



Seafood Choices Alliance

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ALLIANCE



The UK Marketplace for Sustainable Seafood

APRIL 2007

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1 Introduction

1.1 A Comprehensive Review of the UK Seafood Market

This report provides information regarding UK seafood production, both wild and farmed, together with seafood trade. With global demand for seafood growing year on year, the UK like many countries, now imports more seafood than it produces domestically. The mounting demand for seafood worldwide is also being met by increased aquaculture production, and UK farmed seafood is a significant component in this rapidly expanding worldwide industry.

There is a detailed look at trends for seafood sales in the retail and food service sectors, where retail sales are at an all-time high and forecast to keep growing. Data from the food service sector is less comprehensive at the current time, but seafood sales appear to be increasing throughout this entire sector.

The first section concludes with a brief examination of the market for sustainable seafood in the UK, including eco-labelling.

1.2 Constant Cravings and Sustainable Tables

This report includes the UK highlights of market research commissioned by Seafood Choices Alliance in 2005. Surveys were conducted in the UK, Spain and Germany to uncover the influences and concerns of those buying seafood both for personal consumption or business (chefs and retailers). The results demonstrated that seafood buyers across Europe were increasingly aware of the environmental impacts of overfishing and in many cases this awareness translated into a willingness to change their buying behaviour in favour of more sustainable choices.

1.3 Turning the Tide

In a 2006 study published in the journal *Science*¹, an international group of ecologists and economists concluded that loss of biodiversity is profoundly reducing the ocean's ability to produce seafood, resist diseases, filter pollutants, and rebound from stresses such as overfishing and climate change². This study led to headlines around the world hailing "the end of fish by 2048".

However, as the lead author notes, "this is not a prediction, it's a *possible* outcome based on a projection of existing data." The study also strikes a great note of hope, by recognising the inherent ability of ocean ecosystems to self-heal and regenerate, under the right circumstances.

All seafood buyers can influence this outcome through their buying choices. All of us involved in the seafood chain – from fishermen to retailer to consumer – have a responsibility to ensure that we can continue to enjoy the oceans' natural bounty for generations to come.

Seafood Choices Alliance
London, UK. April 2007.

¹ Impacts of Biodiversity Loss on Ocean Ecosystem Services', Worm, B. et al. *Science*, November, 2006.

² www.compassonline.org

1.4 The Role of Seafood Choices Alliance

The Seafood Choices Alliance presents the *The UK Marketplace for Sustainable Seafood* as a reference for those who care about sustainable seafood. For the first time, this report brings together information on the UK seafood market with research on consumer and buyer attitudes towards seafood. With this information, the conservation community and the seafood sector will be better equipped in developing strategies that ensure consumers make informed seafood choices – choices that ensure a healthy seafood supply for years to come.

Founded in 2001, the Alliance represents those who care about making the seafood marketplace more sustainable – consumers, industry and environmental organisations alike. The Alliance, the global trade association for the issue of sustainable seafood, provides the tools and resources that those in the seafood sector need to make smart, conscientious choices.

2 Seafood Production

The global trade in seafood (both fish and shellfish, wild-caught and farmed) is a multi-million pound industry, and in 2004 was valued by the United Nations Food and Agriculture Organisation (FAO) at over £37 billion.

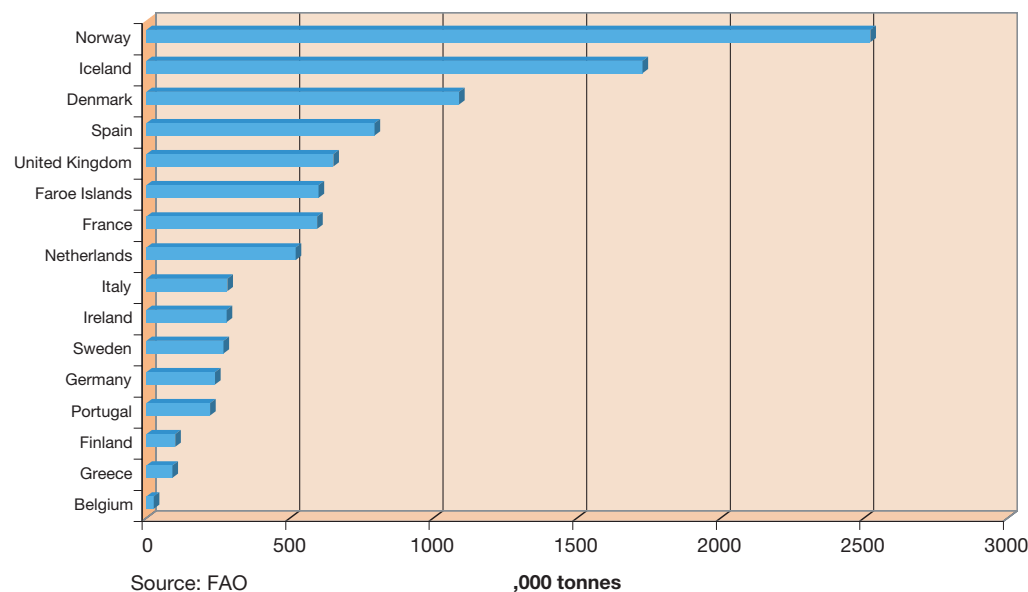
Fisheries worldwide landed 95 million tonnes of seafood in 2004 and aquaculture provided an additional 45 million tonnes³. By 2030, the FAO predicts an additional 40 million tonnes of seafood will be required to satisfy the growing demand. Per capita consumption is rising, as is affluent nations' demand for imported seafood products.

In 2004, the total UK seafood market was valued at £5.2 billion⁴. The UK plays an important role in the global seafood industry both through its domestic landings, which are increasingly exported to Europe and beyond, and as a significant source of farmed seafood, a growing industry worldwide. It is a net importer of seafood, importing three times as much as the fleet catches. The UK consumers' appetite for more exotic species is growing, while populations of seafood traditionally caught domestically, such as cod, are less abundant.

2.1 European Fisheries

According to the FAO, in 2004, almost 12% of the global catch was landed by European nations. The members of the EU15⁵, plus Norway and Iceland are Europe's top producers, accounting for 71% of Europe's landings⁶.

Figure 1.1: European Wild Fishery Landings, 2004



The UK is the fifth largest producer of wild caught fish in Europe. In 2004, UK landings totalled 654,000 tonnes with a value of £513 million.

The UK is a significant producer of wild caught shellfish: scallops, winkles, Norway lobster and mussels, with landings of the latter two species amounting to 13% and 6% of the global catch in 2004⁷.

³ United Nations Food and Agriculture Organisation (FAO).

⁴ The Sea Fish Industry Authority (Seafish).

⁵ The EU15 comprised the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

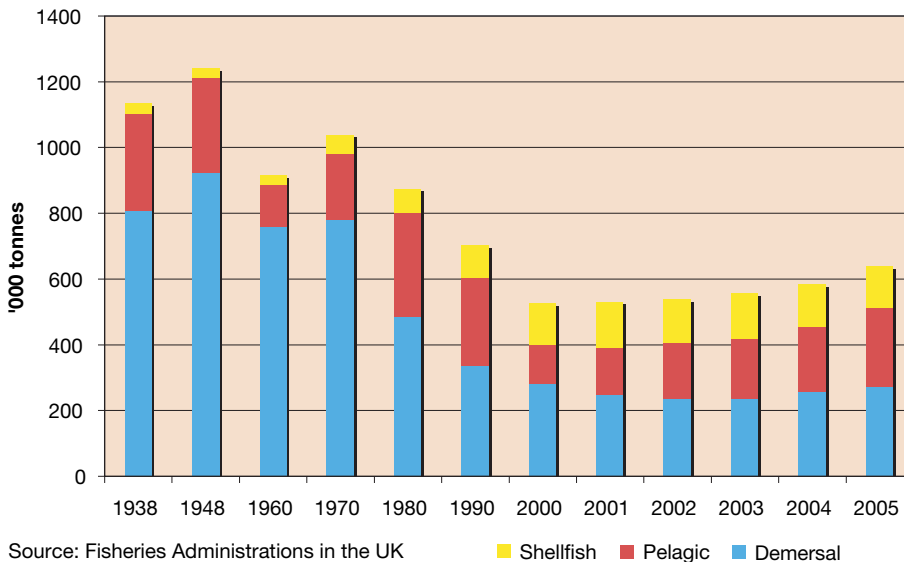
⁶ FAO fishstat includes the Russian Federation, which at 2.8 million tonnes, is the second largest producer after Norway (and 19% of all of the European landings combined).

⁷ FAO.

2.2 UK Fisheries

In 2005, UK landings were almost half those of the boom period after the Second World War, when fish populations rebounded following the reduced fishing effort during the war. However, the rapid decline that took place through the 1970s, '80s and '90s has slowed and in fact, landings are showing a gradual upward trend, probably as a result of implementation of more robust management measures (catch limits, fishery closures and gear modifications).

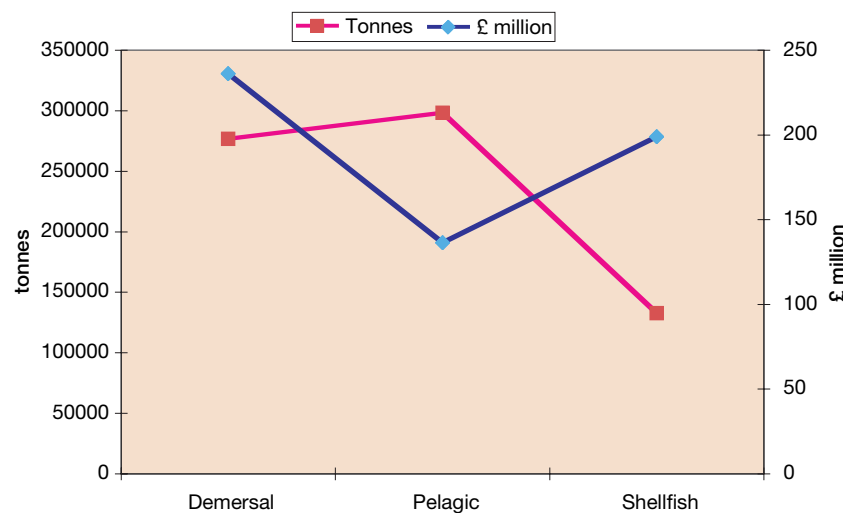
Figure 1.2: Landings into the UK, 1938-2005
(UK and foreign vessels)



In recent years, declining populations and limits on total allowable catch (TAC) have seen a significant decrease in landings, especially of cod. There has been a shift to fishing for alternative species, and an increase in landings of more lucrative shellfish species.

UK fisheries landings are divided into three categories: demersal (i.e. cod), pelagic (i.e. mackerel) and shellfish. Historically, the predominant catch was demersal.

Figure 1.3: UK Landings: Weight vs. Value, 2004



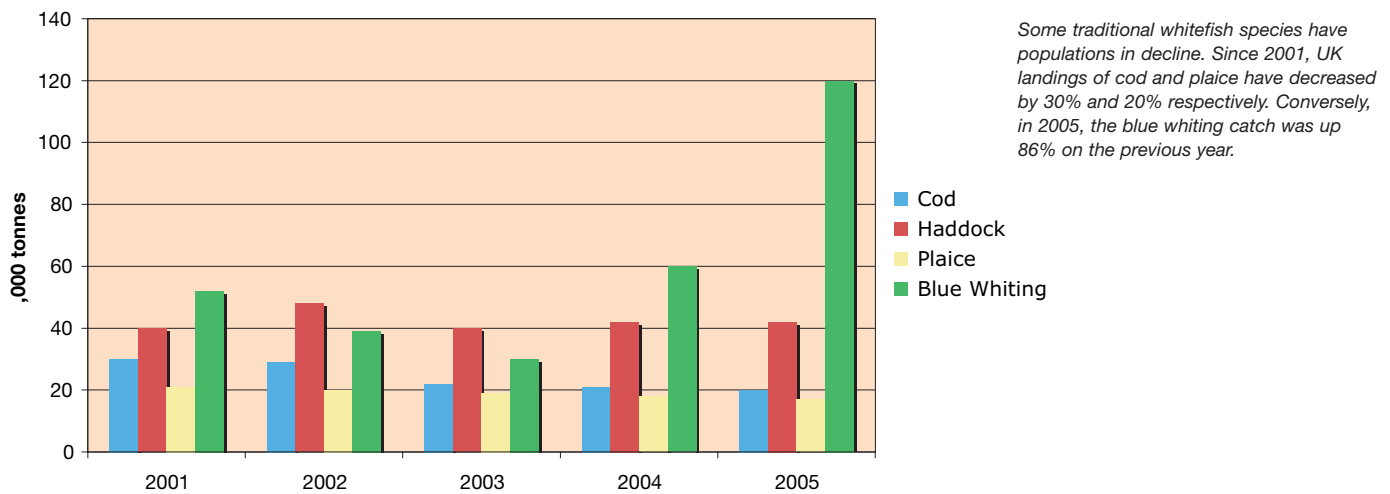
In 2005, landings by UK fisheries had a market value of over £570 million.

While shellfish only accounted for 18% of the total UK catch in 2004, the value, at nearly £200 million represented almost 35% of the total landings⁸.

⁸ United Kingdom Sea Fisheries Statistics, 2005.

2.2.1 Demersal Fisheries

Figure 1.4: UK Demersal Species Landings, 2001-2005



Source: United Kingdom Sea Fisheries Statistics, 2005.

As traditional whitefish species have seen decline, both in population size and landing quotas, there has been a recent shift towards catching less well-known species, such as blue whiting. In 2005, 112,000 tonnes of blue whiting were landed. This was 40% of the total demersal landing by UK fisheries that year, and almost double the landings of cod and haddock combined. However, the commercial value of the blue whiting catch was only 3% of the total demersal catch value⁹.

Blue whiting is a member of the cod family, but it is rarely offered for sale in supermarkets. It is sometimes used in the food service sector, but is simply labelled as 'whitefish'. It is most often used to create fishmeal and fish oil for the aquaculture industry.

Population sizes of this species are not well understood, and scientists have some concerns over the growing size of the fishing fleets searching it out. Blue whiting is an important food item to many other species, including predatory fish, cephalopods and marine mammals¹⁰.

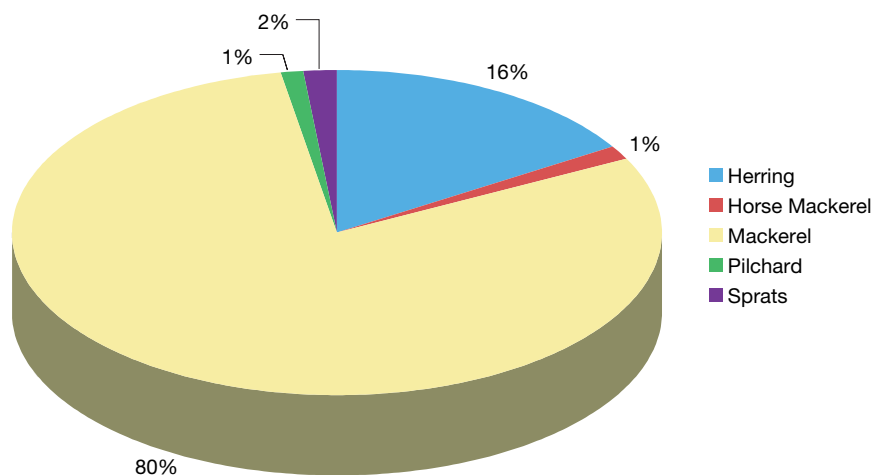
⁹ United Kingdom Sea Fisheries Statistics, 2005.

¹⁰ ICES: <http://www.ices.dk/marineworld/bw2.asp>

2.2.2 Pelagic Fisheries

Mackerel is the most important pelagic fishery for the UK fleet. In 2005, it accounted for 18% of all UK landings (fish and shellfish combined), with a value of £104 million. This was despite a 22% decrease in mackerel landings since 2001¹¹. The decline is believed to be due to a combination of factors: overfishing, a reduction in plankton, (the main diet of mackerel) and reduced reproductive capacity¹².

Figure 1.5: UK Pelagic Landings, by Value, 2005



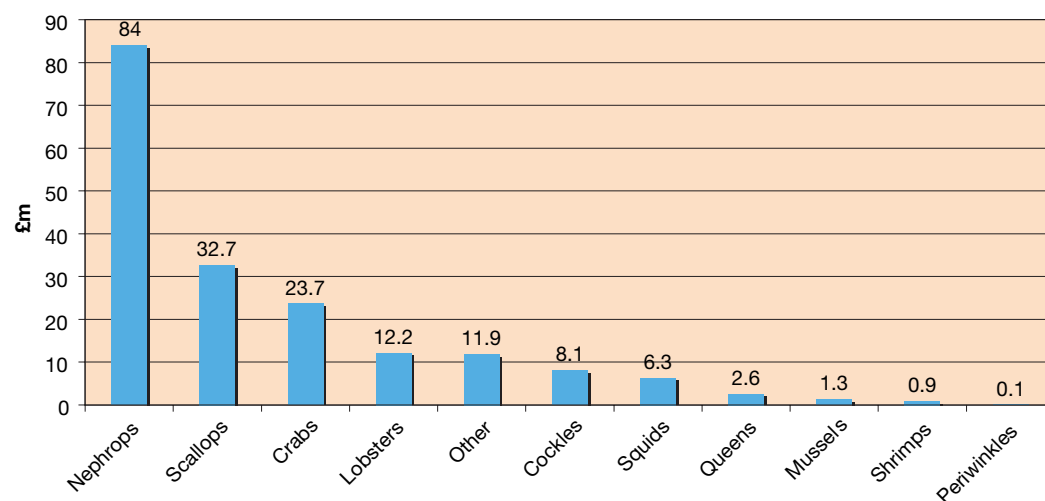
Mackerel and herring account for 94% of all pelagic fish caught by UK fisheries. Although the herring fishery is the smaller of the two, landings are increasing and in 2005 were up 55% on 2001 landings¹³.

Source: United Kingdom Sea Fisheries Statistics, 2005.

2.2.3 Shellfish Fisheries

These are smaller, but highly lucrative fisheries. The most valuable species in 2005 were crabs, scallops and Norway lobster (*nephrops*). The latter accounted for 72% of the value of all UK shellfish landings, and 25% of the weight. Norway lobster is also known as langoustine or Dublin Bay prawn. Additionally, it can be sold as scampi (scampo is the Italian word for Norway lobster), although in the UK the term scampi refers to any shrimp or prawn tail meat coated in breadcrumbs.

Figure 1.6: UK Shellfish Landings, by value, 2005



The Norway lobster fishery is relatively new, but growing; it has increased 20% since 2001 and in 2005 the UK landed 34,000 tonnes of this species, valued at £84 million¹⁴.

Source: United Kingdom Sea Fisheries Statistics, 2005

11, 13 & 14 United Kingdom Sea Fisheries Statistics, 2005.

12 Charting Progress: An Integrated Assessment of the State of UK Seas. Department for Environment Food and Rural Affairs (DEFRA).

3 Aquaculture

Aquaculture first became significant in the 1980s, and production has since grown at approximately 8% per year. The global market for farmed salmon has grown at 10% a year for the last 10 years¹⁵. A 2006 FAO report on aquaculture estimated that 43% of all fish destined for human consumption was raised in an aquaculture facility. This amounted to 45.5 million tonnes of farmed seafood with a value of £33 billion¹⁶.

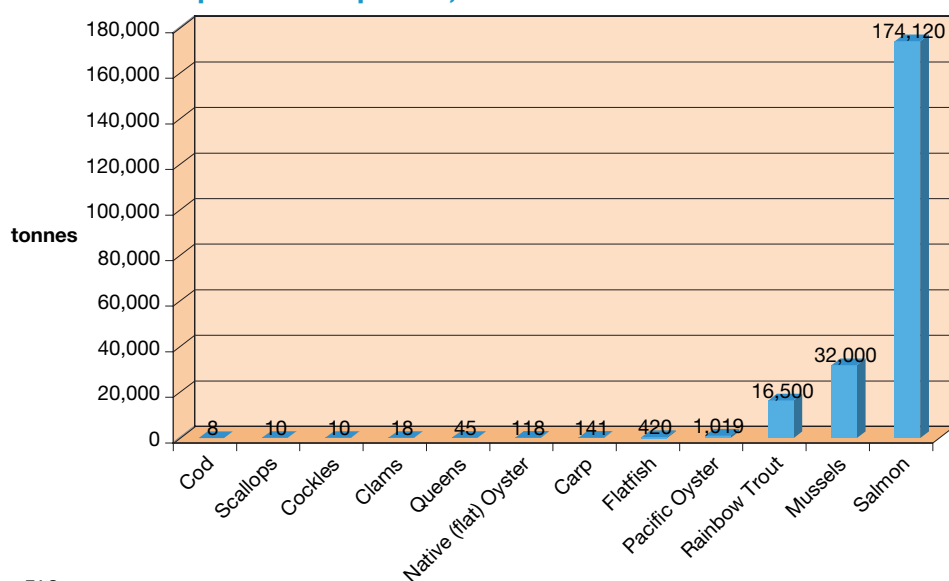
In 2006, developing nations produced 99% of all farmed shrimp, with a value of £4.4 billion¹⁷. Asia was the world's largest producer of farmed shellfish, but Europe was the second largest, with 5% of the total world production of molluscs¹⁸.

3.1 UK Aquaculture

Aquaculture is a growing business in the UK with over 600 fish and shellfish farming businesses operating on 1500 sites, directly employing more than 3000 people¹⁹.

Over 90% of all the UK's farmed seafood is produced in Scotland²⁰.

Figure 2.1: UK Top Farmed Species, 2004



Approximately one-third of all the UK's seafood production is farmed.

Atlantic salmon, mussels and rainbow trout are the top three species (by volume).

Source: FAO

The main finfish species farmed in the UK are Atlantic salmon and rainbow trout, with a lesser production of carp, brown trout, turbot, halibut, cod and Arctic char²². Farmed cod is very new to the aquaculture industry and therefore production levels are low, but the product is attracting media and buyer attention through creative marketing, with slogans such as, 'No Catch...Just Cod'²³.

The mussel is the most frequently farmed shellfish. There are a small number of oyster and clam farms and trials of scallop farming have been successful²⁴.

15 Ernst & Young, 'Review of Current Trends in the Scottish Salmon Farming Industry', December 2005.

16 FAO, 'The State of World Aquaculture 2006'.

17 & 21 FAO.

18 Centre for Environment Fisheries and Aquaculture Science (CEFAS) Shellfish News, Number 20, November 2005.

19, 20 & 22 DEFRA.

23 Johnson Sustainable Seafoods

24 CEFAS, Shellfish News, Number 20, November 2005.

3.1.1 Farmed Trout

Two species of trout are farmed in the UK, the indigenous brown trout and the non-native rainbow trout. The most commonly farmed species is the rainbow trout with 2005 production at 16,500 tonnes²⁵.

The rainbow trout is a Pacific salmonid species, introduced to the UK in 1884. It is farmed around the world, as its fast growing nature and ability to tolerate crowding making it an ideal candidate for farm raising²⁶. It is farmed both for retail sale, and for restocking of recreational fisheries.

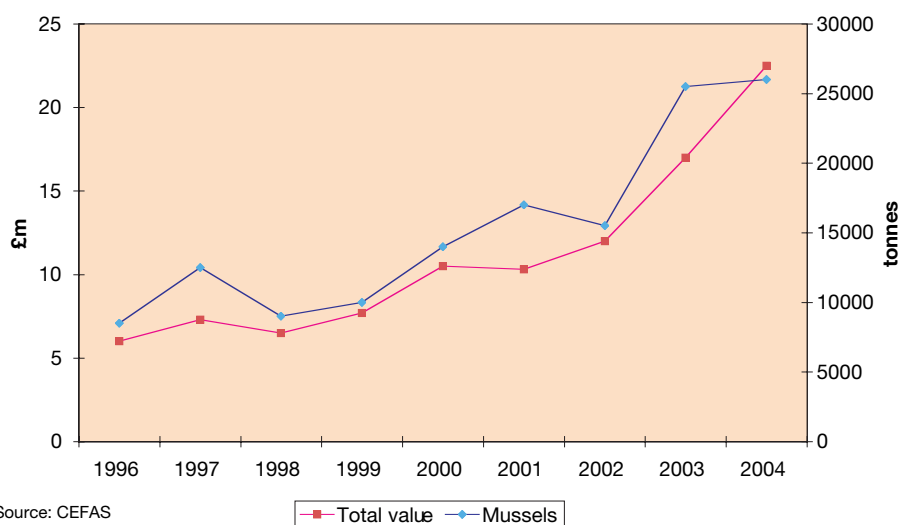
There are places in the UK where this trout reproduces in the wild, but most are bred in farms and raised in freshwater ponds, gravel pits, cages placed in fast flowing rivers, and a small number of sea cages in deep fresh water lakes and lochs²⁷.

Although trout need to be fed a diet including wild caught fish, the feed ratios are generally considered to be low in wild caught content, and farmed trout have one of the lowest environmental impacts of all the carnivorous farmed species. Most environmental groups rate farmed rainbow trout as a good choice²⁸.

3.1.2 Farmed Mussels

In the UK the mussel is both farmed and collected in the wild.

Figure 2.2: UK Farmed Mussel Production, and Total Farmed Shellfish Value, 2004



In 2004, the UK farmed over 26,000 tonnes of mussels, with a market value of over £20 million. This was 10 times the value of the wild catch²⁹.

Source: CEFAS

There are two different techniques for farming mussels; one is carried out by dredging juvenile mussels and transporting them to more sheltered areas for growing to marketable size; the other is to grow them from seed, on ropes hung from long lines or rafts (particularly common in Scotland). Mussels are often grown with other cultured shellfish, such as Pacific Oysters³⁰.

²⁵ DEFRA.

²⁶ Fisheries Research Services, Scottish Executive Environment Rural Affairs Department (SEERAD).

²⁷ British Trout Association.

²⁸ i.e. Marine Conservation Society (MCS), 'Fish Online' & Monterey Bay Aquarium, 'Seafood Watch'.

²⁹ CEFAS - 2004 mussel landings totalled 12,074 tonnes, with a value of £2 million.

³⁰ CEFAS, Shellfish News, Number 20, November 2005.

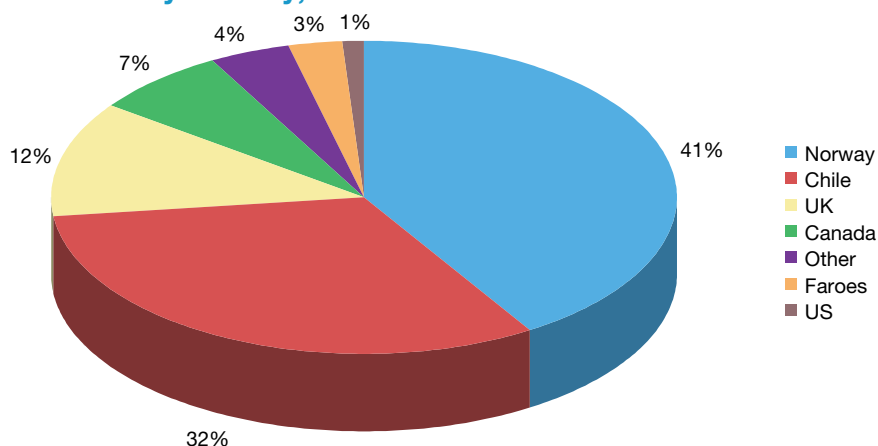
The importance of culturing shellfish in clean waters has been recognised, especially in Scotland where 114 protected areas have been designated for shellfish³¹, to help ensure protection of the water quality. The institution of such protected areas reflects the recognition of the increasingly important value of the shellfish industry in the UK.

3.1.3 Farmed Salmon

The EU and US consume 75% of the world's production of farmed salmon³² and the EU market is projected to grow at an annual rate of 7% until 2010³³.

The Scottish Salmon Producers Association (SSPO) reports that UK demand for fresh salmon grew by 13.8% between 2004 and 2006 and smoked salmon consumption increased nearly 40%.

Figure 2.3: Global Farmed Salmon Production, by Country, 2004



The UK is the third largest producer of farmed salmon in the world, after Chile and Norway. In 2004, the UK produced over 12% of the total world supply, with production of over 158,000 tonnes³⁴.

Source: FAO

Scotland produces 95% of all of the UK's farmed salmon³⁵. The Scottish salmon industry employs over 10,000 people (directly and indirectly) and the retail value of its product in 2004 was estimated at over £700 million³⁶.

2006 saw further consolidation in the salmon farming industry, with the merger of the Norwegian company Pan Fish³⁷ (who bought Fjord in 2006) and Marine Harvest³⁸ (who bought Stolt in 2005). This new alliance created the world's largest salmon farming company, supplying 30-40% of all farmed salmon, and over 40% of all Scottish farmed salmon. In fact 85% of Scotland's salmon farms are Norwegian owned³⁹. Many small independent farms have been unable to compete in this tight market in recent years, and have been forced to either consolidate with larger farms or shut down altogether.

31 CEFAS.

32 Ernst & Young, 'Review of Current Trends in the Scottish Salmon Farming Industry', December 2005.

33 Kontali – aquaculture and fishing industry analyst.

34 FAO.

35 Seafood Intelligence News.

36 Scottish Salmon Producers Organisation.

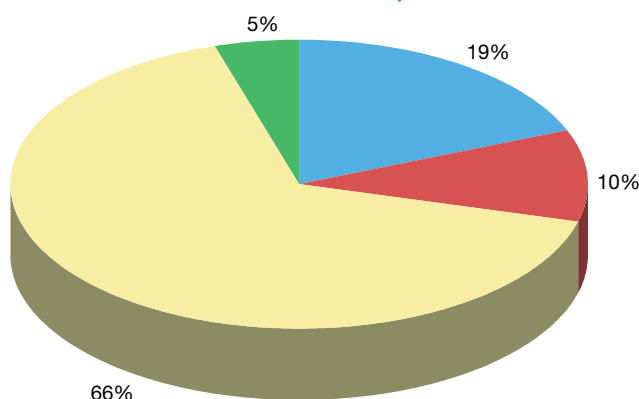
37 Pan Fish is the largest producer of farmed salmon in Chile and Canada – the primary sources for US consumers.

38 Marine Harvest is the largest producer of farmed salmon in the world – it is the primary source for European consumers.

39 Seafood Intelligence News, December 11, 2006.

The EU sources 60% of its farmed salmon from Norway, with a further 10% supplied by Chile⁴⁰. However, the UK sources only 19% from Norway, with UK retailers stating a preference for UK salmon, as local is perceived as fresher. They also prefer the chilled UK product to the frozen product shipped from Chile⁴¹.

Figure 2.4: Source of Farmed Atlantic Salmon Consumed in the UK, 2004

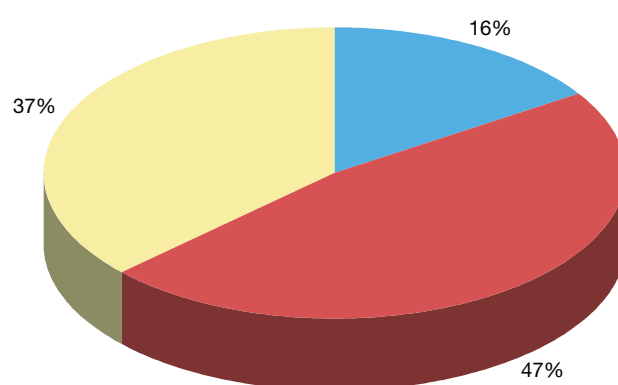


Source: Ernst & Young

■ Norway ■ Chile ■ UK ■ Other

In the UK two-thirds of all salmon consumed is farmed in Scotland

Figure 2.5: UK Farmed Salmon Production - Channels to Market



Source: Ernst & Young

■ Food Service ■ Retail ■ Export

The retail channel sells 75% of the farmed salmon available to the domestic market. Retailers typically buy their supply through UK food processors, who add value, i.e. by filleting and pre-packing. The food service industry buys its salmon from wholesalers. Niche producers, such as organic farms, may supply directly to either channel⁴².

3.1.4 Fishmeal: salmon eat fish too

Scientists continue to be concerned about the growth of aquaculture, particularly with regards to the raising of carnivorous species, such as salmon. Although much improved in recent years, a significant amount of wild caught fish is generally required to feed carnivorous farm raised fish. A well-managed facility may have a feed ratio as low as 1:1 - i.e. one pound of wild caught fish for every pound of farmed salmon produced. However, with millions of salmon in pens at any one time around the world, these feed requirements are still considered by many scientists to be unsustainable, and the FAO estimates that 27% of all fish caught are destined for the feed industry, of which 35% is used in aquaculture.

In addition to removing species that are vital in the food chain for other ocean predators, the small fish used to create fishmeal may be a vital protein source for developing countries and their subsistence fisheries. With a growing worldwide demand for seafood, the role of aquaculture is important, but its use for carnivorous and luxury food items such as salmon and shrimp remains controversial. Farming of herbivorous fish (i.e.) tilapia and filter feeders, such as mussels, can be achieved in an environmentally responsible manner. However, the industry still has a long way to go if it is to provide an adequate source of protein for a growing world population, without further damage to marine ecosystems.

⁴⁰ & ⁴² Ernst & Young: 'Review of Current Trends in the Scottish Salmon Farming Industry'.

⁴¹ Chilean salmon is frozen, rather than air freighted fresh, to keep the price competitive with fresh European produce (E&Y).

3.1.5 Organic salmon – gimmick or good choice?⁴³

Consumers are generally familiar with organic produce, such as fruit and meat. With increasing frequency, organic is being applied to farmed fish such as salmon. One UK certifier, the Soil Association asserts, "standards for organic salmon farming are now on a par with terrestrial organic farming." A growing number of independent fish farms in Scotland and Ireland have organic certification. It's important to note that each country in Europe has its own standards, both national and private, which may vary even within the country⁴⁴. There are no common standards at this time, but this may change at the next European Commission review.

The basic tenants of organic fish farming are; that the fish should have limited exposure to chemicals and the feed should be natural (without added colour) and come from a sustainable source. Only trimmings from fish caught for human consumption currently meet this requirement. Producers must also meet animal welfare standards, raising half the number of fish per pen compared to a standard farm. Less crowding in the cages limits disease and increases space for swimming and muscle development. This provides other benefits, as improved product quality commands a higher price. In 2005, the UK's organic salmon farmers had a 3-5% market share, which is forecast to grow. In fact, some farmers previously squeezed out of the conventional market are returning, recognising the growing consumer trend to pay more for organic foods.

Organic salmon farming occurs in ocean pens, similar to conventional salmon production; therefore many issues that concern environmentalists about salmon farming also apply to the organic product. Conservation groups point to the risk of farmed salmon escaping and out-competing wild populations, and the spread of sea lice and other natural parasites to wild fish.

The organic fish community is aware of these issues and actively works with scientists and certifiers towards improvement. The Soil Association also intends to raise its feed standard in 2010. The new standard will stipulate that feed must be either sourced from a feed fishery certified to the Marine Stewardship Council (MSC⁴⁵) standard, or off-cuts from other fisheries certified to that standard⁴⁶.

So what does this mean for the discerning buyer? In general, organic salmon on the market today does represent an improvement over conventionally farmed salmon. But the jury is still out as to how much better organic salmon is for the environment.

Conservationists and organic advocates agree that reduced density in pens and the reduced use of chemicals are all steps in a positive direction for organic aquaculture. But they are quick to point out that other important issues still remain to be resolved. Chiefly, the dependence on wild fish to feed carnivorous fish like salmon and the continued use of open ocean net pens and cages – both of which go against the widely accepted organic principles for other livestock, i.e. controlling the entire life cycle and treating wastes.

Given the strength of the organics market in general, both in Europe and the US, we are likely to see an increase in organic seafood. It is therefore critical that buyers understand the standards behind the organic provenance, and that the industry and conservationists alike continue to push for strong and meaningful organic standards.

43 Extract from Seafood Choices Alliance, Afshianado, Winter 2006.

44 Such a decision has not been taken in the U.S., where the USDA does not yet certify fish farming.

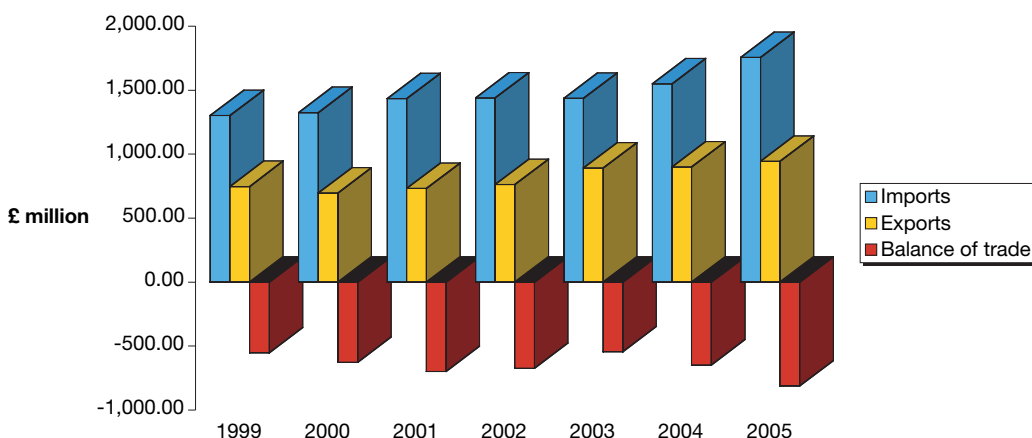
45 The Marine Stewardship Council (MSC) is an independent, global, non-profit organisation.

46 Sainsbury's, MSC and Aquascot (a fish meal provider) are working together to achieve this goal.

4 Seafood Trade

Mackerel is imported into the UK in ever increasing quantities. However, a large percentage of the UK catch of mackerel is exported⁴⁷, as a higher price is available in continental Europe than in the domestic market. This pattern is repeated across many species, but one that may be subject to change in the future. Many companies are beginning to consider the impact of their carbon footprint on the environment and the 'food mile' implications of exporting home grown commodities, only to import the exact same product.

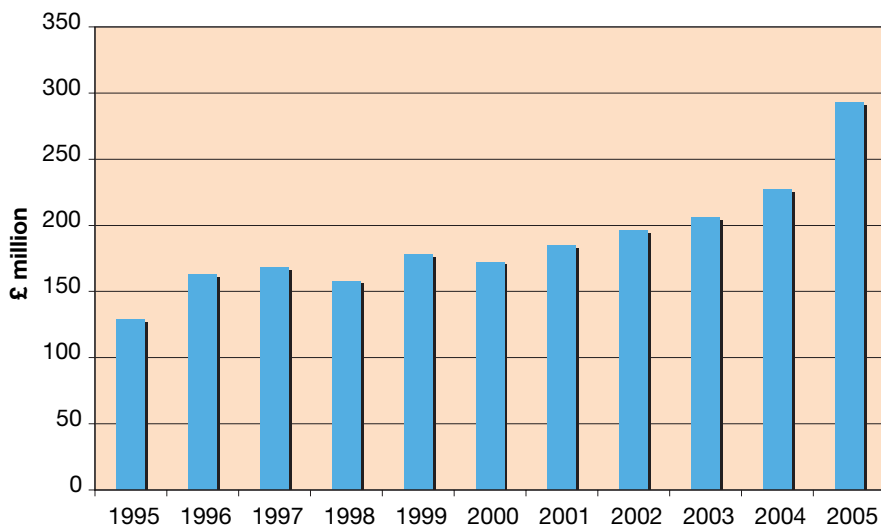
Figure 3.1: UK Balance of Trade: Seafood Industry: 1999-2005



Although a traditional fishing nation, the UK has been a net importer of seafood since 1996 resulting in a negative trade deficit

4.1 Imports

Figure 3.2: UK Seafood Imports, 1995-2005



Imports of seafood into the UK continue to rise. The number one import in 2005 was cod (frozen and chilled) at 131,000 tonnes. Second was tuna at 102,000 tonnes⁴⁸.

⁴⁷ FAO.

⁴⁸ United Kingdom Sea Fisheries Statistics, 2005.

Despite declining landings and quota restrictions, cod continues to be the UK's number one imported seafood product, and in 2005 imports were valued at £370 million. Over 65% of this product was frozen and coated⁴⁹. Haddock imports were valued at £120 million, representing 73% of all EU haddock imports⁵⁰.

Figure 3.3: Source of UK Cod Imports

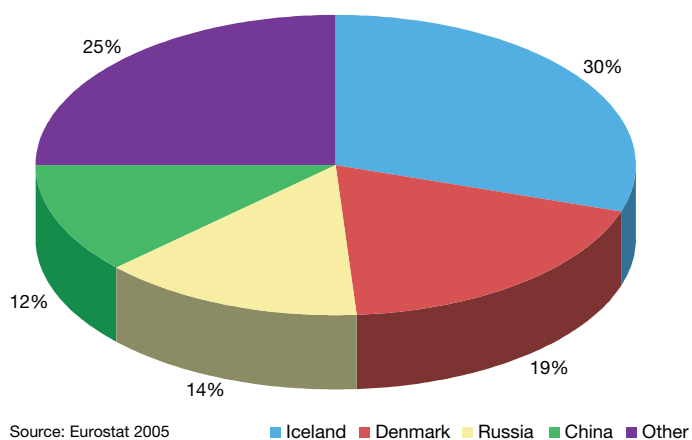
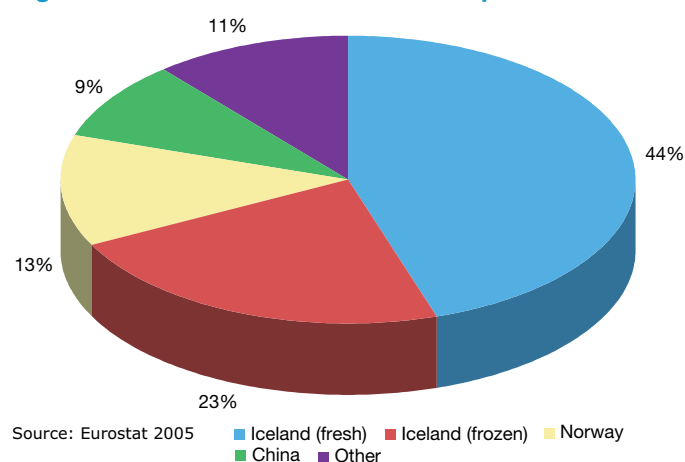


Figure 3.4: Source of UK Haddock Imports

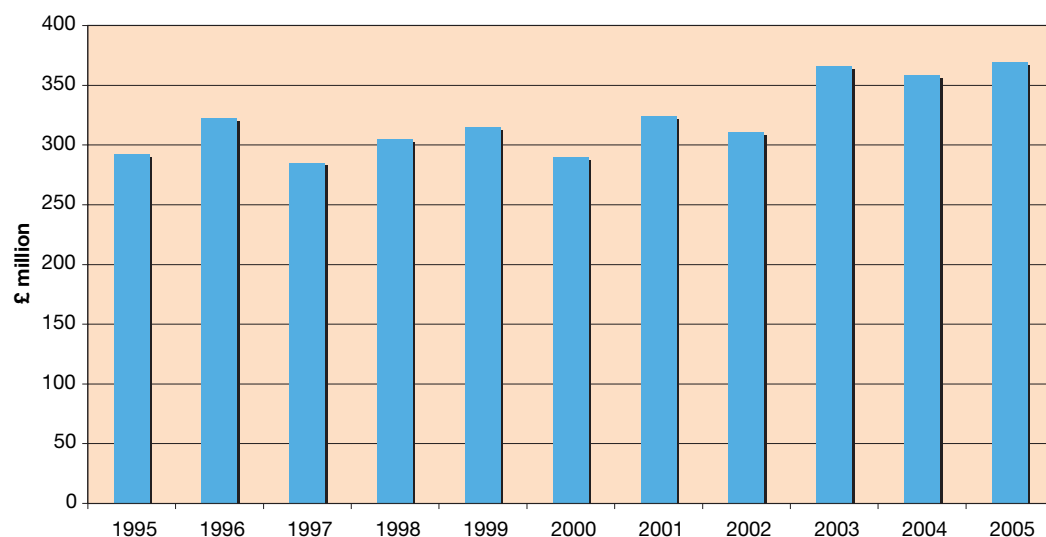


In 2005, Iceland was the most significant supplier of haddock and cod to the UK. China, however, is increasingly playing a larger role, and supplied 12% of all the imported cod and 9% of the haddock that year. It is worth noting that in 2004, China reported to have landed more wild caught fish than any other nation in the world⁵¹.

Imports of prawns also continue to rise, year on year and in 2004, prawns comprised 70% of all imported shellfish to the UK, over 50% from farms in India, Bangladesh and Indonesia⁵².

4.2 Exports

Figure 3.5: UK Seafood Exports, 1995-2005



UK exports have increased over the last 5 years, in line with increased UK landings and rising productivity from UK salmon farms. 41,000 tonnes of farmed salmon were exported in 2005⁵³.

Source: HM Revenue & Customs (HMRC)

In 2005, the UK exported 97,000 tonnes of fish (mostly mackerel and salmon) and 103,000 tonnes of shellfish (primarily Norway lobster and mussels). 27,000 tonnes of shellfish were exported to Spain and France. Over 75% of all UK mussel exports were destined for the Netherlands, with a further 20% to France⁵⁴.

49 & 50 Eurostat 2005.

51 NB. SOFIA often excludes China in much of its analysis, due to its reporting of year on year increases in landings, while most other nations show a downward trend.

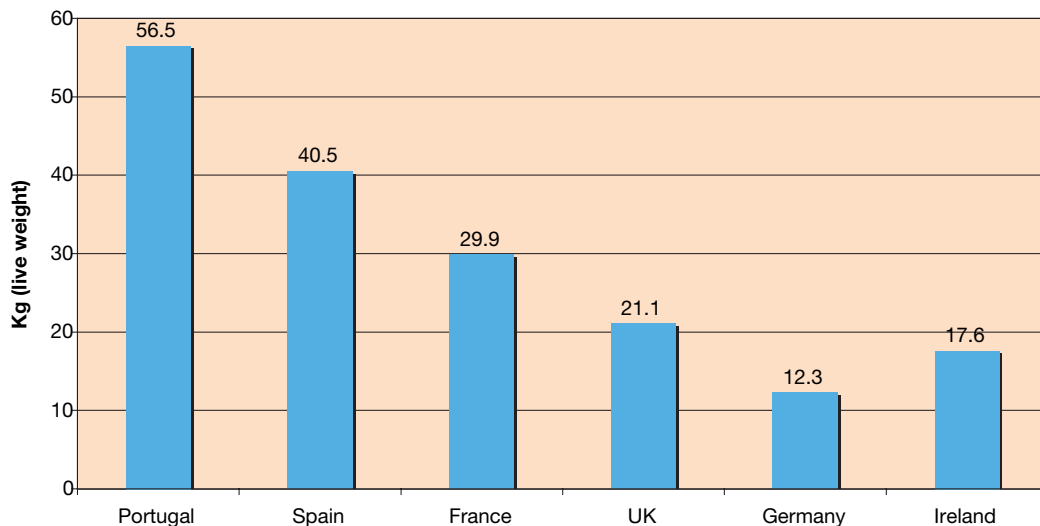
52, 53 & 54 United Kingdom Sea Fisheries Statistics, 2005.

5 Consumption

In 2005, UK consumers spent £2,571 million pounds on fish, nearly 4% of the total expenditure on all food types⁵⁵.

Unlike many of its European neighbours, the UK consumer does not seem to enjoy the challenge of preparing fish or shellfish at home. In fact over 70% of seafood bought for home consumption is pre-prepared, i.e. a ready meal, or ready-to-cook dish⁵⁶.

Figure 4.1: Annual Seafood Consumption in Europe

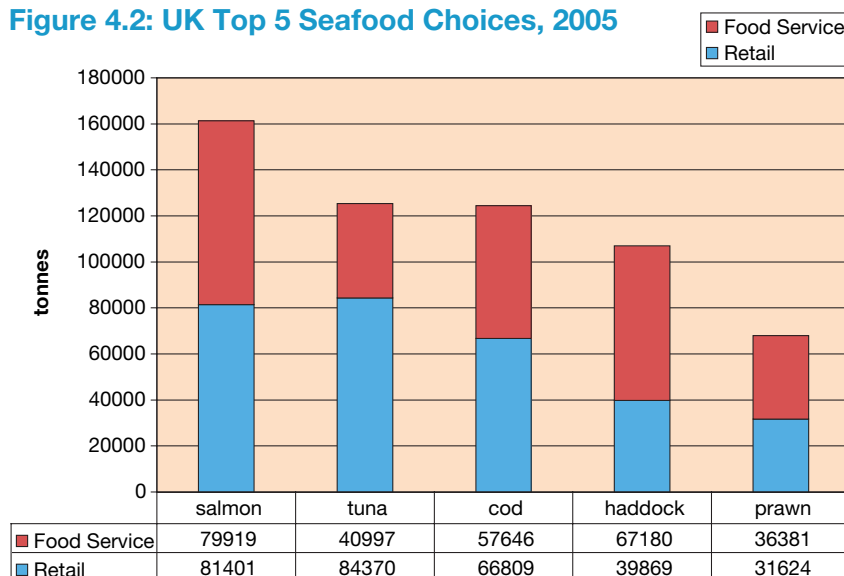


Consumption of seafood is lower in the UK than most other European nations, averaging around 21 kg a year. However, it is estimated that four out of every five households in the UK eats seafood at least once a month⁵⁷.

Source: Seafish/Mintel

Despite the fact that seafood is flown or shipped into the UK from around the world on a daily basis, cod and haddock remain firm favourites. The UK is the biggest market in Europe for breaded/battered fish fillets, with cod taking a 47% market share⁵⁸. The UK's cross industry seafood body, the Sea Fish Industry Authority (Seafish), estimates that about 10 species account for 75% of all of the seafood sold in the UK.

Figure 4.2: UK Top 5 Seafood Choices, 2005



Sales estimates suggest that salmon is the number one seafood choice in the UK. Tuna and cod are an almost equal second, when combining sales from retail and the food service sector⁵⁹.

Source: Seafish

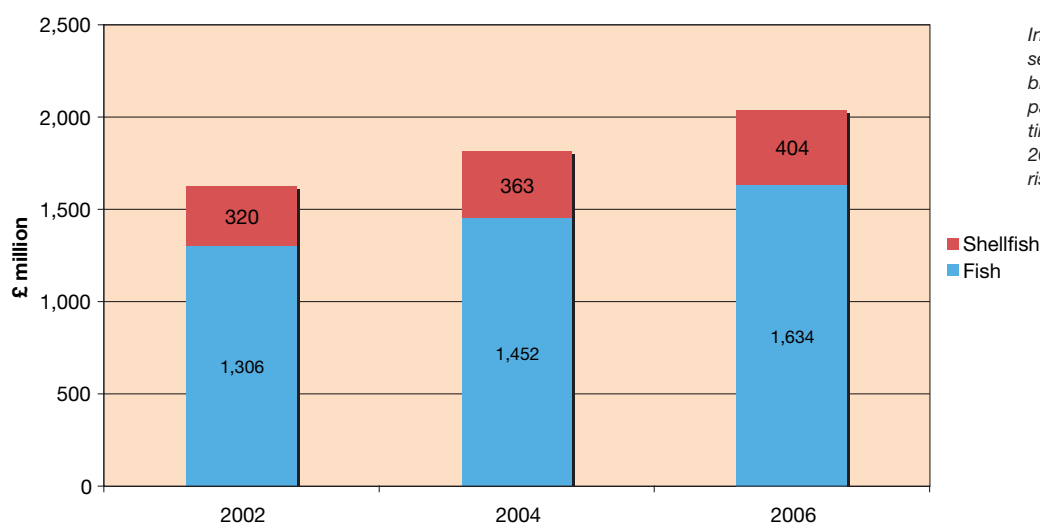
55 United Kingdom Sea Fisheries Statistics, 2005.
 56 Expenditure & Food Survey/National Food Survey.
 57 The Sea Fish Industry Authority (Seafish).
 58 Seafood International.
 59 The Sea Fish Industry Authority (Seafish). See Appendix page 38 for the top 20.

6 The Seafood Supply Chain

6.1 The Retail Sector

In 2006, seafood sales were at an all-time high. Much of this increase in sales may be attributable to the frequently marketed health benefits: fish is a low-fat source of protein and oily fish contain high levels of Omega-3 fatty acids. Retail sales figures showed a slow shift away from coated products, with consumers choosing fresh seafood products over the traditional freezer items. Between fish and shellfish, fish is the most popular seafood choice in the UK, with 80% of all sales⁶⁰. However, shellfish is growing in popularity, particularly imported warm water prawns.

Figure 5.1: UK Retail Seafood Sales Value: 2002-2006



In 2004, the UK retail market for seafood was worth more than £1.8 billion. 2006 sales were estimated to pass the £2 billion mark for the first time. This would be a 5% increase on 2005 sales, which in itself was a 15% rise since 2001⁶¹.

Source: Mintel, Fish and Seafood, Market Intelligence, 2006

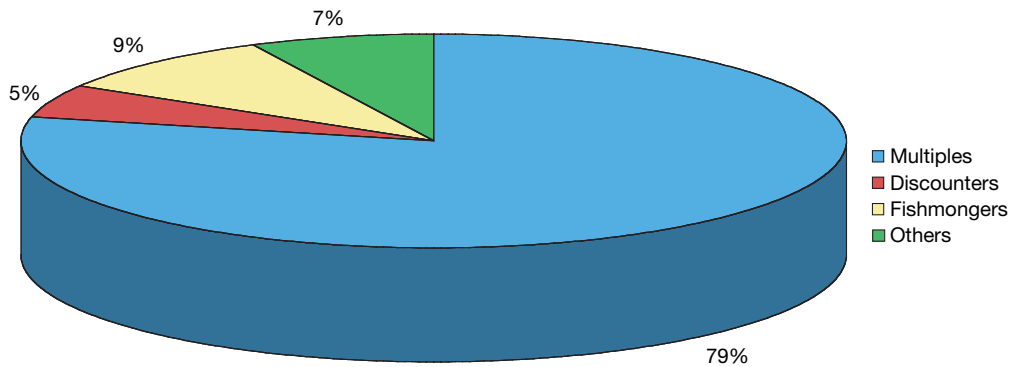
Mintel, the leading market researcher on food and drink in the UK, believes growth in sales is due to a number of factors:

- Chilled (fresh) seafood has a perception of higher quality.
- Increase in convenience offerings: ready meals, ready-to-cook and value-added seafood dishes.
- Introduction of new farmed species, such as seabass, turbot, prawns and more recently (2006) barramundi.
- Marketing of organic farmed species, such as salmon and cod, with a perception that organic is better for consumer health and better for the environment.
- A resurgence in canned fish sales, due to innovative 'light lunch' options and ready mixed products.

60 & 61 Mintel: 'Fish and Seafood Market Intelligence', September 2006.

6.1.1 Supermarkets

Figure 5.2: UK Seafood Sales by Outlet, 2006



Supermarkets (multiples)⁶² dominate the retail sector, with a market share of 80% by value and 85% by volume⁶³. Supermarkets are seeing year on year increases, with some declaring, "fish is the new chicken." Although the UK shopper is still more likely to purchase chicken or beef⁶⁴, there has been a year on year increase in seafood sales, especially from the chilled and fresh seafood counter.

Source: Mintel, Fish and Seafood, Market Intelligence, 2006

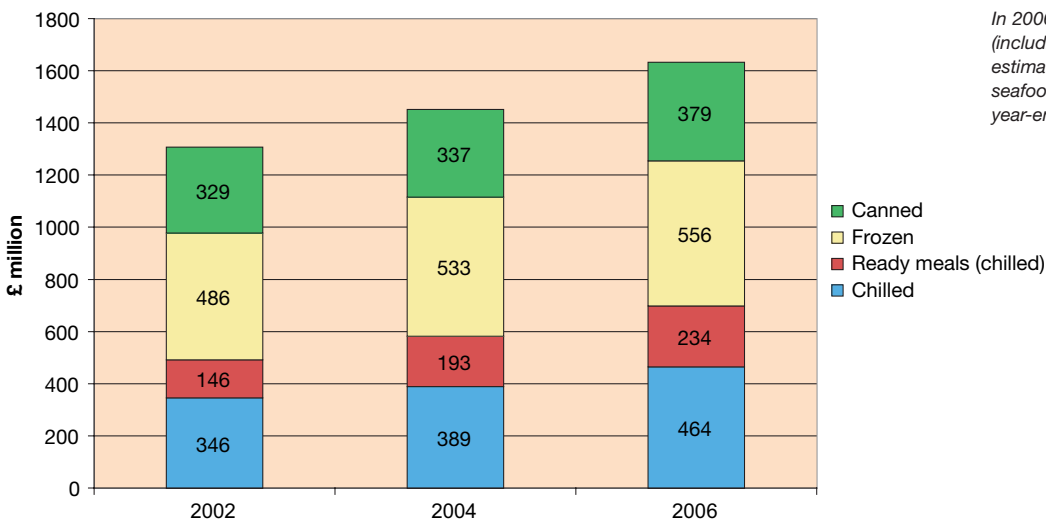
Supermarket sales are divided into the following categories:

- fresh and chilled⁶⁵
- frozen
- canned/bottled
- ready meals

6.1.1.1 Fresh & Chilled

In 2003, Seafish estimated that 83% of the UK population bought chilled seafood at least 14 times a year. According to recent research conducted by FISHupdate magazine, the market for chilled seafood has risen by 7.3% to £1.23 billion⁶⁶.

Figure 5.3: UK Retail Fish Sales 2002-2006



In 2006, sales of chilled seafood (including ready meals) were estimated to exceed sales of frozen seafood in the retail sector by year-end.

Source: Mintel, Fish and Seafood, Market Intelligence, 2006

62 Multiples = Tesco, Sainsbury's, Asda, Waitrose, Somerfield, Morrisons, M&S, Co-op, Iceland. Discounters = Aldi, Lidl, Netto. Fishmonger inc. fish vans and farmers markets. Other = Farmfoods, freezer centres, independents. Source: Mintel.

63 United Kingdom Sea Fisheries Statistics, 2005.

64 For every £5 spent on meat for home consumption, only £1 is spent on seafood (Expenditure & Food Survey, Household Purchases in the UK: 1999 to 2005).

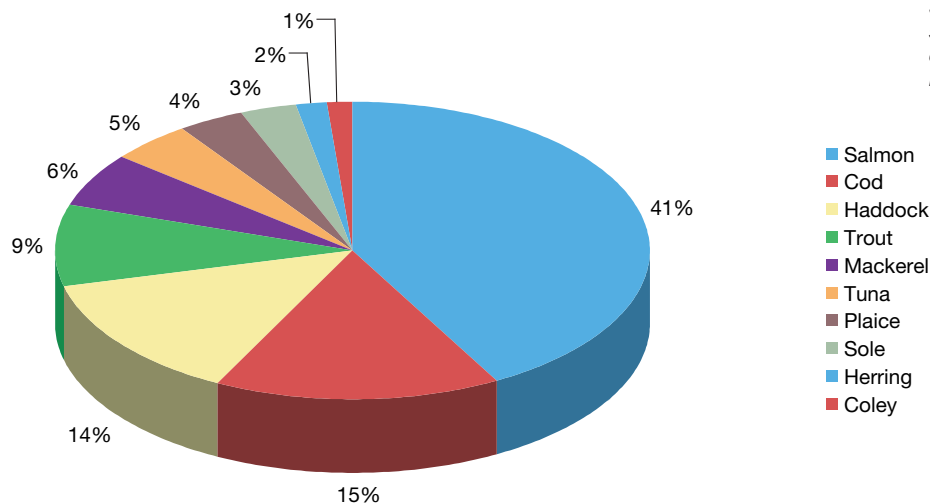
65 Can also mean freshly defrosted (items are flash frozen at sea or on shore, and then defrosted at point of sale).

66 FishUpdate.com 1/10/2006.

As a result of their research into the UK seafood market Mintel offers a number of possible explanations for the shift from frozen to chilled:

- Chilled/fresh fish is perceived to be higher quality than frozen.
- Supermarket own-label products have been developed for the chilled counter, including ready meals, or ready-to-cook offerings.
- An increase in desirability of premium items such as salmon and prawns.

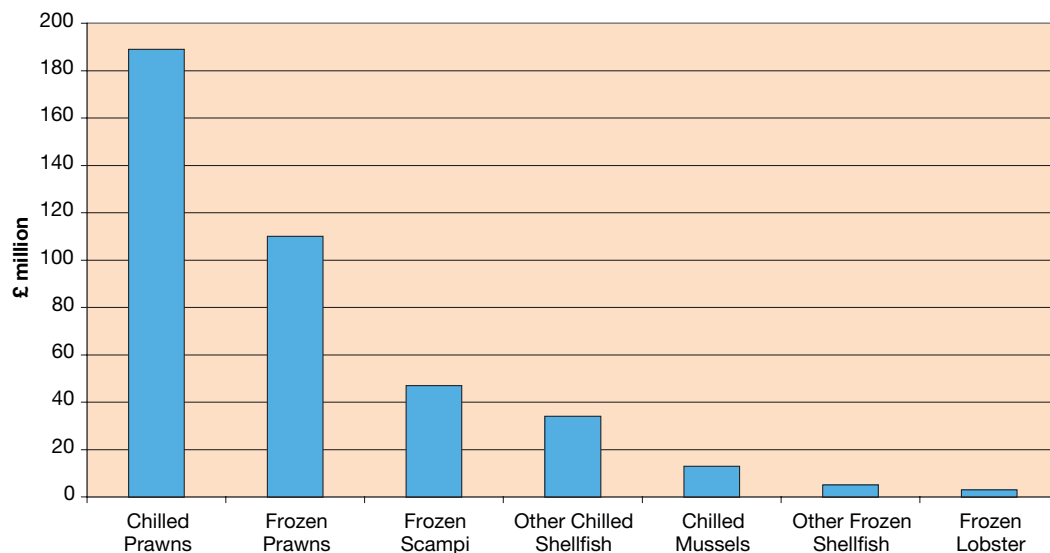
Figure 5.4: Top 10 Selling Chilled Fish, 2006



Salmon is the number one chilled seller and sales for 2006 were estimated at £391 million, a 10% increase over 2005⁶⁷.

The majority of chilled salmon sold in the UK is farmed domestically. Some retailers also offer wild Alaskan salmon, which is certified to the standards of the Marine Stewardship Council (MSC), and therefore considered by environmental groups to be the most ocean-friendly choice.

Figure 5.5: Retail Shellfish Sales, 2006



Sales of imported, chilled warm water prawns were higher in 2006 than the more traditional coldwater shrimp species found in the freezer aisle. In fact, prawns were the number two seafood seller in the chilled sector (after salmon), with sales of £189 million.

Source: Mintel, Fish and Seafood, Market Intelligence, 2006

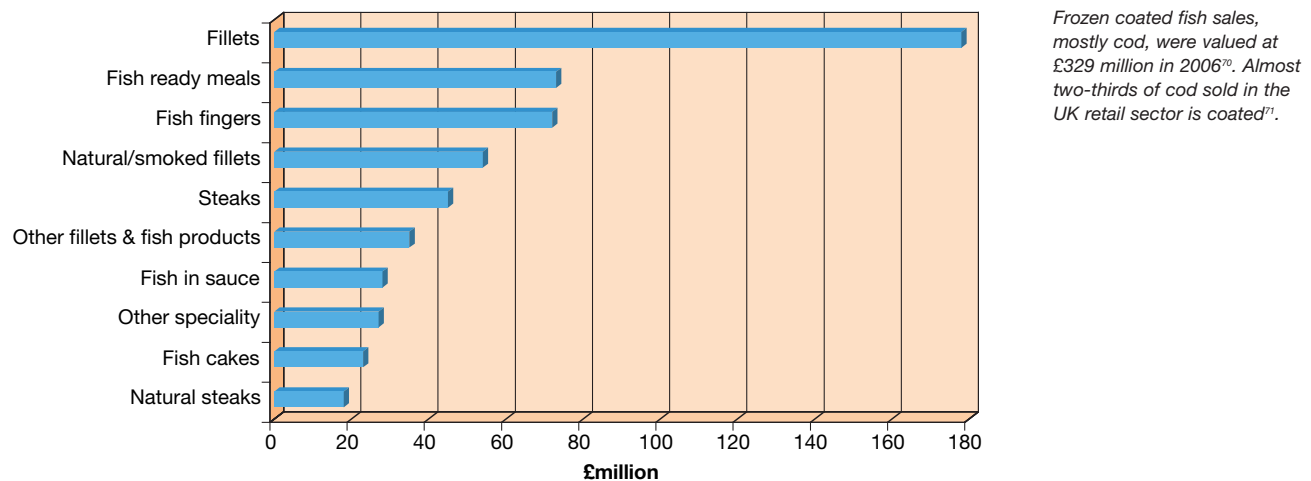
Tiger prawns and king prawns are becoming increasingly popular with the UK consumer⁶⁸. Most are farmed in Asia, where environmental concerns are becoming a priority for debate. Some forward-thinking retailers and suppliers are seeking solutions and are working with environmental organisations such as WWF.

67 & 68 Mintel: 'Fish and Seafood Market Intelligence', September 2006.

6.1.1.2 Frozen

Until 2006, frozen seafood was the most popular option for UK shoppers. Seafish estimates that nearly 90% of the UK population bought a frozen seafood product in the last year. Supermarkets have a 92% share of the frozen seafood sector, with Co-op and other freezer centres taking 6% and small independents the remainder⁶⁹.

Figure 5.6: Frozen Fish Retail Sales, by type, 2006



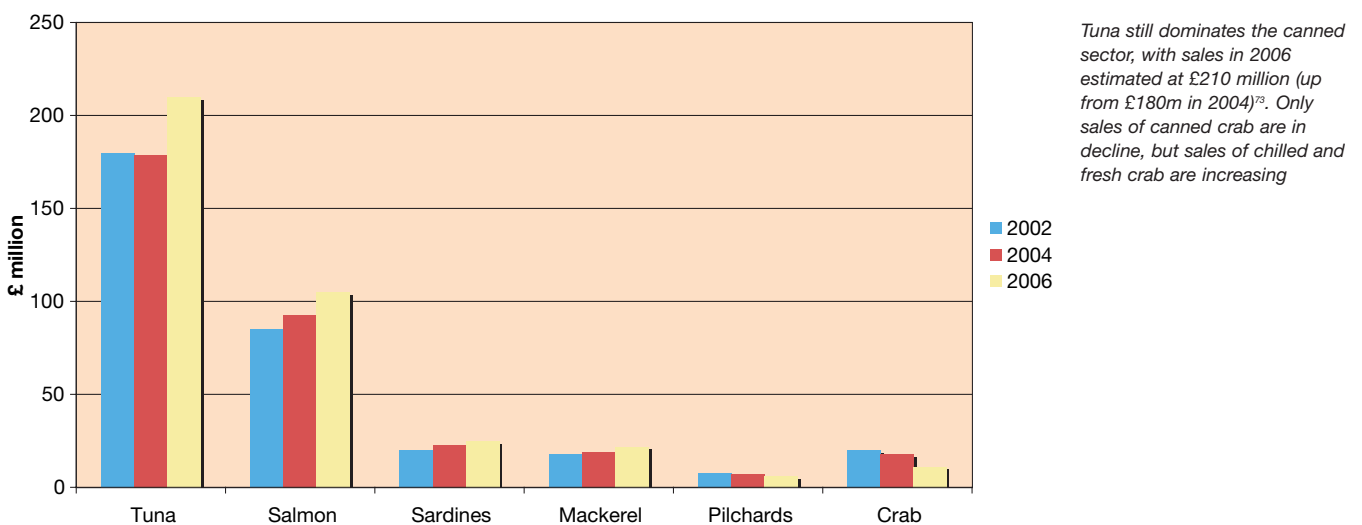
Source: Mintel, Fish and Seafood, Market Intelligence, 2006

While the majority of frozen fish sold is cod, new species are emerging in the freezer section. Retailers and brand names are seeking to expand the range of coated fish and fish fingers offered. In an attempt to encourage consumption of a wide range of sustainable species they are offering choices such as Alaska pollock, New Zealand hoki and South African hake, all certified to MSC standards⁷².

6.1.1.3 Canned

Although considered a household staple, canned fish sales have been in decline in recent years. Mintel notes, however, that innovations such as canned fish in sauces (other than the traditional brine or oil) and ready-mix options have increased sales in 2006. In particular, healthy 'light lunch' options seem to have helped this sector regain some of its previous popularity and enabled these products to compete with some of the other ready meal offerings in the frozen and chilled counters.

Figure 5.7: UK Canned Fish Sales: 2002-2006



Source: Mintel, Fish and Seafood, Market Intelligence, 2006

69 & 71 The Sea Fish Industry Authority (Seafish).

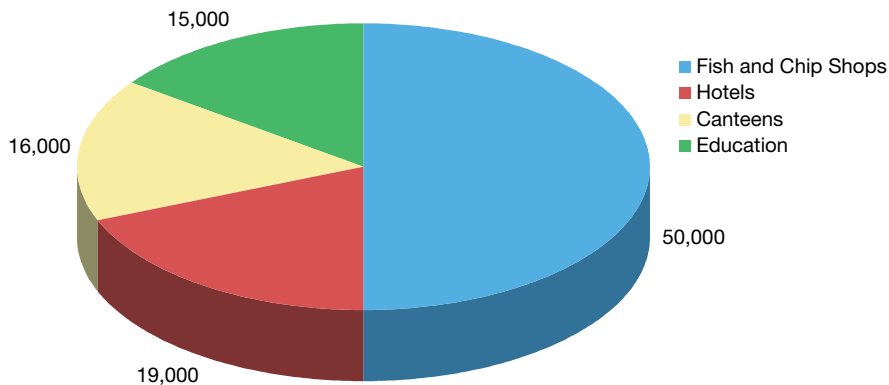
70 & 73 Mintel: 'Fish and Seafood Market Intelligence', September 2006.

72 See page 22 for more information on MSC and eco-labels.

6.2 The Food Service Sector

The food service sector incorporates fish & chip shops, restaurants, hotels, and catering services to health and education institutions.

Figure 6.1: Food Service Sector: Seafood Sales, 2004 (tonnes)

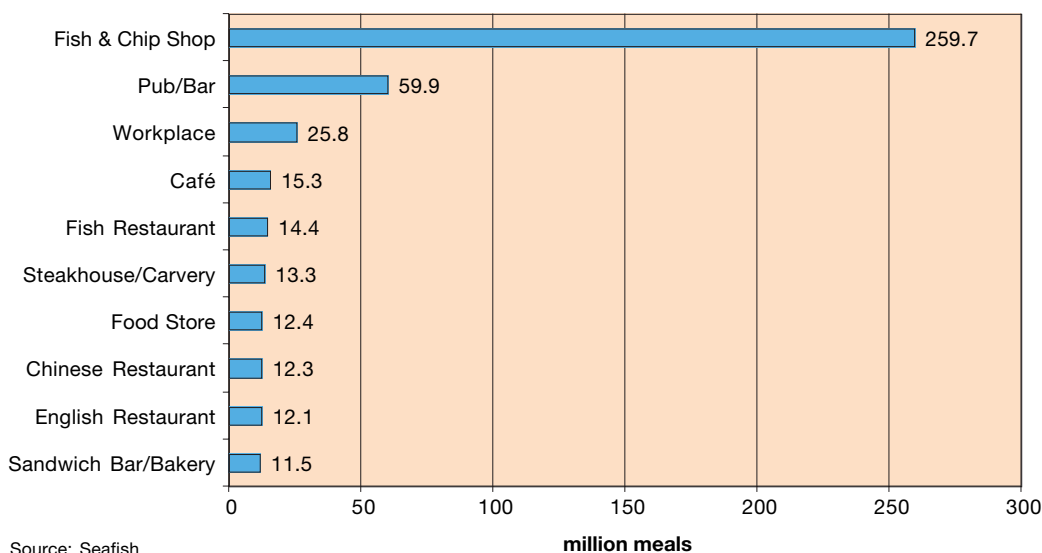


The combined total of the UK food service sector is estimated at £2.8 billion compared to £2.3 billion for the retail sector⁷⁴.

Source: Seafish

Half of all sales in this sector (by volume) are sold through fish and chip shops. However, this sector is experiencing increased growth in sales in all outlets serving seafood dishes. TNS World Panel, an international market research company, estimates 2005 sales increased 23% for restaurants, 4% for fish & chips shops and 6% for pubs. Pub restaurants are the second highest seller of seafood meals, after fish and chip shops.

Figure 6.2: Fish Meals Sold by Food Service Outlet, 2006



Battered cod, fresh salmon, tuna (canned) and prawns are the most commonly served items in the UK food service sector⁷⁵.

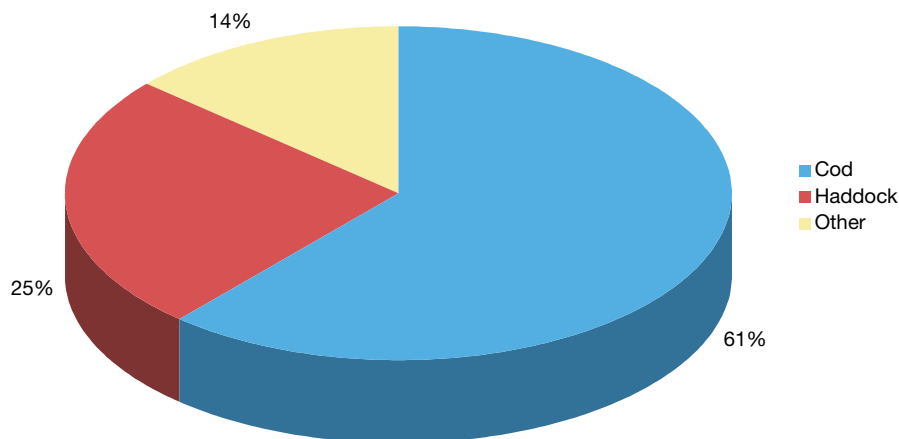
Source: Seafish

74 & 75 The Sea Fish Industry Authority (Seafish).

6.2.1 Fish and Chips

'Fish and Chips' is a traditional British dish with a long history; the first fish and chip shop opened in London in 1860. Fish and chip shops sell around half of all the seafood sold in the food service sector.

Figure 6.3: Sales by Species, Fish and Chip Shops, 2004



There are over 11,500 fish and chip shops in the UK, selling over 259 million fish meals per year, with a value of £1.2 billion⁷⁶. Cod is the most popular choice, and almost two-thirds of all fish sold in fish and chips shops is cod.

Source: Seafish

Most fish and chip shops offer a range of species including haddock, saithe (coley), plaice, whiting and rock. The latter is actually a species of shark, the spiny dogfish. This shark has become a popular substitute for declining whitefish species and is marketed as rock salmon or rock cod. Unfortunately, all species of shark are long-lived, late to mature and have very few young. Many shark species, including the spiny dogfish are listed as 'threatened with extinction' by the World Conservation Union (IUCN), due to the serious threat created by overfishing and bycatch of a number of shark species.

Some UK fish and chip shops sell cod and haddock caught by UK fishermen, especially where there is a local supply, but most is imported from Iceland and the Barents Sea where populations are considered healthier⁷⁷. Many scientists believe that the North Sea population of cod is on the brink of commercial collapse. Drastic measures may be needed in the future if it is to avoid the same fate as the cod population of the Canadian Grand Banks. This fishery was closed in 1992 and is still not recovered or open to commercial fishing.

Juvenile cod are often taken accidentally as bycatch in many of the other fish and chip shop staples – i.e. haddock and plaice. Whilst haddock populations are not yet considered threatened, the method by which they are caught often results in small cod being accidentally caught and discarded. This further threatens the future of cod populations and the fisheries that rely on it. For the last three years the International Council for the Exploration of the Sea (ICES) has advised the European Commission that a total ban on cod fishing is necessary to allow depleted populations to recover. ICES has also recommended restricting all North Sea fisheries that catch cod as bycatch.

76 & 77 The Sea Fish Industry Authority (Seafish).

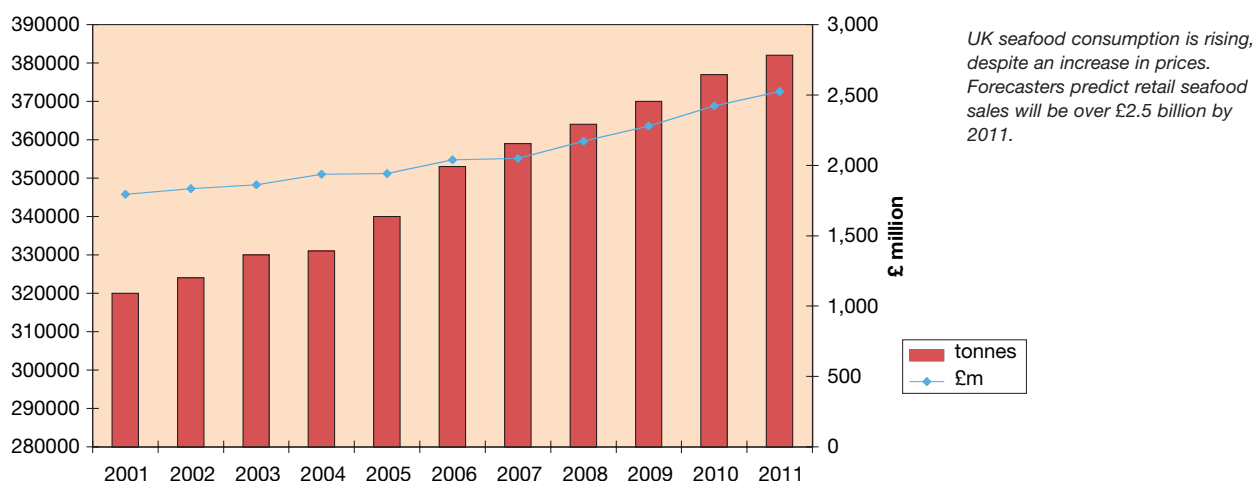
7 Seafood Trends & Sustainable Seafood

7.1 Forecast

A number of trends in seafood sales were apparent in 2006, as highlighted in this report:

- An increase in sales of convenience seafood – ready meals, value-added chilled products, and value-added canned products.
- An increase in consumption of farmed salmon.
- Interest in exotic farmed species such as barramundi, but especially warm water prawns.
- Sustainability is becoming a headline story and a key concern for all, from the fishing industry down through to the retailer, and on to the consumer.

Figure 7.1: Forecast of UK Retail Seafood Sales: 2001 to 2011



Source: Mintel, Fish and Seafood, Market Intelligence, 2006

7.2 Sustainability and the Supply Chain

The issue of seafood sustainability has been on the radar screen of the UK supply chain for a relatively short time. Despite this, however, the sustainable seafood market in the UK is quite well developed, mostly through the actions of retailers, but also through a strong commitment from other parts of the supply chain.

In 1997, Unilever (the world's largest whitefish buyer⁷⁸) joined forces with WWF to set up the Marine Stewardship Council (MSC)⁷⁹. Unilever recognised the importance of securing a fish supply for the future of its business; so they committed to sourcing exclusively from fisheries certified to the MSC standard by 2005⁸⁰. A number of other UK processors and suppliers including Findus, Young's Blue Crest, Seachill and Brakes also source some species certified to the MSC standard.

78 Trading under the 'Birds Eye' brand in the UK.

79 The MSC became an independent non profit in 1999

80 Although, it did not meet this target (at 2005: 50% MSC, 10% other sustainable sources) Unilever remained committed to sourcing from sustainable fisheries wherever practicable, with the hope of achieving 100% in the future.

In 2004, Greenpeace UK began an independent assessment of seafood sustainability in UK supermarkets and in 2005 published its first league table (see page 37) and associated report⁸¹. At this time, Marks & Spencer and Waitrose (as part of their Corporate Social Responsibility programme) were the only two supermarkets with well-developed sustainable seafood procurement policies. Both retailers had committed to working with their supply chain and fish farmers to ensure that sustainability, not just quality, became a key consideration in their buying process. The publication of the league table, together with targeted campaigns at individual supermarkets, led to many supermarkets removing 'at risk' species from their wet fish counters, i.e. those with populations considered endangered or threatened, such as sharks, skates, Atlantic cod, Dover sole and monkfish.

The combined actions of Greenpeace campaigning and positive policy development by a number of major retailers has led to a 'supermarket war', with strong competition for the top place of the league table or simply a race away from the bottom. The publication of Greenpeace's second league table in 2006, (page 37) and its accompanying report⁸², positively reflected the commitment made by several UK supermarkets to more responsible sourcing of fresh and frozen seafood products.

Ultimately, this in-house competition may lead to 'choice editing', where the ethical shopper of the future can use a particular retail outlet confident that the procurement policies are so robust that all choices they make in that store will be responsible ones, without the need for further investigation.

The rising importance of seafood sustainability has not bypassed the rest of the industry, and in fact for the first time in 2007, Seafish's annual *Seafood Awards* will include a sustainability category, the *Sustainable Future Award*.

7.3 Eco-labels

In 2005, the FAO published a set of voluntary guidelines for the eco-labelling of fish products. These guidelines outline general principles, including the need for reliable, independent auditing, transparency of standard-setting, accountability, and for standards to be based on good science.

Minimum requirements and criteria for assessing whether a fishery should be certified and awarded an eco-label, were based on the FAO's *Code of Conduct for Responsible Fisheries*.

At the current time, only one label in the UK meets the FAO standard – and that is the label of Marine Stewardship Council (MSC). The MSC label can be found on over 400 products worldwide. It is used at wet fish counters in a number of supermarkets, on supermarket own-label chilled and canned products, as well as branded frozen and canned products. Currently 5-6% of all global fisheries are certified to MSC standard; this includes 32% of the world's whitefish fisheries and 42% of the wild salmon catch⁸³.

A number of retailers in the UK have committed to sourcing from fisheries certified to the MSC standard as their top priority when buying seafood⁸⁴. Many are working with conservation groups, consultants and their supply chain to source the most responsible types of seafood, including supplies from fisheries as yet outside the MSC certification scheme, which are also considered responsible sources. At this time, there is no UK equivalent to the MSC standard for farmed fish.

81 Dorey CN (2005). 'A recipe for disaster: Supermarkets' insatiable appetite for seafood.' London, UK: Greenpeace.

82 Greenpeace (2006). 'A recipe for change: Supermarkets respond to the challenge of sourcing sustainable seafood.' London, UK: Greenpeace.

83 www.msc.org

7.4 Consumer Responsibility

A new report in 2006 by Worldwatch Institute (an independent environmental think tank in the US) indicated that with governments and fisheries management bodies apparently unable to reverse the decline in some fisheries, initiatives by seafood buyers (restaurants, retailers and consumers) could prove effective.

Catch of the Day, Choosing Seafood for Healthier Oceans notes, "a public that better understands the state of the world's oceans can be a driving force in helping governments pass laws to ban destructive fishing practices."

A March 2006 survey by Mintel/BRMB suggests that public understanding is growing. Over 1,000 UK adults were asked, "What does the term 'ethical food' mean to you?" 36% (the third most popular answer) responded that they believed the term applied to "not buying endangered or depleted fish such as cod and swordfish"⁸⁵.

Results of the Seafood Choices Alliance UK market research follow.

⁸⁴ Nearly all UK supermarkets sell some product certified to the MSC standard.

⁸⁵ Mintel, 'Fish and Seafood. Market Intelligence', September 2006. (See Appendix page 37 for the full results).

8 Overview of Seafood Choices Alliance Market Research

In 2005, Seafood Choices Alliance undertook a comprehensive survey of European consumer and seafood professional attitudes on issues surrounding seafood sustainability. The first phase of this research, conducted by RSM (a UK-based marketing research firm) included focus groups, in-depth interviews and national telephone surveys of seafood consumers, retailers, chefs and restaurateurs. The research was undertaken in the UK, Germany and Spain.

This section highlights the major results from this research for the UK.

The objectives were to understand the following:

- How conscious are UK consumers and seafood professionals about the ocean environment and what is their level of concern?
- How much, and what, is understood about the cause and effect of problems specific to fisheries and aquaculture?
- How does understanding affect buying or supply behaviour? What is the potential for purchasing behaviour to shift in favour of sustainable seafood?

Key Findings

The survey presents positive evidence that UK consumers and seafood professionals desire to maintain and improve the health of the world's oceans and have a willingness to use seafood consumption as a tool towards this end.

- Seafood is becoming a staple of the UK diet, fuelled by its perception as a healthy food and alternative source of protein.
- Broad concern exists over the current state of the oceans. While the effects of overfishing, bycatch and some farming practices are widely known, it was felt that there is a lack of detailed knowledge and information.
- While environmental concerns were expressed as being secondary to freshness and health benefits as purchase criteria, they still ranked higher than price.
- Seafood industry professionals recognise that sustainable sourcing is key to their future business success.
- Consumers want more information on sustainable seafood and expressed a desire for better labelling to make more responsible choices.
- Professionals are prepared to take action to promote more sustainable choices.
- Consumers want government and retailers to take most of the responsibility for providing sustainable choices, but are willing to take some personal action, including paying a higher price.

9 Consumer Attitudes on Sustainability

Only consumers who ate seafood at least once a month qualified for this polling. However, more than 75% of those polled responded that they ate seafood at least once a week, with almost half (44%) eating it even more frequently (see Figure 9.1).

Of the consumers polled, 69% said they purchased seafood in supermarkets (see Figure 9.2). This correlates with sales figures for the UK retail sector (see page 16).

More than once a week	44%
Once a week	32%
Once a fortnight	18%
Once a month	6%

Supermarket	69%
Fishmonger	12%
Shop or small retailer	9%
Restaurant	1%

Awareness of Seafood Sustainability Issues

At the time of the study, the consumers polled had a high level of concern for the oceans health with almost 80% reporting that they were quite or very concerned about the state of the ocean.

When questioned on how much they had heard about various aspects of fish and fishing, most of those polled (68%) had heard a great deal about the health benefits of eating fish. However, there was also high awareness of key environmental impacts, with over half reporting that they had heard a great deal about issues such as overfishing (56%) and bycatch (52%).

How much have you heard about these aspects of fish and fishing?		
	Great Deal	Something
Health benefits of eating fish	68%	22%
Overfishing (depleting species)	56%	29%
Catching and killing turtles and dolphins	52%	28%
Discharging waste water from coastal towns	35%	28%
Catching fish before they can reproduce	28%	31%
Fishing with gear that damages habitat	26%	33%
Inadequate regulations on commercial fishing	22%	28%
Environmental impacts of aquaculture	21%	32%
Mercury and chemicals in wild fish	18%	37%
Use of antibiotics and chemicals in fish farms	14%	30%

Key Factors in Seafood Purchasing

The consumer polling showed that three-quarters of consumers (74%) reported that environmental considerations were quite or very important – ranking higher than price (71%) or convenience (63%). Also interesting to note is that despite growth in the organic food sector, those polled ranked environmental considerations above the organic designation (see *Figure 9.4*).

Figure 9.4: Consumers - Food: Importance of Purchase Attributes		
Factors that may influence your decision to buy food. How important is.....?		
	Very Important	Quite Important
Freshness	79%	18%
Health benefits	52%	37%
Price	30%	42%
Environmental impact	26%	48%
Convenience	22%	42%
Familiarity with brand	18%	44%
Organic	10%	22%
Eaten before	10%	22%

When asked specifically about factors that would influence seafood purchases, the consumers polled felt that overfishing was an important factor (83%). Bycatch and habitat impact were also deemed as important (77%), and in fact all environmental aspects were considered more important than price (see *Figure 9.5*).

Figure 9.5: Seafood: Importance of Specific Attributes		
Which factors are important in your decision to buy seafood?		
	Very Important	Quite Important
Freshness	82%	16%
Health benefits	52%	35%
Overfished	52%	32%
Harms other marine creatures	43%	35%
Whether fresh or frozen	36%	33%
Environmental impact	32%	45%

Not only did those polled report that price is of less importance than the environmental factors, a significant number also expressed a willingness to pay an increased price for sustainable seafood:

- Over 50% said they would be willing to pay 5-10% more.
- Almost 25% said they would be willing to pay more than 10%.

Desire for Information

There was overwhelming agreement from those polled that more advice was needed about how to make good choices. Many agreed that more information was needed about which species to avoid because of overfishing, bycatch etc. (see Figure 9.6).

Figure 9.6: Consumers - Attitude Towards Information Available		
Do you agree more information should be available?		
	Strongly Agree	Agree
Advice on how to make good choices	60%	33%
I don't have enough information	48%	40%
More information on which species to avoid	32%	50%

Those polled believe that although they play an important role in the making of good choices, 91% agree that the government has responsibility for protecting the ocean. However, 83% agreed that consumers should also take action by boycotting those types of seafood that are overfished or caught in a way that is damaging (see Figure 9.7).

Figure 9.7: Consumers - Attitudes Towards Sustainable Seafood		
Do you agree with the following statements?		
	Strongly Agree	Agree
It is the government's responsibility to safeguard the ocean environment	60%	31%
Consumers should boycott seafood if it harms the ocean environment	43%	40%
I care about making responsible seafood choices but price is just as important	30%	50%
I care more that seafood is healthy and safe than environmentally responsible	28%	41%
Fish caught in an environmentally responsible manner will be better quality	22%	40%

Support for Labelling

Of those polled, 95% agree that labelling is the most effective way to communicate sustainability and 90% agreed that they would be more likely to buy seafood that is labelled as environmentally responsible (see *Figure 9.8*).

Figure 9.8: Consumers - Information Sources – Labels		
Do you agree with the following statements?		
	Strongly Agree	Agree
Seafood should be labelled as caught in an environmentally friendly manner	59%	35%
I would be more likely to buy seafood labelled as “environmentally responsible”	41%	49%
I would be more likely to buy seafood items on menus in restaurants if it were labelled as “environmentally responsible”	34%	46%
I would be more likely to buy seafood on menus in that was labelled as “wild” rather than “farmed”	27%	41%
I would be more likely to buy fish at the fresh fish counter if it was labelled as organic	15%	36%

Whilst labelling was cited as the most useful method of communication, there was strong support for other choices, including consumer cards. Recipes using sustainable choices were thought to be useful (70%), as was a web site that provided alternative choices (see *Figure 9.9*).

Figure 9.9: Consumers - Information Sources		
How useful do you think the following would be to you?		
	Very Useful	Quite Useful
Labels in shops and on menus indicating if seafood is caught or farmed in an environmentally responsible way	51%	41%
Cards with recipes of sustainable seafood at the entrance of supermarkets.	35%	44%
A website with the conservation status of fish and environmentally responsible alternatives	35%	34%
Recipes of sustainable seafood provided by fishmongers/specialist fish shops	33%	46%
A cookbook containing recipes for fish and seafood that are good environmental choices	30%	39%
A list identifying seafood to avoid because of harmful impacts	26%	42%
A list of fish that are preferred alternatives	20%	54%

In Summary

The issue of seafood sustainability appears to be growing in the consciousness of the UK consumer, as does awareness of overfishing, bycatch, and some of the environmental issues associated with fish farming.

This research reflects a strong support among UK consumers for better environmental protection of the oceans. There is a desire for better and more comprehensive information to make more responsible choices. The research shows that the UK consumer believes that government is ultimately responsible for managing fisheries, but is willing to make some sacrifices, including paying a higher price for sustainable seafood. The research also indicates that the consumer would be likely to buy more fish (in supermarkets and restaurants) if it were labelled as 'environmentally responsible'.

10 Seafood Professionals Attitudes on Sustainability

The seafood professionals polled by the Alliance believe the environmental condition of the ocean is relevant to their businesses, with 80% expressing a high level of concern.

When asked why they expressed high concern the top reasons given were:

- Seafood/sea produce is my business (56%)
- Environmental issues will affect my business (41%)
- We need to maintain fish populations for the future (24%)

Awareness of Sustainability Issues

When asked to rank the top sustainability issues, the professionals polled appeared most concerned about fishing gear that damages habitat, followed by overfishing and bycatch. In general, the professional seafood buyers polled were more aware and concerned by these issues than the consumers polled (see Figure 10.1).

How concerned are you personally about some of these issues?		
	Very Concerned	Quite Concerned
Catching and killing species such as dolphins or turtles in the process of catching fish	74%	19%
Fishing with gear that damages habitat that fish need to reproduce and survive	68%	26%
Overfishing	65%	28%
Inadequate regulations on commercial fishing	56%	33%
Waste water and discharge from fish farming in coastal waters	50%	28%
The negative environmental impact of aquaculture	35%	46%

Professionals polled displayed a more in-depth knowledge of specific environmental issues than the consumers sampled, with over 50% having heard a great deal about overfishing, taking fish before they can reproduce and types of gear harmful to habitat. However as with the consumer group, the use of antibiotics and pesticides to control disease and parasites in fish farms was not well known (see Figure 10.2).

Figure 10.2: Awareness of Environmental Issues		
How much have you heard about these aspects of fish and fishing		
	Great Deal	Something
Overfishing	84%	11%
Catching and killing turtles and dolphins	64%	22%
Catching fish before they can reproduce	58%	26%
Fishing gear that damages habitat	55%	30%
Impact of aquaculture	45%	28%
Inadequate regulations on commercial fishing	44%	27%
Use of antibiotics and chemicals in farmed fish	28%	32%
Discharge of water from coastal towns	26%	19%
Use of drugs and chemicals to control diseases in coastal fish farms	25%	28%
Mercury and chemicals in wild fish	25%	32%
Use of wild fish to feed farmed fish like salmon	15%	16%

Key Factors in Seafood Purchasing

The poll of seafood professionals reveals that overfishing is an important factor when purchasing seafood, ranking alongside other attributes such as price and availability. Harm to marine creatures (82%) and environmental impact (80%) ranked higher than convenience (70%) and local sourcing (see *Figure 10.3*).

Figure 10.3: Stocking and Serving Seafood: important Attributes		
Which of the following factors are important in your decision to stock or serve seafood?		
	Very Important	Somewhat Important
Freshness	96%	4%
Whether fresh or frozen	77%	13%
Customer demand	74%	22%
Availability	70%	21%
Health benefits	60%	27%
Price	59%	26%
Harms other marine creatures	56%	26%
Overfished	52%	34%
Whether sourced locally	48%	24%
Environmental impact	44%	36%
Whether wild or farmed	39%	34%
Convenience	38%	32%
Organic	22%	24%

Desire for More Information

The research reflected that a high percentage (85%) of both chefs and retailers thought a seafood directory with information regarding associated environmental impacts would be Useful, or Very Useful. An almost equal number felt that information on how others in the seafood and restaurant business deal with environmental issues would also be helpful. Respondents also suggested that a national database of suppliers to source environmentally responsible fish and seafood would fill a critical gap. A large percentage of retailers (86%) thought that recipe cards would be helpful to educate their consumers on sustainable options (see *Figure 10.4*).

Figure 10.4: Information Sources		
How useful do you think the following would be to you?		
	Very Useful	Quite Useful
Recipe cards you can give to customers for environmentally-responsible seafood (Retail only)	49%	37%
A national database of suppliers who can source environmentally responsible fish and seafood	38%	42%
A directory of different kinds of fish and seafood, the environmental impacts associated with each	37%	48%
Lists of environmentally responsible seafood choices provided by environmental groups	34%	48%
Information on how others in the seafood and restaurant business are dealing with environmental issues	33%	52%
Instructions and recipe suggestions for environmentally-responsible seafood (restaurant only)	32%	48%
A website that tracks what the ocean conservation organisations have said about each fish	30%	44%
A scientific database of what is known about each species and how they are fished	21%	46%

Over 90% of professionals polled agreed that they have a responsibility to promote environmentally responsible choices. The sample also felt strongly that the government has a major role in promoting responsible seafood. Around 80% agreed that consumers are more likely to buy 'environmentally responsible' seafood, with less than 40% expressing a belief that consumers were influenced more by taste than environmental issues (see *Figure 10.5*). The retailers in the focus groups felt that sustainability issues are increasingly prevalent in the minds of consumers.

Figure 10.5: Attitudes Towards Sustainable Seafood		
Do you agree with the following statements?		
	Strongly Agree	Agree
It is the government's responsibility	52%	40%
I have a responsibility to promote environmentally responsible choices	41%	50%
Consumers are more likely to buy "environmentally responsible"	30%	50%
Consumers are more likely to buy if they know it is "wild" and not "farmed"	28%	47%
Fish caught in an environmentally responsible manner will be better quality	20%	46%
Consumer tastes will always come before environmental concerns	9%	30%

Changing Behaviour

Professionals polled said that they would be most likely to carry fish certified as environmentally friendly by a fishing industry association (93%). The group also showed a high interest in carrying fish that had been caught in the most responsible ways, i.e. with low bycatch (85%) and minimal habitat damage.

In Summary

The research suggests that a substantial number of retailers, chefs and restaurateurs are willing to take action to address environmental concerns about seafood, but feel vulnerable. According to the results chefs are the most versatile and willing, but there is interest in all sectors.

There appears to be a great deal of awareness and concern among seafood professionals about unsustainable practices associated with seafood. While all those professionals polled expressed concern about meeting their customers' demands, they believe it is important for them to play a role in promoting sustainable seafood.

Conclusion

Seafood consumption around the world is increasing, and this trend is reflected in the UK market, with seafood imports rising year on year, and retail and food service sales reaching record levels. Some might consider celebration appropriate, yet 25% of all global fisheries are over exploited and 52% are fully exploited⁸⁶. With that in mind, the industry must continue to seek out responsible, ethical and environmentally appropriate operating practices in order to maintain our fishing heritage and communities. The seafood industry is enormously complex, with far ranging global trade and complex ecosystems. The world's oceans also have such a vital role to play in the health of the planet; it is essential we find ways to work in harmony.

The data and research presented in this report are provided in order to help seafood industry professionals find appropriate ways of operating. In addition to presenting what we do know, part of the role of bringing together such information is to identify what we don't know. The findings point to many gaps of data in the Food Service sector in particular and the research leads us to realise there are many unanswered questions, as well as offering opportunities for immediate action; particularly in the area of information provision to both consumers and professionals.

It is clear that a market for sustainable seafood exists and that segments of the UK seafood industry are working to make better choices available to a growing number of consumers who actively seek them. The Seafood Choices Alliance partners with all sectors of the seafood industry to increase these choices through solution driven collaborative action and better communication, as well as working with the conservation community to continue to bring the issue of sustainability to the attention of industry, media, consumers and policymakers.

Together we can make more responsible choices and make a difference, leaving a healthy ocean with plentiful seafood choices for the future.

⁸⁶ FAO.

Appendices

Appendix 1 - Seafood Labelling

EU labelling

Directive 2065/2001: from January 1st, 2002 fish retailers are obliged to provide information regarding:

1. The correct species name (including scientific name)
2. The production method (caught at sea, inland waters or farmed)
3. Catch area (North-West Atlantic, Mediterranean Sea, etc.)

N.B. The directive only applies to **retail** sale and to primary processed products (whole fish and fillets).

UK labels

There are four eco-labels commonly seen on UK seafood. Only the MSC label relates to wild capture fisheries. All other labels relate to farming (aquaculture and agriculture).

Sustainable seafood

<p>Marine Stewardship Council (MSC)</p> <p>www.msc.org</p>		<p>Has developed an environmental standard for sustainable and well-managed wild capture fisheries</p>
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Organic

<p>Soil Association Certification Limited</p> <p>www.soilassociation.org</p>	 <p>Soil Association</p>	<p>Offers organic certification for:</p> <ul style="list-style-type: none"> • Atlantic salmon • Brown trout • Rainbow trout • Arctic char⁸⁷
<p>Organic Food Federation</p> <p>www.orgfoodfed.com</p>		<p>Offers organic certification for:</p> <ul style="list-style-type: none"> • Cod • Salmon • Trout • Shellfish⁸⁸

Animal welfare

<p>RSPCA Freedom Food</p> <p>www.freedomfood.co.uk</p>		<p>Freedom Food is the RSPCA's farm assurance and food labelling scheme dedicated to improving farm animal welfare, including fish.</p>
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⁸⁷ Also certifies shellfish outside the UK - approval pending for UK.

⁸⁸ DEFRA approval pending.

Appendix 2 - Greenpeace Supermarket League Tables

2005 ⁸⁹	Sustainable seafood sourcing policies	Support for sustainability initiatives	Labelling/ promotion of sustainable seafood	Selling most destructively fished species	Total score (out of 20)
M&S	5	5	4	3	17
Waitrose	5	3	4	3	15
Sainsbury's	3	4	3	0	10
Co-op	2	2	2	1	7
Somerfield	1	1	2	2	6
Tesco	2	1	1	1	5
Iceland	0	0	0	3	3
Morrisons	1	1	0	0	2
ASDA	0	1	0	0	1

2006 ⁹⁰	Sustainability of wild caught seafood	Sustainability of farmed seafood	General issues*	Rank and grade 2006	Rank and grade 2005
M&S	A	A	A	1	1
Waitrose	A	A	B	2	2
Sainsbury's	B	B	B	3	3
Co-op	C	B	C	4	4
ASDA	C	D	C	5	9
Morrisons	C	D	C	5	8
Tesco	C	D	C	5	6
Somerfield	D	D	D	8	5
Iceland	E	E	E	9	7

*General issues: the brands and ranges of seafood covered by seafood procurement policies; transparency of policies and their implementation; and promotion of sustainable seafood.

89 Dorey CN (2005). 'A recipe for disaster: Supermarkets' insatiable appetite for seafood.' London, UK: Greenpeace.

90 Greenpeace (2006). 'A recipe for change: Supermarkets respond to the challenge of sourcing sustainable seafood.' London, UK: Greenpeace.

Appendix 3 - Mintel: Ethical Consumer Survey

Attitudes Towards Ethical Food – UK Market Intelligence, August 2006⁹¹

“What does the term ethical food mean to you?”

1007 adults, aged 15+	%
Buying Fairtrade products	48
Concern for the environment e.g. free from pesticides	37
Not buying depleted fish such as cod, swordfish	36
Regularly recycling food/drink packaging	35
Only buying free-range eggs	34
Concern for animal welfare e.g. Freedom Foods	32
Avoiding genetically-modified (GM) foods	29
Shopping at independent stores	24
Only buying produce which is in season	22
Buying organic food whenever possible	22
Don't know	10
None of these	4

⁹¹ Mintel/BRMB.

Appendix 4 - UK Top 20 Seafood Choices, 2005⁹²

PRODUCT WEIGHT (Tonnes)					
Species	Imports	Exports	Landings	Aquaculture	Apparent Consumption
Salmon	54,773	49,127		158,009	163,655
Tuna	135,578	5,531			130,047
Cod	135,456	41,130	11,651	8	105,985
Haddock	67,504	6,270	43,580		104,814
Prawn	89,924	22,717	537		67,743
Blue Whiting	99	2,239	28,793		26,653
Pollack	18,362	4,140	11,372		25,594
Mackerel	27,057	100,596	94,084		20,545
Herring	15,540	69,652	73,780		19,669
Scallop	1,916	8,831	24,675	55	17,815
Cockles			13,162		13,162
Sardines	15,000	5,856	3,603		12,747
Whelks			11,103		11,103
Plaice	7,525	741	3,080		9,864
Whiting	1,897	1,447	8,570		9,020
Monkfish	3,308	4,246	8,390		7,452
Mussel	5,577	14,540	11,318	4,223	6,578
Crab	2,185	15,253	19,146		6,078
Hake	5,614	2,359	2,230		5,484
Nephrops	1,499	20,712	24,118		4,905

⁹² Table of apparent consumption provided by Sea Fish Industry Authority (Seafish), with data from a variety of sources.



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to the table*

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