, 43 FTEs and 23 FTEs respectively. The findings suggest that although the average size of units by employment has increased; this is particularly the case for primary processing.

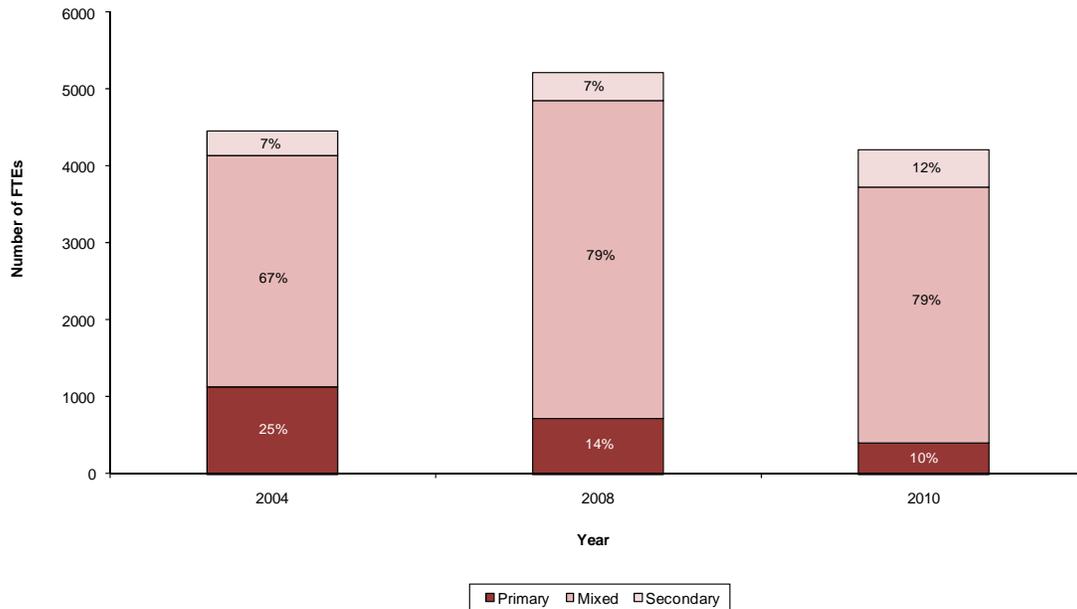


Figure 1.11 Salmon industry employment by process type

### 6.3 Geographical distribution

The profile of salmon processing units by region reveals the continued dominance of this activity in Scotland where almost 80% of units are located. This is particularly the case in areas out with Grampian, which given the concentration of seafood processors accounts for 11% of all salmon processing units. Other areas of the UK show much more modest levels of salmon processing activity. Processing units in Scotland show a much greater share of all processing types but particularly secondary processing activity.

The profile of salmon processing employment again reveals the dominance of Scotland in the salmon processing industry. Almost 90% of salmon employment is located in Scotland. Areas of the UK outside Scotland are responsible for a relatively small share of employment. This is in line with the share of processing units in these regions.

Mixed processing accounts for a much larger share of salmon processing employment across all regions. However, secondary processing employment has a much larger share in Scotland particularly outside Grampian. These areas of Scotland are responsible for the majority of employment in secondary processing (96%). Areas such as Humberside and Grampian that are associated with concentrations of seafood processing activity, show relatively low levels of salmon processing units and employment.

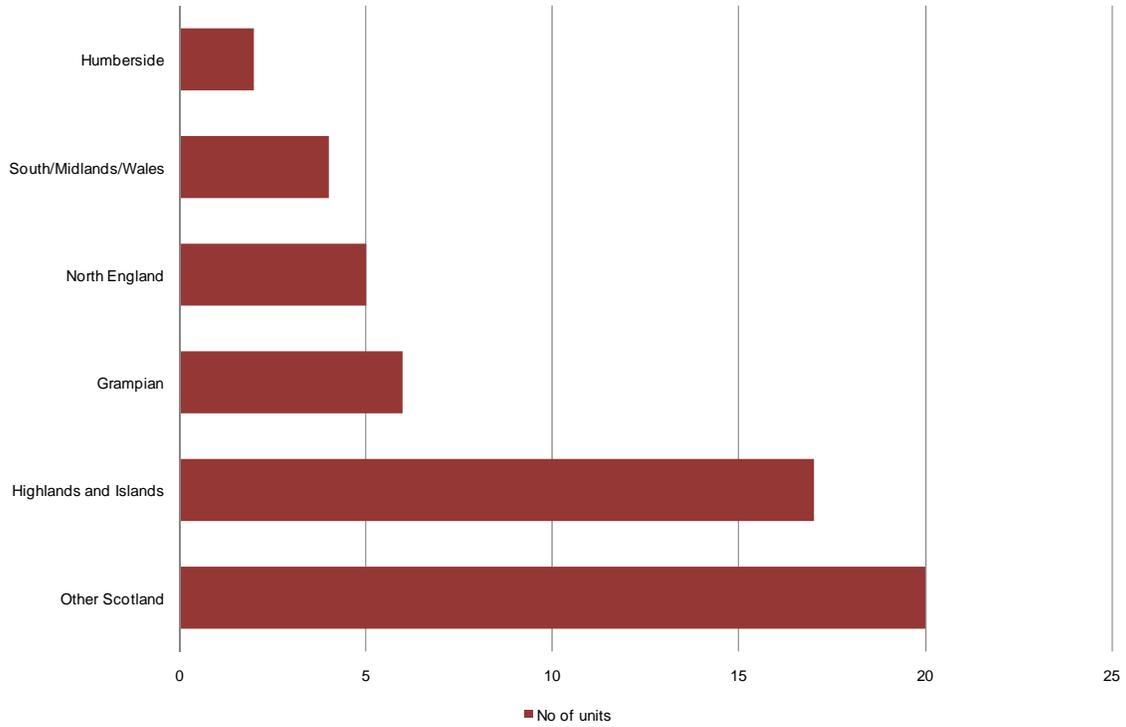


Figure 1.12 Distribution of UK salmon processing units by region

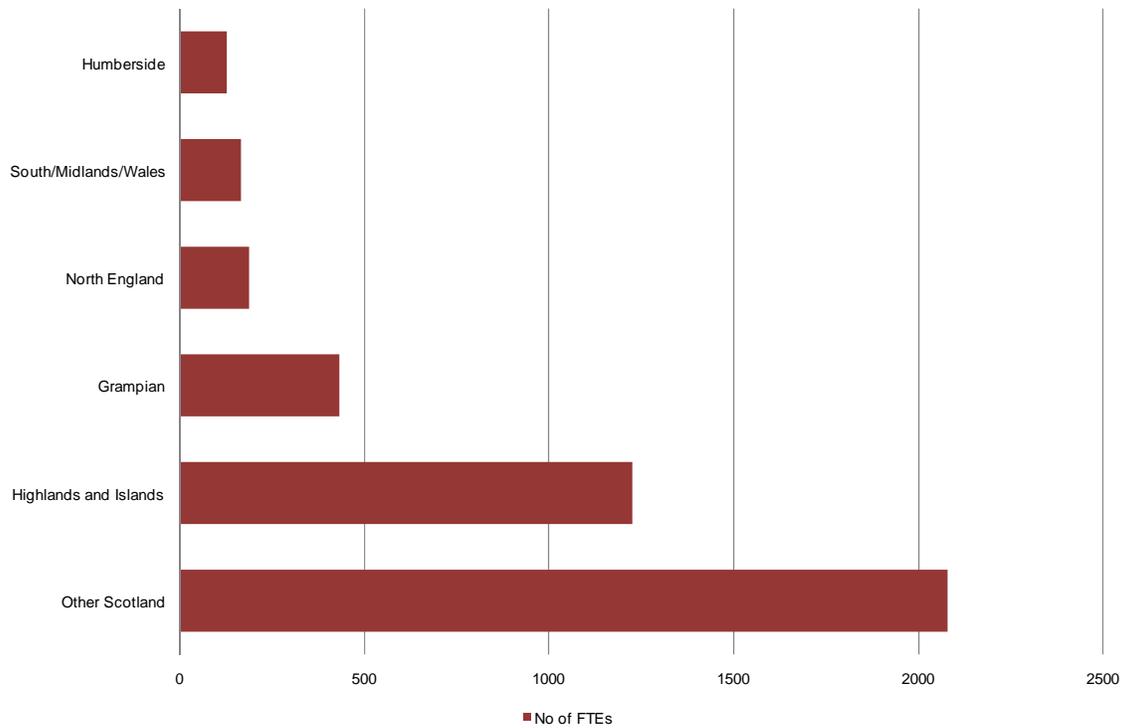


Figure 1.13 Distribution of UK salmon employment by region

## 7. Research strategy and methods

The research strategy involved defining the stakeholders, agreeing the research objectives, defining the research scope and methods, and a plan to secure industry engagement.

### 7.1 Defining the stakeholders

The stakeholders were defined as the UK Government (specifically the newly established Marine Management Organisation) and the Scottish Government (the Marine Analytical Unit of Marine Scotland).

### 7.2 Research objectives and scope

The research objectives were to provide data:

1. to enable the UK government to meet its obligations under the EU data collection framework EC Decision 2008/949
2. to provide key insights into the changing structure of the seafood processing industry
3. to update the Seafish processor database and
4. for future input-output reports on the UK processing sector.

The research scope was defined as relating to two industry groupings:

1. enterprises that carried out fish processing as a main activity. Main activity was defined as being that accounting for more than 50% of turnover generated by either seafood or salmon processing.
2. enterprises that carried out fish processing but not as a main activity. Data was to be collected on number of enterprises; and turnover attributed to fish processing where possible.

The research scope excluded the following aspects of industry: companies engaged in farming and distribution only; processors located in Isle of Man and Channel Islands; and financial analysis of businesses processing a wide range of food, of which fish contributes less than 50% of the turnover.

### 7.3 Definitions

The following definitions were used throughout this survey. These are consistent with previous surveys.

#### Processor

- A processor is a company which in some way materially changes the seafood. This excludes seafood merchants who buy and sell seafood, possibly including defrosting, repackaging and selling in smaller quantities but not actually coating or cutting the seafood in any way.
- Fishmongers who process seafood solely for sale in their own retail outlet are not included.

- Service companies, who provide a processing service to other companies without owning the seafood, are included, as they materially change the
- seafood.
- Processors were divided into seafood and salmon processors according to whichever constituted the greater part of their turnover.
- Trout-only processors are excluded from the report although data was gathered from these companies.
- Employment data includes mainly seafood-processing employees. Onsite admin staff have been included, but not office staff or office-only sites. This is a natural consequence of viewing each processing plant as a separate unit and is consistent with previous surveys.
- Businesses that process fishmeal that is not for human consumption were excluded.
- Processors located in Isle of Man and Channel Islands were excluded.

### Process types

Primary processes include: cutting, filleting, picking, peeling, washing, chilling, packing, heading and gutting.

Secondary processes include: brining, smoking, cooking, freezing, canning, deboning, breading, battering, vacuum and controlled packaging, production of ready meals.

Processors who carry out processes from both of these categories are classed as “mixed” processors. It is important to remember these strict definitions when considering the figures presented in this report, since there is often a general idea that a primary processor is a smaller firm filleting fresh fish and a secondary processor is a large firm producing ready packaged seafood products. For the purpose of this survey, large units which carry out primary processes to provide material for their finished products have been classed as mixed (i.e. units are defined by activity rather than output).

### Processor Size

- Small processor: 1–25 FTEs
- Medium processor: 26–100 FTEs
- Large processor: 100+ FTEs

### Seafood types

Fish types included have been defined as follows:

- *Demersal / whitefish* includes: cod, haddock, plaice, whiting, pollack, saithe (coley), hake, monk/anglerfish, soles, lemons, megrim, witches, brill, turbot, halibut, dogfish, sharks, skates, rays, john dory, bass, ling, catfish, redfish.
- *Pelagic* includes: herring, mackerel, pilchard, sprat, horse mackerel, whitebait, tuna.
- *Shellfish* includes: nephrops (scampi, langoustines), scallops, crabs, oysters, cockles, mussels, winkles, lobster, crawfish, shrimps, squid, cuttle-fish, octopus.

Data to be collected was expected from: companies of all sizes; engaged in any type of processing (primary, secondary, mixed); which process any type of fish (demersal fish, shellfish, cephalopods, exotic fish, pelagic fish, salmon, trout).

#### 7.4 Research methods

The research involved two data collection tasks and the methods employed for obtaining the data included a combination of primary and secondary research. The first task was concerned with defining the industry and its activity and involved a *census survey* of all UK processing activity in the UK. Having defined the industry, the second task was concerned with industry performance and involved a *financial survey* supplemented by existing financial data available from Companies House. Data from both research tasks was then analysed to generate the findings and meet the deliverables.

#### 7.5 Task 1 - Census survey

The census survey sought to define the population of the UK seafood processing industry. In the first instance a list of possible seafood processing companies was compiled drawn from a variety of sources: the 2008 census of the processing industry; the Seafish contact management system; Seafish levy database; and a list of food processing companies having a fish processing licence from the Food Standards Agency. Each company within the list of possible seafood processing companies was then contacted through a telephone survey exercise. The telephone survey used a very short questionnaire that asked for confirmation of business details, and for details of their business activity (whether they processed seafood, traded seafood or neither, species handled, the proportion of turnover from seafood processing, nature of processing activity). If the company activity was majority seafood processing (by share of turnover) then further information was sought including employment (full time, part time, seasonal) and an invitation was made to participate in the financial survey.

The census survey was conducted as follows:

1. A database was constructed (using Microsoft Access) to contain the list of potential seafood processors (c.1,300), and the survey data
2. Research assistants were used to contact all potential seafood processors by telephone
3. Companies were categorised as seafood processing businesses or otherwise
4. Where a business had more than 50 full time equivalent employees, written confirmation of employment was requested

5. All data gathered was stored on paper copies before entry into database

## 7.6 Task 2 - Financial survey

Those companies categorised as seafood processing businesses constituted “the population”; these were approached to participate in the financial survey. A very short questionnaire was designed to allow very simple and straightforward responses concerning the data required (table 1). This information was supplemented with published financial information on seafood processors available from Companies House.

The financial survey was conducted as follows:

1. A database was constructed (using Microsoft Excel) to contain the financial data on participating seafood processors and data from Companies House
2. Research assistants were used to invite all seafood processing companies to participate (441)
3. All data gathered was stored on paper copies before entry into the database

A number of businesses were unwilling to participate in the survey. Where possible this unwillingness was overcome by using Seafish staff with personal contact with companies to provide assurance. However, in many cases this was not possible and reasons given by companies included:

1. Commercial sensitivity
2. Lack of time to compile relevant data
3. Lack of available data
4. Lack of value from participating in the exercise

<b>Table 1 Data to be collected from fish processing enterprises*</b>	
<b>Variable Group</b>	<b>Variable</b>
Income	Turnover
	Subsidies
	Other Income
Personnel Costs	Wages and salaries of staff
	Imputed value of unpaid labour
Energy Costs	Energy costs
Raw Material Costs	Purchase of fish and other raw materials for production
Other Operational Costs	Other operational costs
Capital Costs	Depreciation of capital
	Financial costs net
Extraordinary Costs	Extraordinary costs net
Capital Value	Total value of assets
Net Investments	Net Investments
Debt	Debt
Employment	Number of persons employed
	FTE National
Number of enterprises	

\*2008/949/EC Appendix XII(based on the requirements of EC decision 2008/949/EC in accordance with the UK national programme)

### *7.7 Data input and analysis*

When undertaking the census survey, researchers produced completed questionnaires and entered survey data directly into an Access database. Data from the financial survey was received from companies, and input centrally to the financial database to minimise input errors. All data was analysed using a STATA program routine which sourced data directly from the survey database and accounts data (sourced from Companies House). The STATA routine combined the data and analysed according to a statistical methodology designed to produce the required deliverables. The statistical methodology departed from previous methods which involved regression models based on species processed, process type, location etc. The methodology adopted in the 2010 census used the more straightforward factor of business size using a proxy of full time equivalent as the leading predictor.

Some partially completed survey returns meant that data on all variables for all participating companies was not comprehensive.

## Appendix 1 Seafood processing industry tables

UK seafood processing industry population: FTEs and processing units					
Seafish processors	1995	2000	2004	2008	2010
No. of UK FTE jobs	19,659	22,256	18,180	14,660	14,331
No. of processing units	719	541	573	479	384
Average FTEs per unit	27	41	32	31	37

Table 1.1 UK seafood processing industry population: FTEs and units

FTE Band	2004	2008	2010
1-10	307	255	189
11-25	121	108	88
26-50	63	44	45
51-100	48	41	33
101+	34	31	29
Total	573	479	384

Figure 1.1 Number of processing units by size (FTE band)

FTE Band	2000	2004	2008	2010
1-10 FTEs	1,561	1,579	1,400	986
11-25 FTEs	1,784	1,964	1,781	1,420
26-50 FTEs	2,230	2,349	1,600	1,679
51-100 FTEs	2,899	3,385	2,944	2,324
101+ FTEs	13,826	8,903	6,935	7,922
Total	22,300	18,180	14,660	14,331

Figure 1.2 Industry employment by processing unit size (N=384)

Species	2000	2004	2008	2010
Demersal only	8,474	4,335	1,899	2,446
Mixed species	8,920	9,596	8,467	8,494
Pelagic only	669	762	785	789
Shellfish only	4,014	3,487	3,504	2,602
Total	22,077	18,180	14,660	14,331

Figure 1.3 Industry employment by species processed (N=384)

Process type	2000	2004	2008	2010
Primary	206	226	220	159
Mixed	263	283	201	170
Secondary	72	64	58	55
Total	541	573	479	384

Figure 1.4 Proportion of seafood processing units by process type

Process type	2000	2004	2008	2010
Primary	2,695	2,812	3,051	2545
Mixed	11,465	10,025	8,186	6979
Secondary	8,096	5,343	3,423	4807
Total	22,256	18,180	14,660	14,331

Figure 1.5 Proportion of industry employment by process type (N=384)

	Sites	Percentage of Sites
Cooperative	1	0.3%
Limited Company	211	56.4%
Partnership	60	16.0%
PLC	0	0.0%
Sole Trader	74	19.8%
Subsidiary	28	7.5%
Total	374	100.0%

Figure 1.6 Ownership type of processing units (N=374)

Age Range	Units	Total Employed
0-5 Years	42	766
6-10 Years	48	2,617
11-15 Years	37	1,193
16-25 Years	77	2,247
26-50 Years	108	4,842
51-100 Years	47	2,196
over 100 Years	13	374
Total	372	14,235

Figure 1.7 Age of processing units (N=372)

Region	Primary	Mixed	Secondary	Total
Humberside	52	20	12	84
Grampian	35	31	6	72
North England	19	25	12	56
South/Midlands/Wales	10	28	12	50
Other Scotland	10	27	3	40
S W England	21	12	5	38
Highlands and Islands	6	17	2	25
N. Ireland	6	10	3	19
Grand Total	159	170	55	384

Figure 1.8 Seafood processing units by region

Region	Primary	Mixed	Secondary	Total
Humberside	708	2,413	1,186	4,307
Grampian	700	1,182	1,247	3,129
South/Midlands/Wales	96	986	985	2,067
North England	161	669	1,069	1,899
Other Scotland	265	715	114	1,094
S W England	429	406	76	911
Highlands and Islands	86	399	35	520
N. Ireland	100	209	95	404
Grand Total	2,545	6,979	4,807	14,331

Figure 1.9 Industry employment by region (N=384)

## Appendix 2 Salmon processing industry tables

UK salmon processing industry population: FTEs and processing units							
Salmon processors	2001 (Scotland)	2004 (Scotland)	2008 (Scotland)	2010 (Scotland)	2004 (UK)	2008 (UK)	2010 (UK)
No. of FTE jobs	4,728	3,849	4,073	3,737	4,462	5,223	4,223
No. of processing unit	145	55	48	43	76	71	54
Average FTEs per unit	33	70	85	87	59	74	78

Table 1.2 UK salmon industry population: FTEs and units

Process type	2004	2008	2010
Primary	24	17	7
Mixed	36	38	30
Secondary	16	16	17
Total	76	71	54

Figure 1.10 Salmon processing units by process type

Process type	2004	2008	2010
Primary	1,135	725	410
Mixed	3,004	4,134	3,318
Secondary	322	364	495
Total	4,461	5,223	4,223

Figure 1.11 Salmon industry employment by process type (N=54)

	Primary	Mixed	Secondary	No of units
Other Scotland	2	12	6	20
Highlands and Islands	3	7	7	17
Grampian	0	4	2	6
South/Midlands/Wales	0	4	1	5
North England	1	2	1	4
Humberside	1	1	0	2
S W England	0	0	0	0
N. Ireland	0	0	0	0
Grand Total	7	30	17	54

Figure 1.12 Distribution of UK salmon processing units by region

	Primary	Mixed	Secondary	No of FTEs
Other Scotland	135	1,737	207	2,079
Highlands and Islands	232	725	269	1,226
Grampian	0	423	9	432
North England	15	169	6	190
South/Midlands/Wales	0	164	4	168
Humberside	28	100	0	128
S W England	0	0	0	0
N. Ireland	0	0	0	0
Grand Total	410	3,318	495	4,223

Figure 1.13 Distribution of UK salmon employment by region (N=54)