

UK Sea Fisheries Statistics 2021



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UK SEA FISHERIES STATISTICS 2021

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About this publication

The aim of this publication is to provide a comprehensive picture of UK Sea Fisheries in 2021, recent trends and long-term historical context, back to 1938 in some instances.

The publication is a summary of:

- The UK fishing fleet (Section 1)
- Its activity at sea
 - o Landings how much fish are caught and landed (Section 2)
 - Effort how long is spent at sea (Section 3)
- Trade (Section 4)

This report contains charts and commentary to describe UK sea fisheries. View the accompanying tables for each section and underlying datasets here:

https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021

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Key Statistics

In 2021 there were 5,783 UK registered fishing vessels. This represents a 10 per cent reduction in the last ten years, however Gross Tonnage (GT) has remained the same at 202 thousand tonnes. **Fleet** Approximately 20 per cent of the UK fleet is represented by vessels over 10 metres in length, of which 44 per cent are administered in Scotland. There are around 11 thousand fishers working on UK registered vessels. This is a reduction of 1,700 fishers in the last ten years. In 2021, UK vessels landed 652 thousand tonnes of sea fish with a value of £921 million. Compared to 2020, this is an increase of 5 per cent and 11 per cent in quantity and value respectively. This is mainly driven by the UK's recovery from the covid period and additional quota available to the UK fleet after leaving the EU. Landings Landings into the UK by foreign vessels in 2021 was 20 thousand tonnes, which compared to 2020 represents a 48 per cent reduction, however landings abroad by UK vessels has increased by 5 per cent to 258 thousand tonnes. Since 2003, fishing effort (kW days at sea) by the over 10m fleet has decreased by around 43 per cent. Most of the reduction in effort is driven by a 46 per cent decline in effort in the demersal trawl and seine segment. **Effort** Fishing effort by the over 10m fleet increased by nearly 5 per cent between 2020 and 2021. This reverses a small decline following the levelling off in effort seen since 2011. The UK is a net importer of fish. The UK's crude trade gap in 2021 for sea fish is 305 thousand tonnes. This is higher than 2020 where the gap was 250 thousand tonnes. Trade In 2021 the UK imported 655 thousand tonnes of sea fish, with a value of

£3.1 billion. It exported 350 thousand tonnes, with a value of £1.6 billion.

Section 1: Fleet

View the tables accompanying this section here:

https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021

Fleet Characteristics

Capacity and power

As well as the total number of vessels, the fleet can also be assessed in terms of their capacity and power. Capacity is usually measured in gross tonnage (GT) which is a volumetric measure of a vessel capacity. The power (kW) of a vessel refers to the vessel's engine power.

The MMO holds data on the capacity and power of all individual UK vessels and these figures are aggregated to compare groups of interest. This allows for a more nuanced assessment of the fleet, as opposed to looking at the number of vessels alone.

The number of UK fishing vessels has reduced by 49 per cent over the past three decades, from over 11 thousand vessels to below 6 thousand.

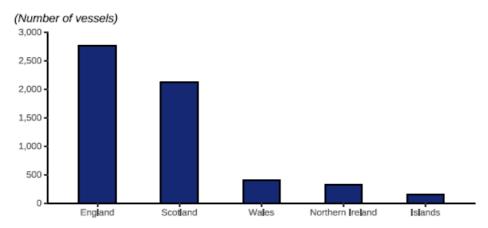
The power (kW) of the UK fleet has also decreased by 38 per cent over the past three decades¹. Two key changes which have contributed to this are national and international policies introduced to ensure the future sustainability of fish stocks:

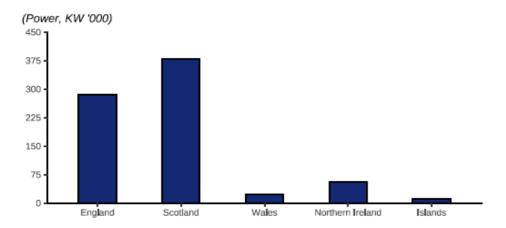
- 1. Greater controls on fishing opportunities
- 2. Fleet capacity reductions through decommissioning exercises

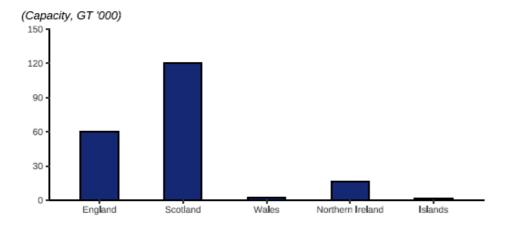
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¹ Table 1.1

Figure 1.1²³: In 2021, England contributed the highest number of vessels to the UK fleet, but Scotland's fleet had more power and capacity







English vessels represent 48 per cent of the total number of vessels in the UK while Scottish vessels 37 per cent. This proportion has remained the same as 2020, with little change over the last decade.

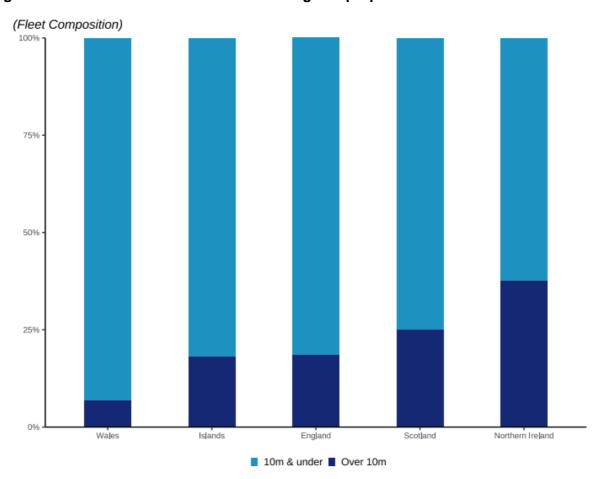
² In this figure and throughout the publication, Islands refers to the Crown Dependencies of Isle of Man, Jersey and Guernsev.

³ The figures and values reported here are based on the country of administration for the vessel while the figures in Tables 1.1 and 1.2 are based on the country associated with the district the vessel is administered by. Some Island vessels (based on country of administration) are assigned to England in the associated tables as the district of their admin port is Plymouth in England.

The Scottish fleet has the greatest overall capacity (60 per cent) while the English fleet accounts for 30 per cent of the total fleet capacity.

Vessel length

Figure 1.2: The Northern Irish fleet has the highest proportion of vessels over 10m



The smaller number yet higher capacity of Scottish compared with English vessels (Figure 1.1) can be explained by Scotland having a higher proportion of larger, more powerful vessels in comparison to the English fleet.

The fleet with the largest proportion of vessels over 10 metres in the UK is the Northern Irish fleet. The different length composition of the fleet can again be used to explain why the Northern Irish fleet has more capacity and power than the Welsh and island fleets, despite having a similar number of vessels.

In 2021, there were 34 vessels that could not be assigned to a country. These vessels are registered but not administered by a port; typically, new vessels and vessels in the process of moving to another administration⁴.

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⁴ Table 1.2

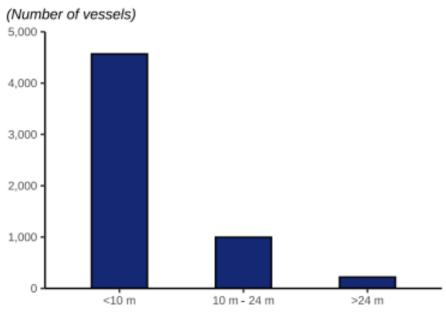
Fish stock

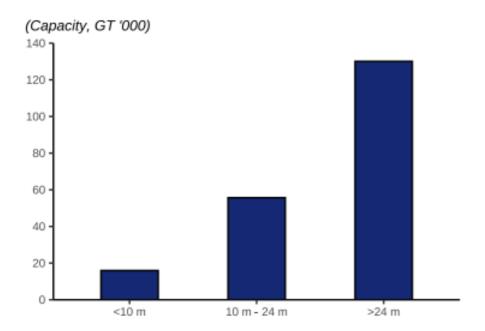
A fish stock refers to a fish population that is isolated from other stocks of the same species. For example, around the UK there are several cod stocks – including e.g. Cod 7d in the Channel and North Sea Cod. Many fish stocks are managed by quotas – limits set on the tonnage that can be caught. Currently the UK has quota for around 100 different fish stocks.

Owing to the diverse nature of the fishing industry, it is difficult to provide a simple explanation of the variation seen across the fleet. The main influencer is the different fish stocks that the fleets target. Key elements of the Scottish fleet target several fisheries that are high volume but lower priced, such as herring and mackerel caught in the North Sea and West of Scotland waters. To target these stocks, the Scottish fleet has moved towards having higher capacity vessels which cover large sea areas and can catch several hundred tonnes of fish per trip.

Compared with this, the English fleet is involved in several key fisheries that are typically lower volume but higher priced, such as the Channel fisheries for sole and plaice. In addition, a greater proportion of the fisheries pursued by the English fleet cover inshore areas. Together these factors have allowed the English fleet to develop with a greater proportion of smaller vessels that are able to be economically viable through catching smaller quantities of more valuable fish. Changes in fishing opportunities over time have been key drivers for the development of the fleet.





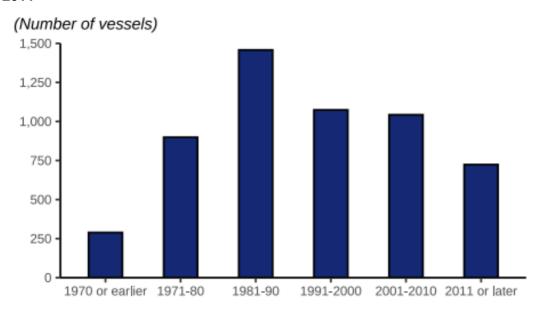


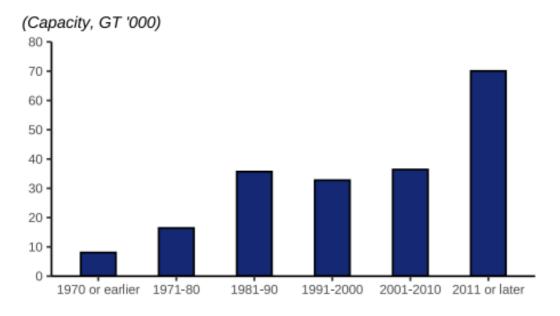
Vessels under 10 metres make up 79 per cent of the UK fleet but only contribute 8 per cent to the fleet's total capacity. Larger vessels of more than 15 metres make up 10 per cent of the total fleet by number representing 85 per cent of the fleet's capacity. This is because larger vessels utilise fishing gear that can catch larger quantities and hold greater amounts of fish per trip and can journey for longer distances to better fishing locations.

The Scottish fleet has larger vessels than the English fleet. The average length of a Scottish vessel is 14 metres while the average length of an English vessel is just over 11 metres. As a result , the Scottish fleet has twice the capacity than the English fleet despite the English fleet having 23 per cent more vessels.

Age of vessels

Figure 1.4: Vessels built in 2011 or later have a much higher capacity than vessels built prior to 2011





While the number of vessels built in the last four decades has decreased, the total capacity and power of those built since 2011 has increased substantially. These modern vessels (built since 2011) contribute 35 per cent of the fleet's capacity, while only making up 13 per cent of the vessels in the UK fleet. Vessels built between 1981 and 1990 account for 25 per cent of the total number of vessels in the fleet but only 18 per cent of the fleet's total capacity.

Industry group

Fish Producer Organisations (FPOs)

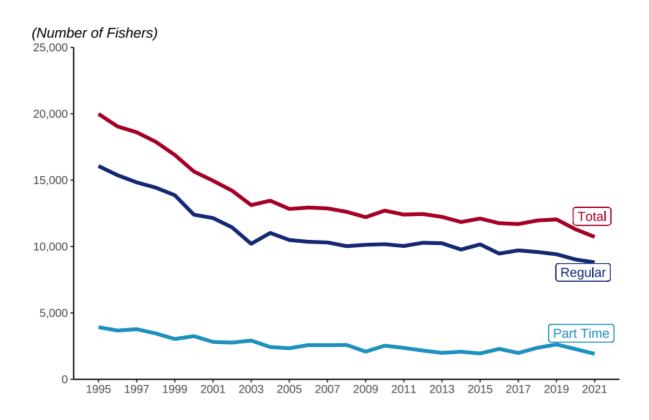
FPOs are officially recognised bodies set up by fishery or aquaculture producers. In the UK, they are responsible for managing the quota for their vessels and play an essential role in fisheries management.

On 1 January 2021, 747 vessels over 10 metres in length were members of a FPO, 61 per cent of all vessels over 10m. The remaining 446 vessels over 10m were not members of an FPO and were therefore members of the non-sector. The proportion of non-sector vessels (37 per cent) has remained relatively stable since 2018.

The composition of FPOs varies greatly; Scottish FPO had the highest membership with 144 vessels and Klondyke FPO had the smallest membership with 3 vessels. The average number of vessels in an FPO was 31⁵.

Fishers on UK vessels

Figure 1.5: The number of fishers in the UK continues to steadily decline.



Compared to 2020, the total number of fishers decreased by 5 per cent in 2021. This amounted to almost 600 fewer jobs in the catching sector.

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⁵ See Table 1.5.

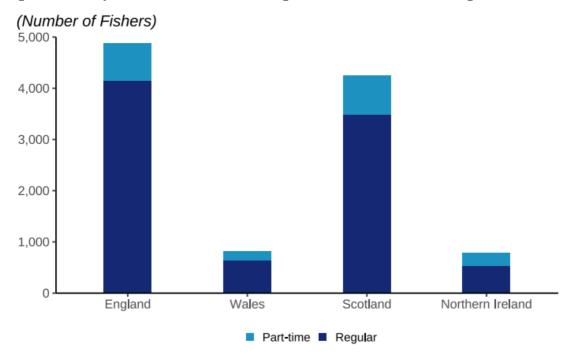
The total number of fishers in the United Kingdom has steadily declined by 48 per cent since 1994 and 78 per cent since 1938. The number of part-time fishers in 2021 was 62 per cent less than in 1994. Over the last decade, the number of fishers has fluctuated around 12 thousand fishers but has remained relatively stable.

The long-term decrease in the number of fishers is associated with reductions in fleet size and the move to fewer but larger vessels. Relative to their capacity, larger vessels do not require as many fishers as small vessels. Vessels under 10 metres have on average two fishers while vessels over 24 metres have nine fishers. As the UK fleet transitions to having more of these large ships rather than a higher proportion of small ships, there are fewer jobs in the catching sector.

Another reason for this decline is policies that limit fishing activity to protect fish stocks and the marine environment. National and international policies that limit fishing activity, such as the <u>western waters</u> and <u>Sole recovery zone effort regimes</u>, can reduce the number of available fishing jobs while insuring the sustainability of the industry.

Fishers by UK nation

Figure 1.6: 85 per cent of fishers working on UK vessels are on English and Scottish vessels



Forty-six per cent of UK fishers work onboard English vessels and 40 per cent work on Scottish vessels. The rest (14 per cent) are almost evenly split between Welsh and Northern Irish vessels. Welsh vessels have the highest proportion of part time workers (32 per cent). In England and Scotland only 15 and 18 per cent of their fishers are part time respectively.

The Scottish fleet has a 50 per cent higher capacity that the English fleet but employs 641 fewer fishers. This demonstrates that fleets with a higher proportion of large ships require fewer fishers while having a higher capacity.

Section 2: Landings

View the tables accompanying this section here: https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021

UK summary

In 2021, UK vessels landed 652 thousand tonnes⁶ of sea fish into the UK and abroad with a value of £921 million⁷. Compared to 2020, this is a slight increase in the quantity of sea fish landed (5 per cent) and a 11 per cent increase in value landed.

Multiple factors impact fishing, and landings tend to fluctuate considerably over time. In 2020, the biggest impact on sea fisheries was the effect of the UK's departure from the EU. This had impacts on the stocks the UK fleet had access to fish in 2021.

Species groups

Fish are commonly split into three groups of similar species.

Demersal fish inhabit the bottom of the ocean. Key demersal species fished by the UK fleet include cod and haddock.

Pelagic fish inhabit the water column (not near the seabed or shore). The two main pelagic species fished by the UK fleet are mackerel and herring.

Shellfish include various species of molluscs (e.g. scallops, whelks) and crustaceans (e.g. crabs and nephrops).

The quantity of landings in 2021 increased compared to 2020 driven by an increase in landings (11 per cent) of lower value pelagic species compared to 2020. The value of landings increased as landings of higher value shellfish species increased by 8 per cent.

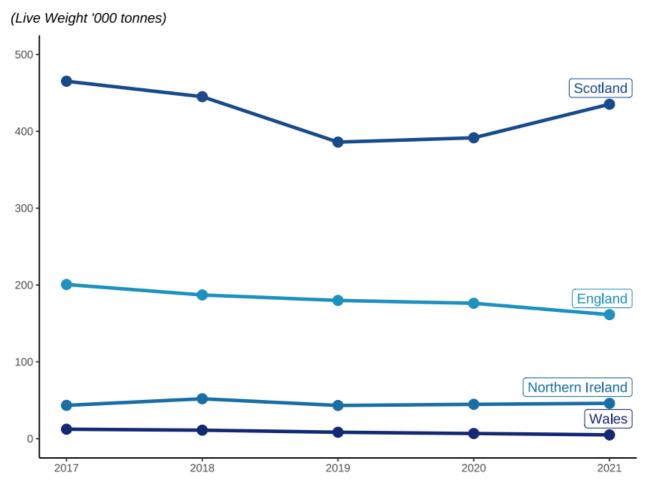
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⁶ In this section, tonnes always refer to live weight tonnes. This is the sum of the live weight of fish caught, prior to any processing e.g. gutting or shelling.

⁷ Table 2.1

Vessel nationality

Figure 2.1: Of the four UK nations, Scotland lands the most fish by quantity and value



At the country level, the landed weight of fish by each of the four nations remains stable over time. A notable exception is the 13 per cent decrease in landings by Scottish vessels between 2018 and 2019. This reduction is mainly driven by a reduction in landings of pelagic species, driven by smaller quotas for key pelagic species.

Vessel length

Three quarters of the total quantity of fish caught by UK vessels in 2021 was landed by vessels over 24 metres in length. In 2021, these vessels constituted just 4 per cent of the UK fleet by number. The large volume of landings by these large vessels is explained by their very high fishing capacity and power (Figure 1.3).

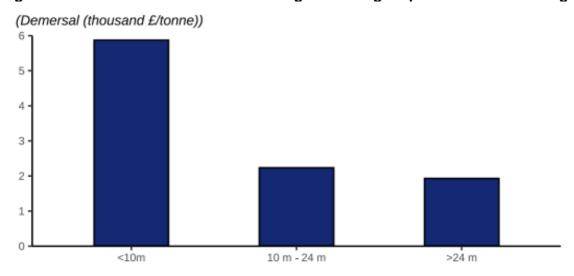
Landings of pelagic species by vessels over 24 metres in length formed 97 per cent of the annual total pelagic landings for the whole UK fleet. 71 per cent of all landings of demersal species by the UK fleet were by vessels over 24 metres in length.

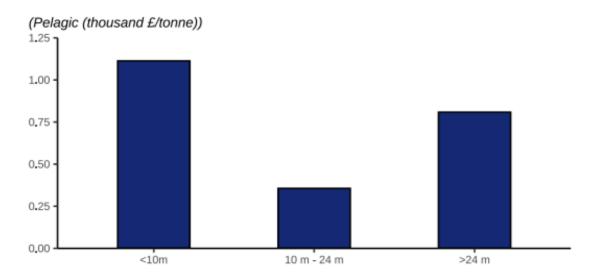
In contrast, landings of shellfish are more evenly distributed across the fleet, with vessels 10 metres and under in length accounting for 22 per cent of the total quantity of shellfish landings. Landings of shellfish made by 18 – 24m vessels accounted for a quarter of shellfish landings.

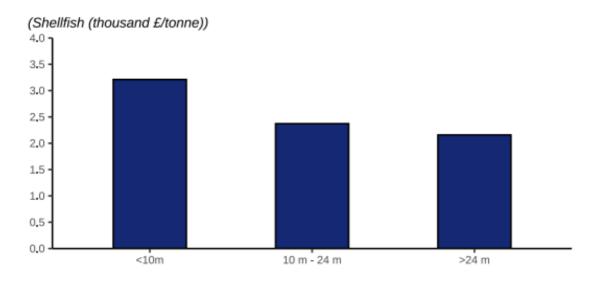
Table 2.2: Landings by UK vessels 10m and under and over 10m

	Vessel Length	2020	2021	Percentage change
Quantity ('000 tonnes)				
	10m and under	35.1	35.9	2%
	Over 10m	588.2	615.9	5%
Value (£ million)				
	10m and under	99.6	121.5	22%
	Over 10m	731.3	799.8	9%_

Figure 2.3: Vessels under 10 metres in length fetch higher prices for their landings.







Overall, vessels under 10 meters fetch a higher price per tonne for their landings. This is especially true for demersal catches. Demersal landings by vessels under 10 meters fetch prices 67 per cent higher than vessels over 24 meters. Landings of demersal species by larger vessels tend to be frozen on board the vessel and sold in bulk, contributing to their lower price per tonne.

There is a strong a relationship between vessel size and the average price per tonne for shellfish catches. Shellfish catches by vessels under 10 meters only fetch 33 per cent higher prices per tonne than catches by vessels over 24 meters.

Industry group⁸

Eight-seven per cent of the quantity of landings by the UK fleet in 2021 was landed by vessels in a Fish Producer Organisation (FPO)⁹. The largest FPO, Scottish FPO, accounted for almost 20 per cent of the quantity and 18 per cent of the value of fish landed by the UK fleet.

There is clear specialisation among some Producer Organisations to species targeted. For example, vessels in North Atlantic FPO, Lunar Group and Interfish and Klondyke primarily target pelagic species. Other FPOs are segregated more by region. For example, Wales and West Coast FPO and South Western FPO.

Over a third of UK vessels over 10 metres in length were in the non-sector (vessels without producer organisation membership). These vessels typically have limited access to fishing quota¹⁰ and primarily target shellfish species, which are mostly non-quota stocks. In 2021 they caught 30 per cent of all shellfish landed by the UK fleet. Vessels in the non-sector landed less than 2 per cent of the demersal and pelagic fish caught by the UK fleet.

Vessels 10 metres and under in length without producer organisation membership (the '10m and under pool') also landed relatively small quantities of demersal and pelagic species. Four fifths of their catch are shellfish. The fishing methods used by this sector and the different species targeted mean that they typically gain higher than average prices for their catch (Figure 2.3).

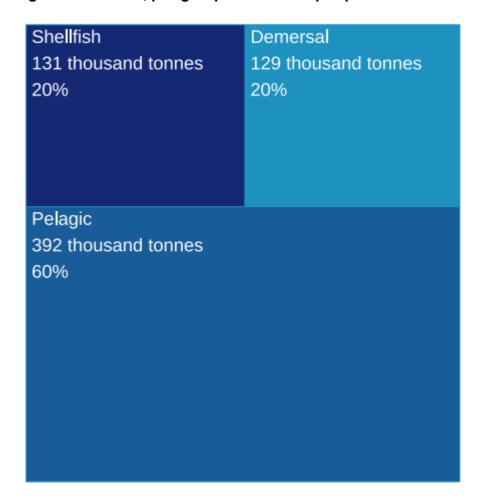
⁸ Table 2.9

⁹ Fish Producer Organisations (FPOs) are officially recognised bodies set up by fishery or aquaculture producers.

¹⁰ https://www.gov.uk/government/publications/fishing-quota-allocations-for-2021-for-england-and-the-uk

Species group

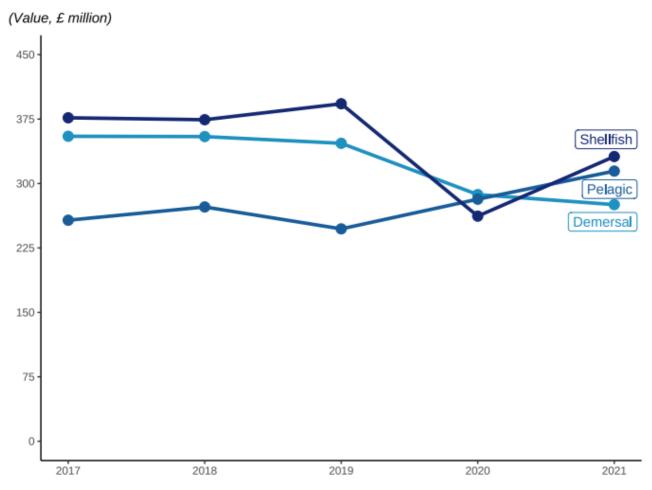
Figure 2.4: In 2021, pelagic species made up 60per cent of the total quantity landed



Pelagic species make up 60 per cent of the total quantity of landings by UK vessels, while only contributing a third of the value landed (Figure 2.5) this is due to pelagic species typically fetching a lower price per tonne. Shellfish landings make up 20 per cent of the total quantity landed, but account for only £17 million less than pelagic landings.

In 2020, a higher proportion of landings by quantity were demersal (24 per cent) than in 2021. In 2021 there were 37 thousand more tonnes of pelagic species landed than in 2020.

Figure 2.5: The value of demersal landings dropped in 2021, while the value of pelagic and shellfish landings increased.



The value of pelagic landings between 2020 and 2021 increased by 12 per cent, in line with the 11 per cent increase in the quantity of landings.

The quantity of demersal landings decreased by 13 per cent while the value of those landings decreased by 4 per cent. Shellfish landings increased by 8 per cent while their value increased by 26 per cent. The price per tonne¹¹ fetched for shellfish species increased across all species groups with the highest increase seen in shellfish (16 per cent). Pelagic species had the smallest increase (6 per cent).

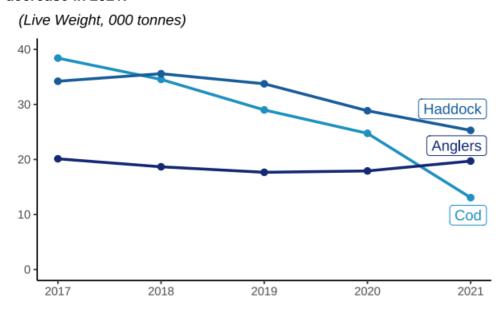
In 2020 the shellfish sector was hit most severely because shellfish species tend to be landed and sold fresh for use in the hospitality sector in the UK and abroad. The demand for shellfish from the hospitality sector dropped dramatically as lockdowns were imposed across the UK and EU. However, in 2021, with the release of lockdown measures, the shellfish sector has started to return to prices typically seen pre 2020.

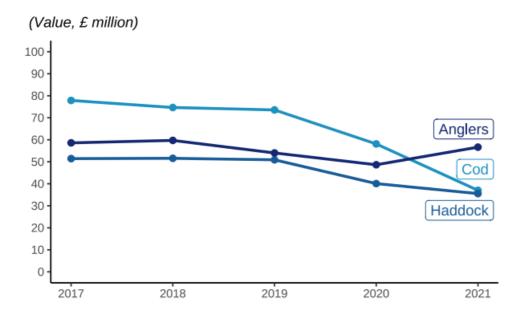
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¹¹ Table 2.16

Demersal

Figure 2.6: Landings of key demersal species specifically cod and haddock continued to decrease in 2021.





In 2021, landings of cod decreased by almost a half compared to 2020 leading to a reduction of around a third of value landed.

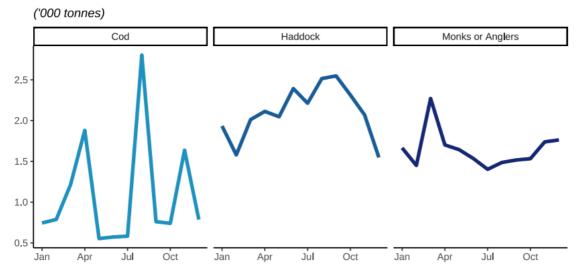
Landings of demersal species, particularly cod and haddock have fallen considerably since 1996. This follows the long-term declining trend reported since 1938¹². In 2021, landings of demersal fish were around 15 per cent of the quantity landed in 1938.

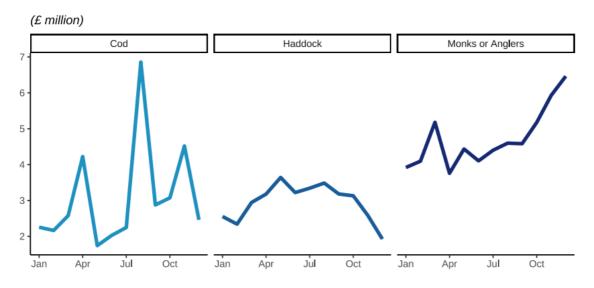
The decline in landings of demersal fish has several causes, including reductions in fleet size, declining fish stocks and restricted fishing opportunities. National and international regulations have limited demersal fishing activity in recent decades, through decommissioning of fishing vessels, reductions in quotas and fishing effort limits and other provisions of stock management plans.

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¹² Table 2.7 – note this table includes landings into the UK by UK and foreign vessels.

Figure 2.7: Landings of cod fluctuate across the year





Landings of cod fluctuate more than haddock and anglerfish as the UK's distant water fleet has targeted cod in e.g., Faroese waters. The distant water fleet are vessels that fish outside their own territories and often into other countries Exclusive Economic Zones (EEZ) and international waters. These large vessels can be out to sea for months and land huge volumes of fish at a time. This explains the spikes in quantity landed every few months.

Sole, turbot and halibut all command the highest price of demersal species landed by the UK fleet, all fetching over £10,000 per tonne in 2021¹³. These high prices, particularly for sole, are likely down to reduced supply following the introduction of the Sole Recovery Zone¹⁴.

ICES rectangle

The International Council for the Exploration of the Seas (ICES) standardise the division of sea areas for analysis. Each ICES statistical rectangle is 30 min latitude by 1-degree longitude, which is approximately 30 nautical miles by 30 nautical miles. Note that the area of ICES rectangles varies because the Earth is a sphere.

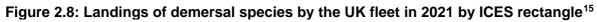
ICES rectangles are amalgamated to create ICES areas.

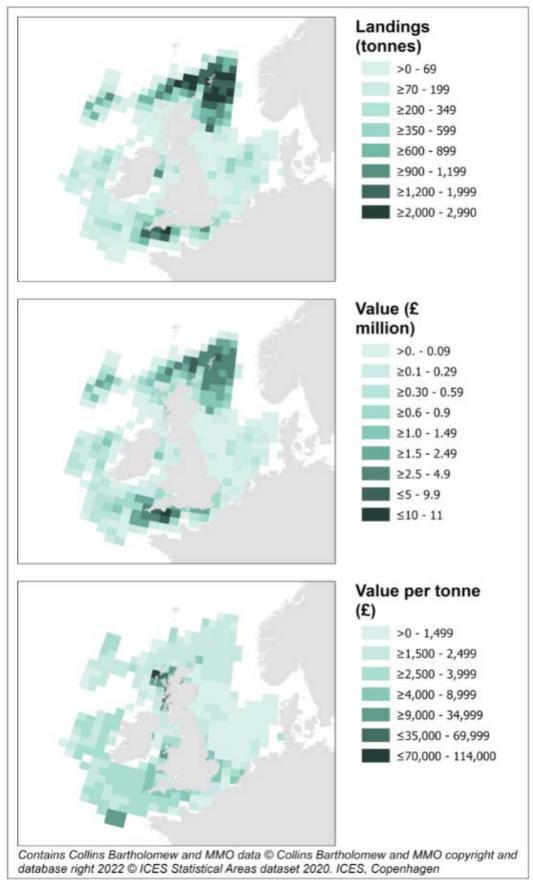
The following maps show landings of demersal species by the UK fleet in 2021 by ICES rectangle of capture. In 2021, the largest quantities and value of demersal species caught by the UK fleet were captured to the north-east of Scotland, in the central North Sea and in the English Channel. Demersal species with the highest average prices were captured by the UK fleet from waters along the west coast of Scotland.

¹³ Table 2.16

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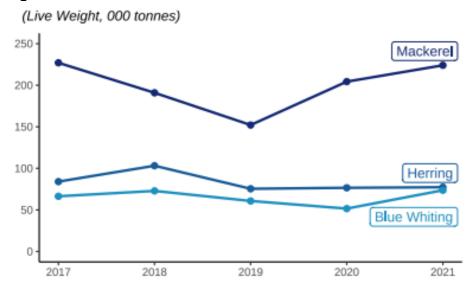
¹⁴ https://www.gov.uk/government/publications/manage-your-fishing-effort-sole-recovery-zone/sole-recovery-zone-rules

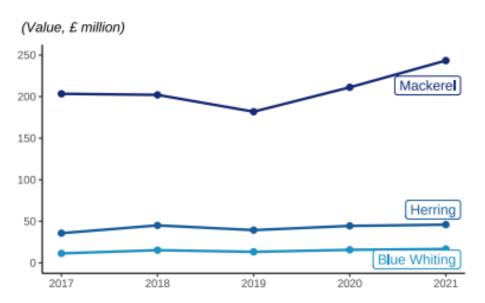




Pelagic

Figure 2.9: In 2021, the quantity and value of mackerel landed by UK vessels was 10 per cent higher than in 2020.





The UK fleet catches more mackerel than any other species – over 220 thousand tonnes in 2021, comprising 32 per cent of the total UK catch in 2021. Sixty per cent of mackerel landings by UK vessels are landed abroad.

Most pelagic species are under stock management plans with quotas. Their annual landings therefore track quota limits.

Landings of herring have not fluctuated as much as mackerel, as their quota limits have been more stable in the past five years.

Like most demersal species, most pelagic species are managed by quota limits. However, pelagic landings have not seen the same reduction as demersal species over the very long term. When

¹⁵ The very high value per tonne records included here are landings of wrasse species, commonly referred to as "cleaner fish". These are sold for their use in fish farms.

compared to 1938, pelagic landings in 2021 were 43 per cent lower, while demersal landings were down 85 per cent.

Figure 2.10: Pelagic landings follow seasonal patterns

('000 tonnes)

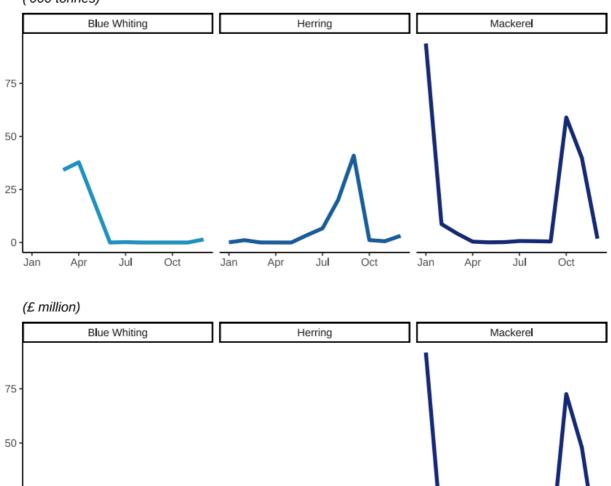
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0

Jan

Apr

Oct



Mackerel is a winter fishery for larger vessels so large landings are seen annually in January, February and October and November. Quotas had almost been exhausted by the end of the year, so catches are consistently lower in December.

Jul

Apr

Oct

Jan

Apr

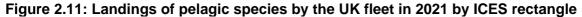
Jul

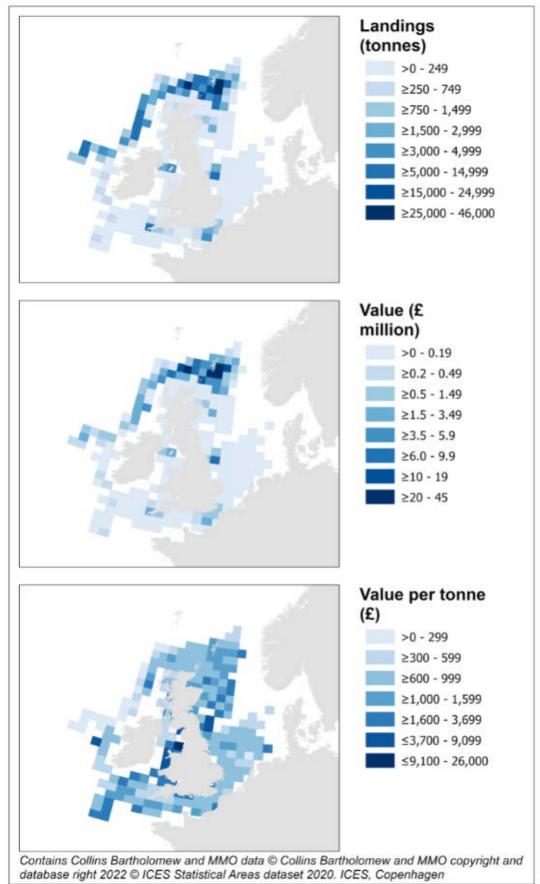
Oct

Ninety-eight per cent of all mackerel landings into the UK by the UK fleet in 2021 were in those four peak months. The sources of these two peaks are different: the January peak is mostly from landings captured off the West of Scotland (75 per cent), while the mackerel landings later in the year come from a fishery in the Northern North Sea. This North Sea fishery tends to attract higher prices.

A two-month period (August to September) accounts for 84 per cent of herring landed into the UK by the UK fleet. Landings in June and July came primarily from the Northern North Sea and were supplemented in August and September by fisheries in the Irish Sea.

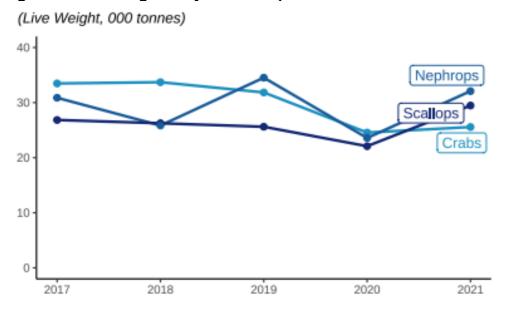
The following maps show landings of pelagic species by the UK fleet in 2021 by ICES rectangle of capture. In 2021, the largest quantities and value of pelagic species caught by the UK fleet were captured from rectangles near Shetland and from the north coast of Scotland down to the north-west coast of Ireland. Price per tonne was more evenly spread across ICES rectangles, with the highest prices fetched closer to the coast.

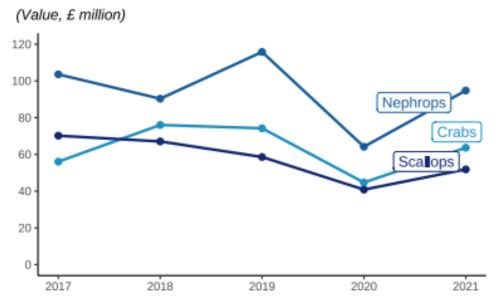




Shellfish

Figure 2.12: Landings of key shellfish species increased between 2021 and 2020





Nephrops (also known as langoustine or Norway lobster), crabs and scallops are the main shellfish species landed by the UK fleet, accounting for 71 per cent of all shellfish landings made by the UK fleet in 2021.

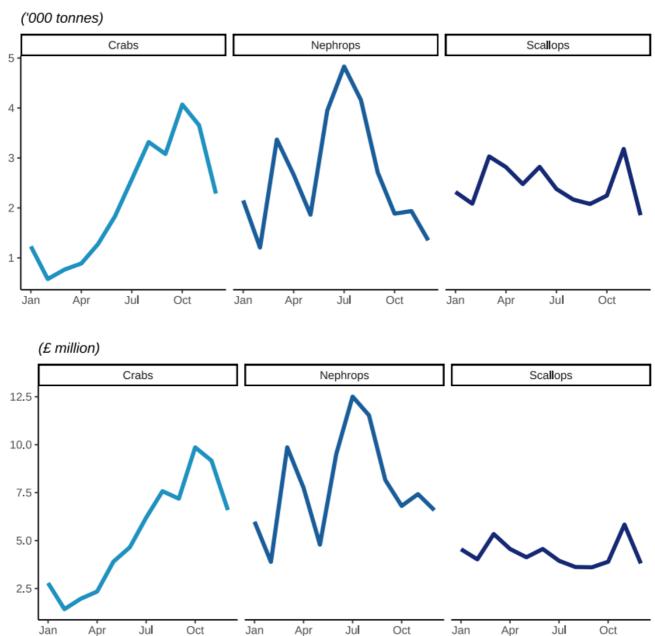
Landings of these three key species increased between 2020 and 2021, the increase in the value of nephrops landings was the most prominent at 48 per cent.

Over the last eighty years, landings of demersal and pelagic landings have decreased substantially (discussed above). In contrast, landings of shellfish have increased by over 290 per cent, from 32 thousand tonnes to almost 126 thousand tonnes in 2021.

This is partly driven because, for shellfish species, quotas only apply to nephrops. Further, the increase in shellfish landings by the UK fleet is likely due to the industry diversifying into the shellfish sector, where there are often fewer restrictions on fishing opportunities.

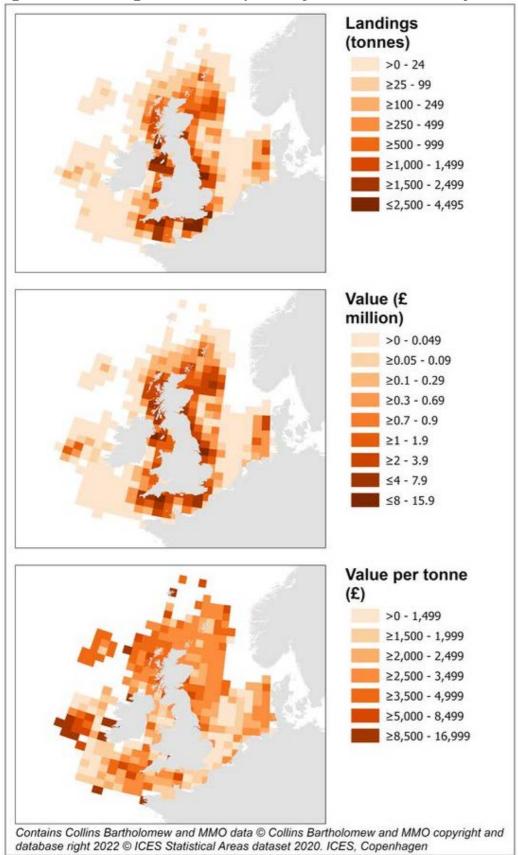
Another factor is improved reporting. A large proportion of shellfish landings are made by vessels 10 metres or under in length, for which there was no statutory obligation to report activity prior to 2022. From 2022 this is now mandatory with the introduction of the catch recording app. Successive improvements in data collection for this sector in recent years, including the introduction of mandatory reporting of first sales of fish, may account for some of the increase in reported landings.

Figure 2.13: Landings of nephrops fluctuate but show the highest peak in summer months. Crabs and scallops peak in landings towards the end of the year before Christmas period.



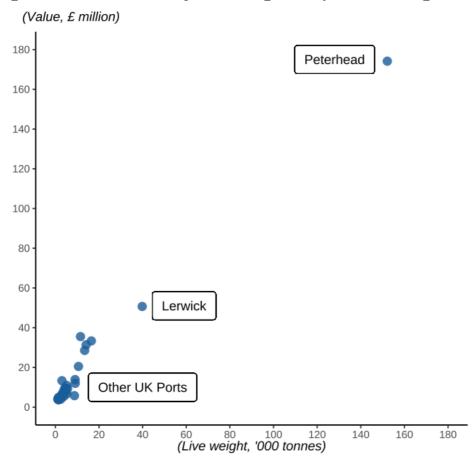
The following maps show landings of shellfish species by the UK fleet in 2021 by ICES rectangle of capture. In 2021, both the largest quantity and value of shellfish were captured in rectangles relatively close to the coast of the UK. However, shellfish species with high prices were typically captured in rectangles away from coastal areas, in particular off the west coast of Ireland around Porcupine bank.





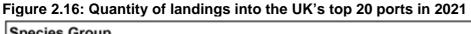
Landings by port

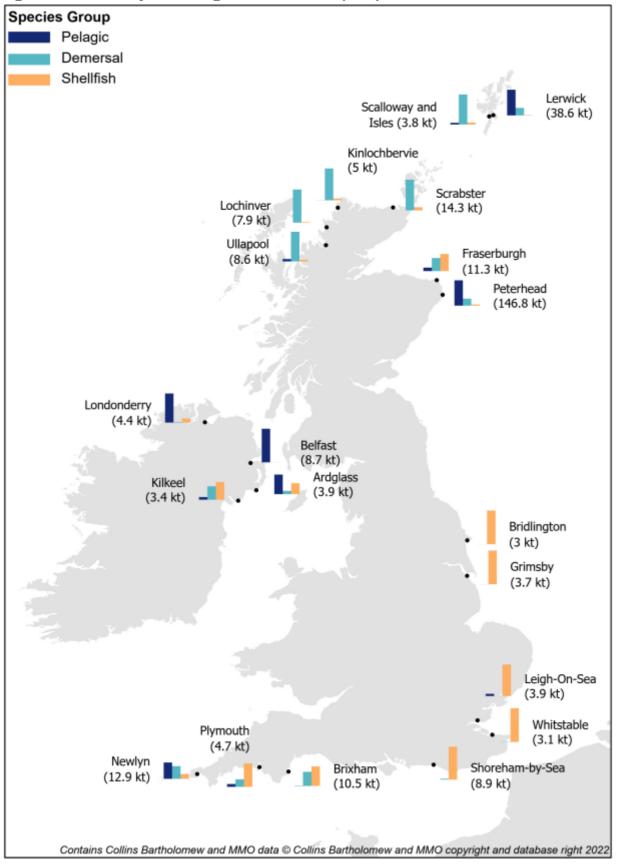
Figure 2.15: Peterhead is by far the largest UK port for landings



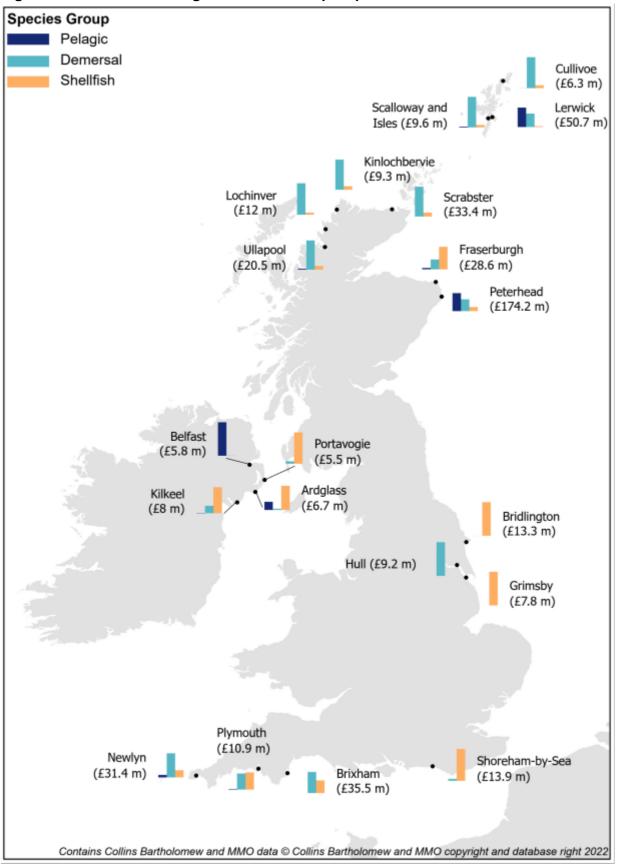
Peterhead continually tops the leader board for the largest port for landings, with either Lerwick and Fraserburgh in second place. These ports are all in Northern Scotland. In England, Newlyn was the port with the highest quantity of landings while Brixham had the highest value of landings. Seventy per cent of all landings by UK vessels into Scotland were into Peterhead and Lerwick, This is because Peterhead and Lerwick specialise in pelagic species, where landings are higher in 2021 than 2020.

Contrastingly, landings into Newlyn and Brixham (the top 2 English ports) form only 28 per cent of landings into England, with the remaining landings more evenly spread around the English coast.









Landings abroad by the UK fleet

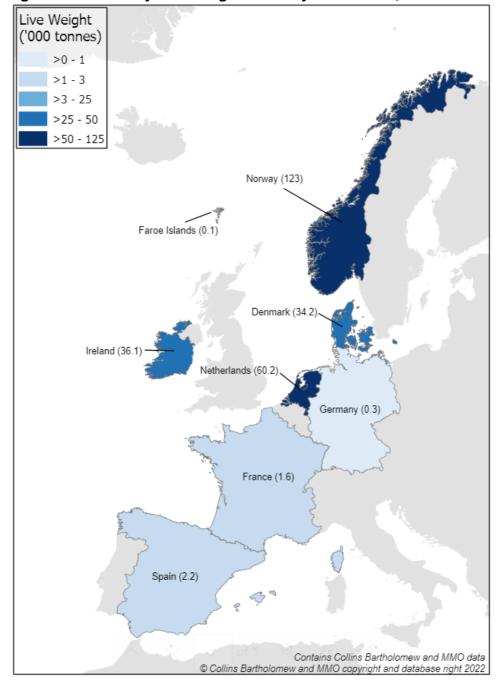


Figure 2.18: Quantity of landings abroad by the UK fleet, 2021

In total in 2021, UK vessels landed 258 thousand tonnes of fish abroad. This is 36 per cent of the total quantity of fish landed by UK vessels and represents 25 per cent of the value of all fish landed by UK vessels. The majority of landings abroad are pelagic fish species. Ninety per cent of landings abroad are pelagic species, 58 per cent of which was mackerel. Pelagic species fetch a lower price than most demersal and shellfish species which explains the 11-per cent difference between the quantity and value landed abroad for pelagic species. Nearly half of all landings abroad were into Norway, followed by almost a quarter of landings into ports in the Netherlands. A small number of the UK registered fishing fleet is in Dutch economic ownership; landings by these vessels contribute to the large quantities of fish landed into the Netherlands.

Landings into UK ports by foreign vessels

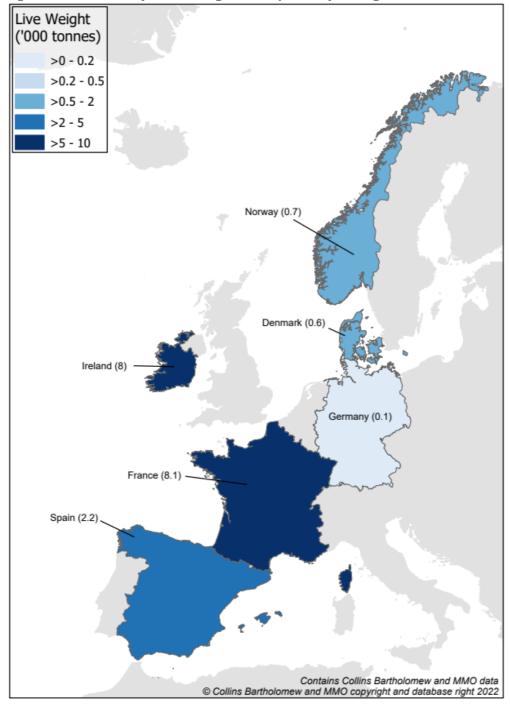
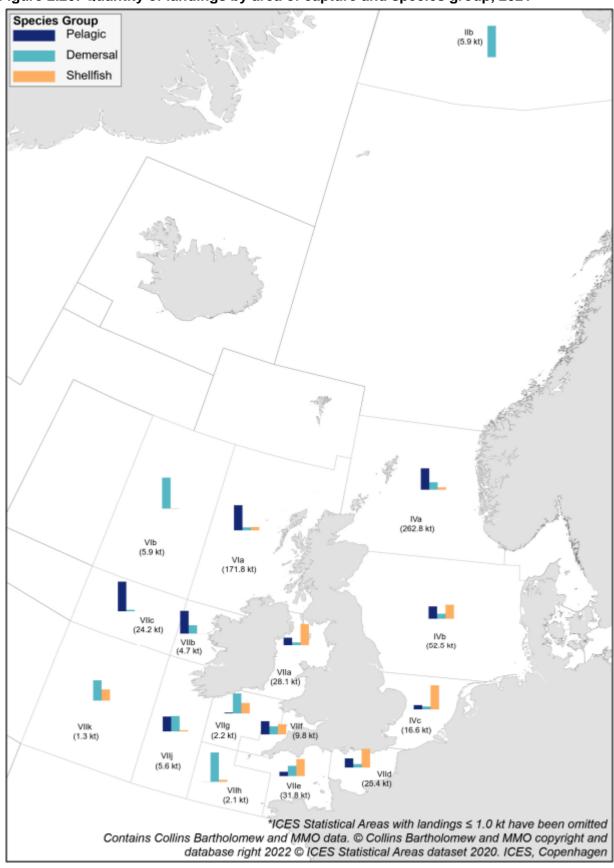


Figure 2.19: Quantity of landings in UK ports by foreign vessels, 2021

In 2021, 20 thousand tonnes of fish were landed into the UK by foreign vessels, down 48 per cent on 2020. The average change in landings between 2017 – 2019 was only 1 per cent, compared to a 25 per cent decrease between 2019 and 2020. The decrease between 2020 and 2021 will likely be caused by reduced access for foreign vessels into UK waters following EU exit. Fifty-seven per cent (11 thousand tonnes) of fish landed into the UK by foreign vessels were demersal. Most of the remainder was pelagic landings (8 thousand tonnes) and a small amount of shellfish, less than 1 thousand tonnes.

Area of capture

Figure 2.20: Quantity of landings by area of capture and species group, 2021



Different sea areas yield different proportions of species.

- 48 per cent (63 thousand tonnes) of the demersal fish landed by the UK fleet is from the Northern North Sea
- 46 per cent (179 thousand tonnes) of pelagic fish landed by the UK fleet is from the Northern North Sea
- 16 per cent (20 thousand tonnes) of shellfish landed by the UK fleet is from the English Channel

Typically, shellfish landings form a high proportion of landings from enclosed sea areas with large coastal stretches (Irish Sea, Bristol Channel, English Channel and the Southern North Sea), while pelagic species form the majority of landings from open waters such as the West of Scotland, Northern North Sea, West of Ireland and Porcupine Bank.

Landings by Exclusive Economic Zone

Exclusive Economic Zone

The term Exclusive Economic Zone is taken to mean the entire zone under the exclusive jurisdiction of a coastal state or international organisation. This will include the territorial seas which spans 0-12 nautical miles from the coast as well as the UNCLOS Exclusive Economic Zone from 12 up to 200 nautical miles (or roughly 22 to 370 kilometres) from the coast. Where EEZs would overlap a median line is used to delineate the sovereignty of waters.

ICES Statistical Rectangles

The International Council for the Exploration of the Sea (ICES) has implemented spatial divisions of the sea for statistical analysis in major fishing area 27. ICES rectangles are the lowest broadly available unit of spatial reporting for this area. Each rectangle is 0.5 degrees latitude by 1 degree longitude.

From 2021 vessels were required to report fishing activity by EEZ, differentiating between UK and EU waters. From this date the EEZ of capture will be determined by using the landings data as reported in vessel logbooks. Landings data by EEZ published prior to 2021 is based on the estimated EEZ by ICES rectangle spatial apportioning, therefore caution is advised when assessing differences with years before this date due to the alternative methodology used. This is however the most reliable data available to the MMO to determine EEZ for UK fishing vessel activity prior to 2021.

Figure 2.21: The UK's Exclusive Economic Zone

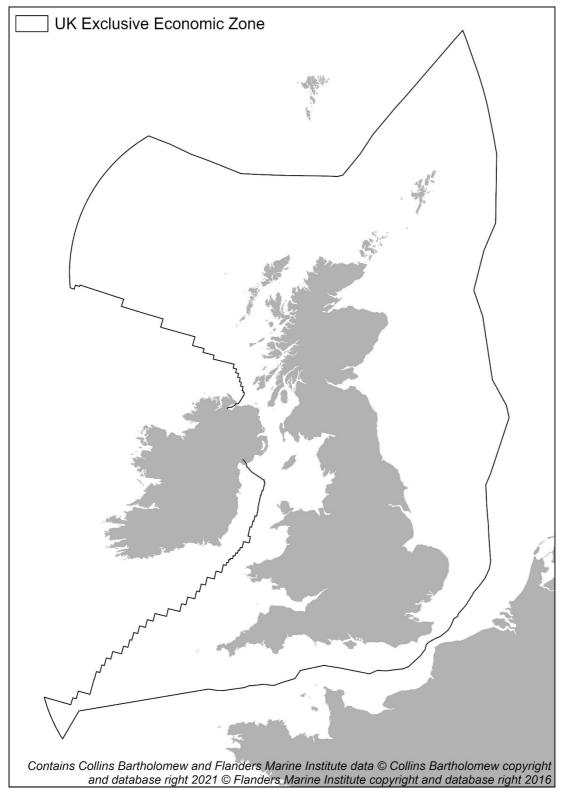


Figure 2.22: In 2021, 86 per cent of landings by UK vessels were from UK waters

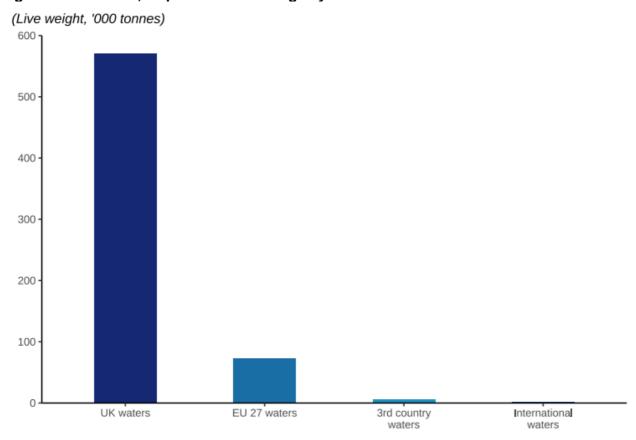
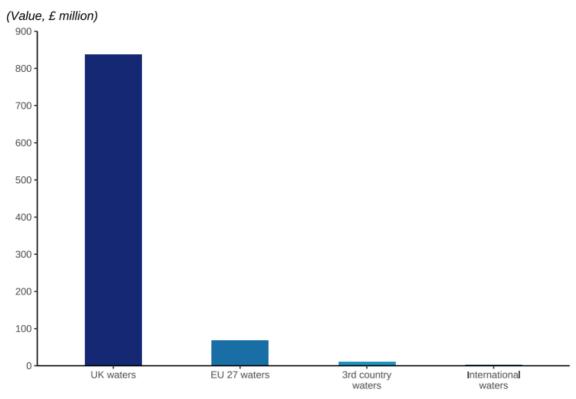
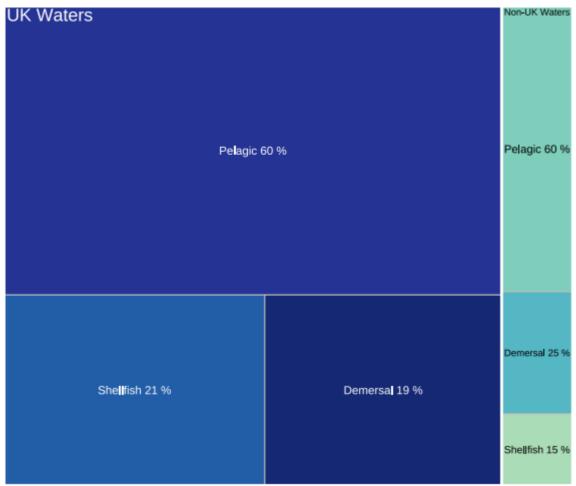


Figure 2.23: In 2021, 90 per cent of the value of landings by UK vessels were from UK waters



Outside the UK's waters the most important coastal state or bloc was EU-27 waters where UK vessels caught and landed 73 thousand tonnes of fish and shellfish for a value of £685 million in 2021. This equates to 11 per cent by weight and 7 per cent by value of the UK fleet's landings.

Figure 2.24: Pelagic species made up the majority of landings caught from both UK and non-UK waters in 2021.



In 2021, UK vessels landed a total of 563 thousand tonnes of fish and shellfish from UK waters with a first sale value of £830 million. By tonnage 46 per cent of this was from UK waters of area 27.4.a (Northern North Sea); mackerel and herring made up 69 per cent of those UK in UK Northern North Sea landings where as haddock, whiting, nephrops, cod, monkfish and saithe combined accounted for a further 23 per cent of the total UK landings from UK waters of the Northern North Sea.

Fishing gear

Gear

Different types of fishing gear are used to catch different species of fish. A single vessel can use several gears, or individual vessels may be more specialised. Gears can be grouped several ways. One grouping is active versus passive. Active gears follow the target fish while target fish come to passive gears which remain in one place.

Active gears

- Beam trawlers target fish on the seabed by towing a net from either side of the boat.
- Demersal trawlers fish along or just above the seafloor to catch demersal fish. A funnel-shaped net is towed behind one or two boats.
- Dredges are rigid structures that are towed along the seabed by a boat. They are used to target shellfish species such as scallops and oysters.
- Seine netting uses a net that is vertical in the water. Demersal seines target bottom dwelling fish while pelagic seines target fish that inhabit the water column.

Passive gears

- Drift and fixed nets usually target pelagic fish and hang in the water column. They
 are suspended from buoys or the seabed.
- Gears using hooks attract fish by placing bait on a hook fixed to the end of e.g. a line.
- Pots and traps are rigid structures into which fish, mainly shellfish, are enticed through funnels that are hard to escape from.

Most (89 per cent in 2021) of fish landed by UK vessels was captured using active gears. Ninety-nine per cent of pelagic fish were caught using active gears and 91 per cent of demersal fish¹⁶. Fifty-nine per cent of all shellfish were caught using active gears, mainly by scallop dredges and otter trawls.

The type of gear used can make a difference to the average price of fish. For demersal species, the average price of fish captured using passive gears is higher than for active gears. Price differentials are also observed between different gears of the same class. For example, shellfish caught using demersal trawls and seines are sold at a higher average price than dredges. This variation in prices partly reflects the different species caught by different gears. For example, demersal trawls and seines capture the majority of the nephrops landed by the UK fleet, while the bulk of the landings from dredges are scallops, which sell at a lower average price¹⁷. However, there can also be a premium attached to the method by which the fish are captured. This is driven partly by consumer choice around the environmental impact of different gears.

¹⁶ Table 2.11

¹⁷ Table 2.16

Landings by quota and non-quota stocks

Quota and non-quota stocks

Landings of quota stocks are those fish which are managed via quota limits, i.e. there is an upper limit set on the amount of fish that can be harvested from the sea. Non-quota stocks do not have an upper limit set on the quantity of fish that can be caught but some are managed via different regimes, e.g. effort limits on days at sea.

Non-quota species include almost all commercial shellfish species, nephrops being the exception.

In 2021, landings of quota species make up 82 per cent of the total quantity of landings by the UK fleet and 70 per cent of the value.

Figure 2.25: Scottish vessels land three quarters of UK landings of quota species

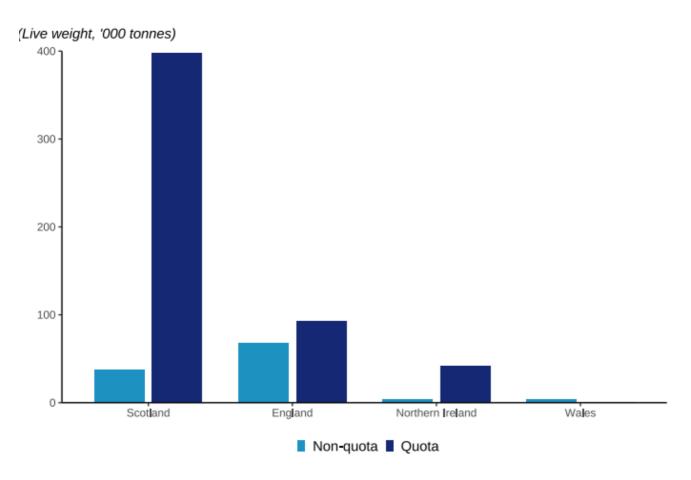
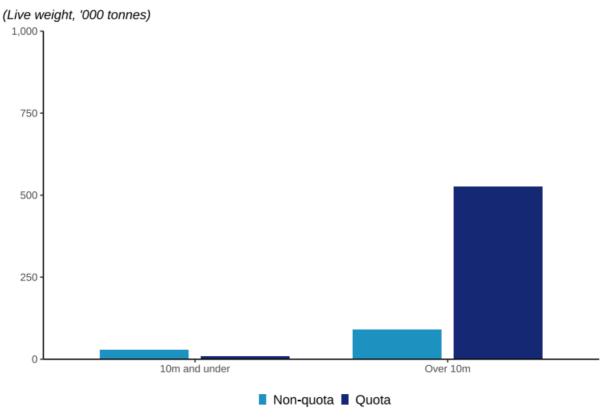


Figure 2.26: Vessels over 10m in length land 99 per cent of the landings of quota species by UK vessels



Quota allocations and management

Quota is allocated to the sector (Fish Producer Organisations) and the non-sector. The non-sector is split into two categories based on vessel length – over 10 metre and 10 metre and under.

Each UK nation holds the quota and manages uptake via catch limits for the non-sector. For the sector, individual Fish Producer Organisations are responsible for managing their members quota.

Landings of non-quota species by under 10m vessels are 3.5 times higher than their landings of quota species. Conversely, landings of quota species by over 10m vessels are almost 6 times higher than their landings of non-quota species.

Quota allocations are primarily based on Fixed Quota Allocation (FQA) units. These are mainly held by vessels in the sector based on their fishing track record of catching quota species. Most vessels in the sector – a member of a <u>Fish Producer Organisation</u> – are vessels over 10m in length. Vessels under 10m in length are mainly part of the non-sector and are allocated a small proportion of the total UK quota. Their landings of quota species are therefore less.

Section 3: Effort

View the tables accompanying this section here:

https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021

Western Waters

To prevent growth in fishing activity in the sea areas to the west of the UK, Ireland, Spain, Portugal and Morocco, an area (the 'Western Waters') was established from November 2003 in which fishing effort is limited.

Trips targeting edible crabs and spider crabs, demersal species and scallops are covered by the Western Water effort regime.

Following the end of transition from the EU in 2021 the UK has been enforcing the EU Western Waters regulation as amended by The Common Fisheries Policy (Amendment etc.) (EU Exit) Regulations 2019. The scope of this regulation has been changed to be consistent with the jurisdiction of the UK as an independent coastal state, and as such limits the application to those parts of the areas covered by Western Waters which are within United Kingdom waters.

Western waters effort statistics are also updated monthly here: https://www.gov.uk/government/collections/effort-use-statistics18

Over 10 metre fleet

Effort

Fishing effort captures the time vessels spend fishing. One measure of this is days at sea. Another measure is kW days at sea, which considers both the time vessels spend fishing and the power (kW) of the vessel's engine.

Effort restrictions are one of the ways fish stocks are managed. Limiting the number of days vessels can fish restricts their fishing opportunities.

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¹⁸ These monthly statistics are provided to supervise control of fishing effort in Western Waters areas within British fisheries limits waters by UK vessels. The Western Waters regulations were originally derived from EU law and have been transposed into UK law. The statistics are made available on or after the 15th day of each month.

Figure 3.1: Since 2003, fishing effort¹⁹ by the over 10m fleet has decreased by around 43 per cent

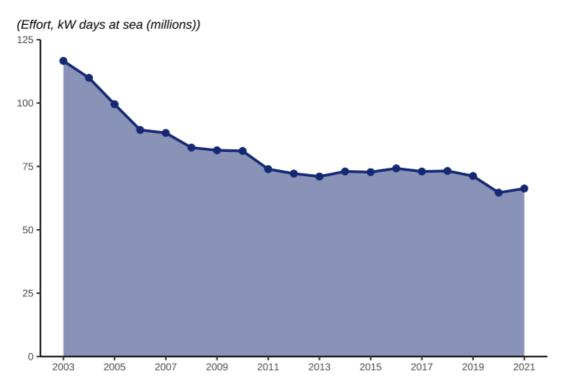
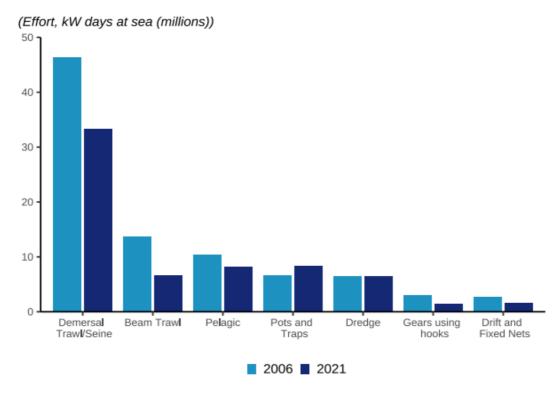


Figure 3.2: Most of the reduction in effort is driven by a decline in effort of the demersal trawl and seine segment



 $^{^{\}rm 19}$ kW days at sea, table 3.2 kW days.

Effort by the demersal trawl and seine segment of the fleet fell by 46 per cent between 2003 and 2021, to 33 million kW days at sea. The beam trawl segment, which has relatively lower levels of effort (6.6 million kW days at sea in 2021) fell by 64 per cent over the same period.

This reduction in effort in the demersal trawl and seine segment followed decommissioning exercises which were carried out by UK fisheries administrations between 2001 and 2003. The latter focused on removing fleet capacity targeting cod in the Cod Recovery Zone (a combination of North Sea, West of Scotland and Irish Sea fishing areas) and was particularly focused on vessels that used demersal trawls for whitefish. A further exercise was carried out to remove excess beam trawl fishing capacity in the Western Channel fishing area as part of the recovery regime for sole. This removed eight vessels previously active in the area.

Sole Recovery Zone

Sole Recovery Zone (SRZ)

As part of the measures for recovery of sole stocks, a Sole Recovery Zone was established from 2004 to apply effort controls to vessels of 10 metres or over, using certain gears (including beam trawls) in the Western Channel²⁰.

The Marine Management Organisation controls effort in the Western Channel by allocating days for fishing with these gears to eligible vessels.

²⁰ https://www.gov.uk/government/publications/manage-your-fishing-effort-sole-recovery-zone/sole-recovery-zone-rules

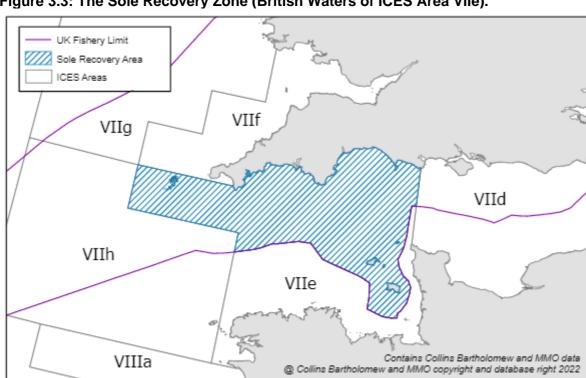
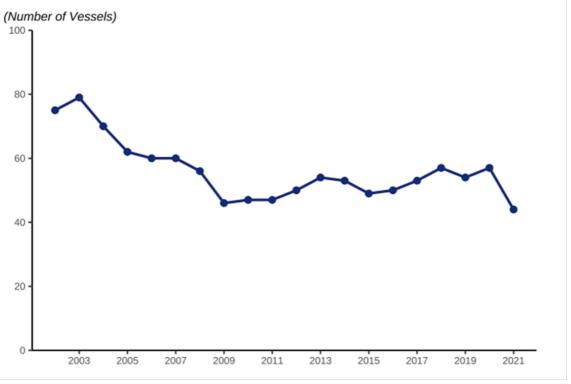
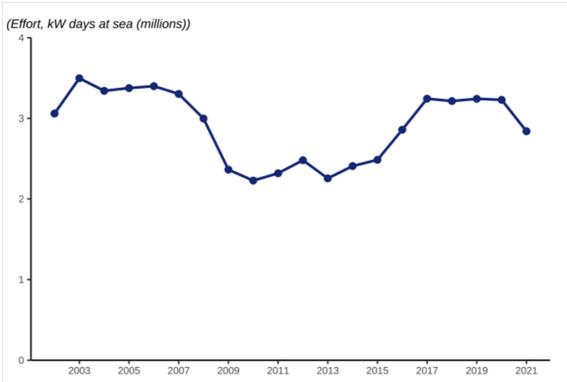


Figure 3.3: The Sole Recovery Zone (British Waters of ICES Area VIIe).

Figure 3.4: The number of vessels in the SRZ has decreased in the past two decades whilst effort has stabilised





Since the implementation of the SRZ in 2004, the number of vessels beam trawling in the Sole Recovery Zone fell dramatically, as did effort, before stabilising. Reasons for this may include the effect of decommissioning schemes as well as reduced fishing opportunities owing to effort and quota controls. However, effort has increased considerably in recent years, approaching pre-2008 levels. In 2021 there was a large reduction in the number of vessels compared to 2020 decreasing by 23 per cent. This translated to reductions in effort levels down by 12 per cent equating to a reduction of 390 thousand Kw Days.

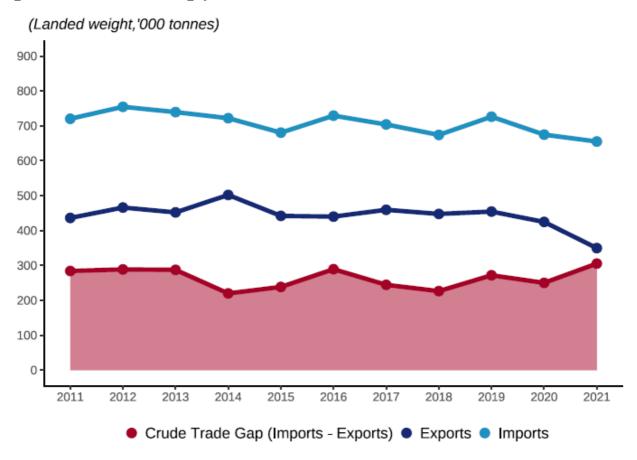
Section 4: Trade

View the tables accompanying this section here: https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021

Data on trade is collected by landed weight. This differs to the measure of quantity used in previous sections which is live weight. MMO landings data is reported in terms of *live weight* which is the weight of the live fish caught from the sea. Landed weight is sometimes smaller if fish are processed (e.g. gutted or shelled) on board a ship prior to being landed.

Imports and exports

Figure 4.1: The UK's trade gap in 2021 for sea fish was 305 thousand tonnes.

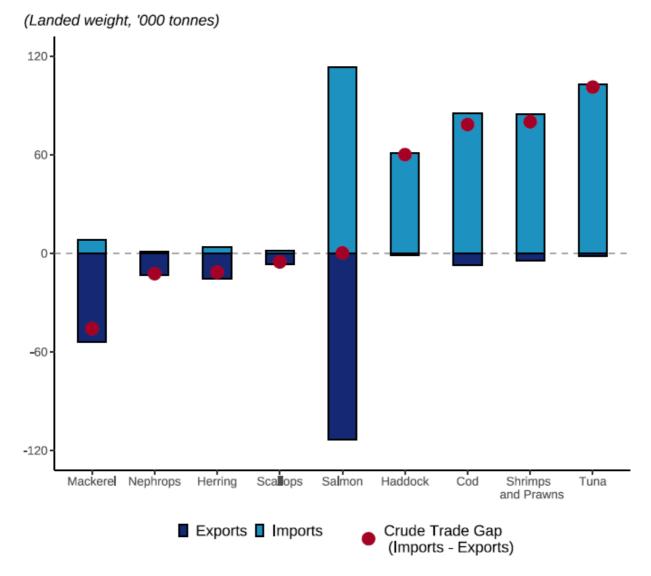


The UK is a net importer of fish. In 2021 the UK imported 655 thousand tonnes of fish²¹, with a value of £3.1 billion. It exported 350 thousand tonnes. Compared to 2020, imports were down by 3 per cent, however the crude trade gap grew between the years, increasing by 22 per cent compared to 2020, caused by a large decrease in exports (18 per cent).

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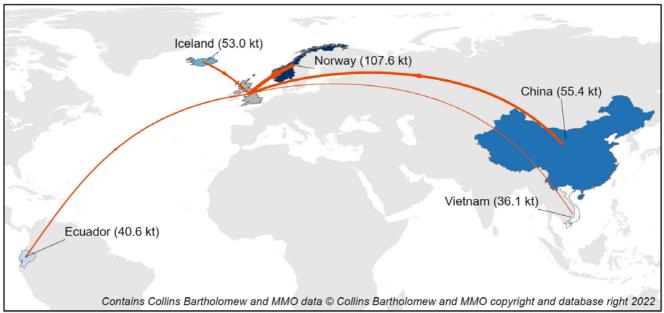
²¹ Excluding fish products

Figure 4.2: The UK imports and exports more salmon than any other species in 2021.



Imports

Figure 4.3²²: The UK imported the most fish and fish products from Norway in 2021



Demersal and pelagic fish accounted for 83 per cent of fish imports into the UK by weight. Shellfish accounted for the remaining 17 per cent. In terms of value imported, shellfish made up a slightly higher percentage at 25 per cent, because of the higher price typically fetched by shellfish species²³. The UK imported 136 thousand tonnes of fish products²⁴ in 2021, with most of which was fish meal (81 per cent). This brings the total imports (including sea fish, freshwater fish and fish products) to 791 thousand tonnes.

²² Imports into the UK of fish and fish products by top 5 exporting countries in 2020.

²³ Table 2.12.

²⁴ Fish products includes e.g. fish meal and oils.

Figure 4.4²⁵: The UK is a net importer of cod, importing 85 thousand tonnes in 2021

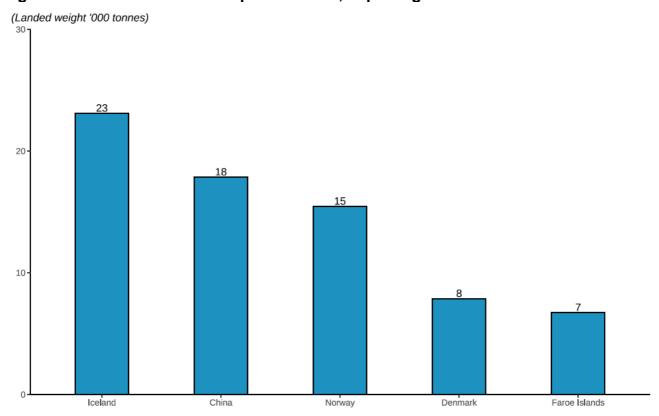
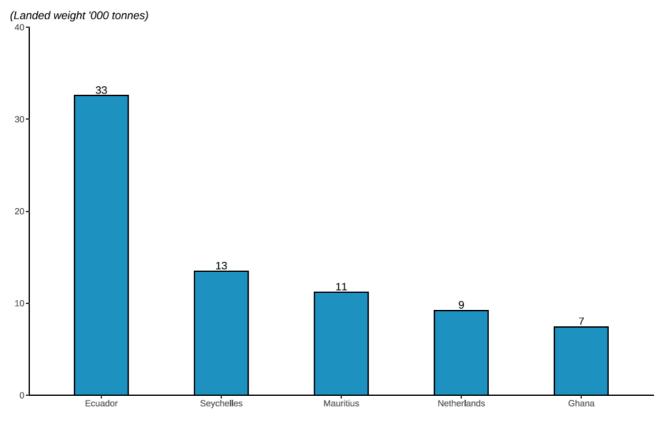


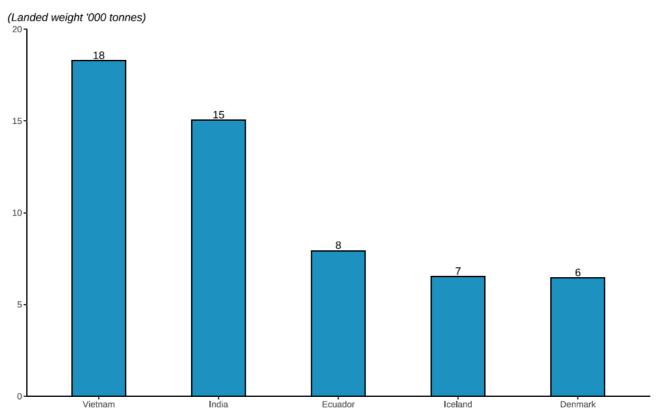
Figure 4.5 26 : The UK is a net importer of tuna, importing 103 thousand tonnes in 2021



 $^{^{25}}$ Imports to the UK of cod by top 5 exporting countries.

 $^{^{\}rm 26}$ Imports to the UK of tuna by top 5 exporting countries.

Figure 4.6²⁷: The UK is a net importer of shrimps and prawns, importing 85 thousand tonnes in 2021



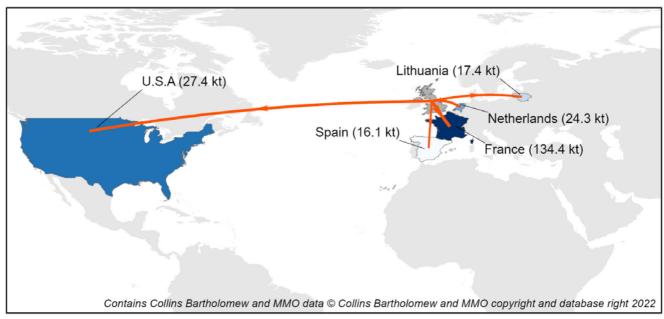
In 2021, the largest exporters of shrimps and prawns to the UK were Vietnam (18 thousand tonnes) and India (15 thousand tonnes), imports from these two countries accounted for 39 per cent of the total imports of shrimps and prawns into the UK in 2021.

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 $^{^{}m 27}$ Imports to the UK of shrimps and prawns by top 5 exporting countries.

Exports

Figure 4.7²⁸: The UK exported the most fish and fish products to France in 2021



Demersal and pelagic fish accounted for 83 per cent of fish exports out of the UK by weight with shellfish accounting for 17 per cent. This is identical to the split seen for imports. Shellfish similarly make up a higher percentage of the exports by value owing to their higher price per tonne on average than other sea fish (27 per cent). The UK exported 14 thousand tonnes of fish products in 2021, bringing the total exports (including sea fish, freshwater fish and fish products) to 363 thousand tonnes.

 $^{^{28}}$ Exports from the UK of fish and fish products by top 5 importing countries in 2020.

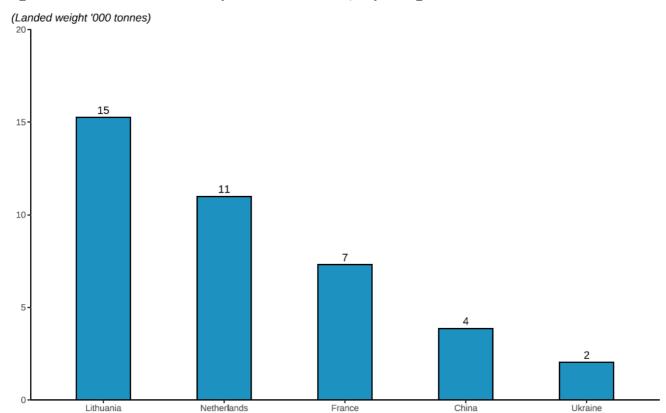


Figure 4.8²⁹: The UK is a net exporter of mackerel, exporting 54 thousand tonnes in 2021

Mackerel exports decreased by 23 per cent compared to 2020. The largest share of mackerel exports went to Lithuania (15 thousand tonnes).

GDP

GDP

Gross Domestic Product (GDP) provides an economic snapshot for a country. Within countries, this is split into different sectors so you can see how much different industries contribute to the economy.

Within the UK GDP for fishing includes landings abroad by the UK fleet and the aquaculture sector. Fishing can then be grouped with the wider agriculture, forestry and fishing GDP total.

The GDP for fishing in 2021 is £590 million, up 17 per cent on a year earlier. The GDP for fishing comprises 4.2 per cent of the total for agriculture, forestry and fishing³⁰. Compared to a decade ago, the GDP for fishing has decreased by 14 per cent, from £684 million in 2011.

²⁹ Exports from the UK of Shrimps and Prawns by top 5 importing countries.

 $^{^{30}\,}http://www.ons.gov.uk/ons/datasets-and-tables/data-selector.html?table-id=A1\&dataset=pn2\;.$

Annex A: ICES data

In collaboration with CEFAS, the MMO has previously published either a chapter or standalone report called Main stocks and their level of exploitation³¹ which summarised ICES data for 6 key species (spanning 13 stocks) of interest to the UK fleet.

ICES have improved their dissemination of scientific data and we now recommend users access this interactive data direct from ICES.

All stock assessment graphs can be accessed at the following link: https://www.ices.dk/data/assessment-tools/Pages/stock-assessment-graphs.aspx.

Seafish provide a thorough guide of how to interpret ICES graphs. See pages 25-26 here: https://www.seafish.org/document/?id=23A69338-21D2-4617-ADF5-58099360DAEB.

Below we have provided a list of key stocks of interest to the UK fleet and their corresponding biological stock page on ICES. This is not an exhaustive list of stocks that the UK holds quota in.

Stock code	Biological stock	Link
	code	
ANF/07.	ank.27.78abd	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14295
ANF/07.	mon.27.78abd	https://standardgraphs.ices.dk/ViewCharts.aspx?key=16700
BOR/678-	boc.27.6-8	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15609
COD/07A.	cod.27.7a	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14433
COD/07D.	cod.27.47d20	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14324
COD/2A3AX4	cod.27.47d20	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14324
COD/7XAD34	cod.27.7.e-k	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15605
HAD/07A.	had.27.7.a	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14557
HAD/2AC4.	had.27.46a20	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14386
HAD/5BC6A.	had.27.46a20	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14386
HAD/7X7A34	had.27.7.b-k	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14557
HER/07A/MM	her.27.nirs	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14091
HER/4AB.	her.27.3a47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14149
HER/4CXB7D	her.27.3a47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14149
HER/7G-K.	her.27.irls	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14087
HKE/2AC4-C	hke.27.3a46-8abd	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14566
HKE/571214	hke.27.3a46-8abd	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14566
JAX/4BC7D	hom.27.3a4bc7d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14459
L/W/2AC4-C	wit.27.3a47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14516
L/W/2AC4-C	lem.27.3a47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14370
LEZ/07.	meg.27.7b-k8abd	https://standardgraphs.ices.dk/ViewCharts.aspx?key=16699
LIN/04-C.	lin.27.3a4a6-91214	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14347
LIN/6X14.	lin.27.3a4a6-91214	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14347
MAC/2A34.	mac.27.nea	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14203
MAC/2CX14-	mac.27.nea	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14203
NEP/07.	nep.fu.14	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14248
Stock code	Biological stock	Link
	code	
NEP/07.	nep.fu.2021	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14248
NEP/07.	nep.fu.22	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14248
NEP/2AC4-C	nep.fu.5	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15601

³¹https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/920035/2019 _Main_stocks_and_their_level_of_exploitation.pdf.

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NEP/2AC4-C	nep.fu.6	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15601
PLE/07A.	ple.27.7a	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14392
PLE/2A3AX4	ple.27.420	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15614
PLE/7DE.	ple.27.7d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14598
PLE/7DE.	ple.27.7e	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14426
PLE/7FG.	ple.27.7fg	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15646
POL/07.	pol.27.67	https://standardgraphs.ices.dk/ViewCharts.aspx?key=16701
POL/56-14	pol.27.67	https://standardgraphs.ices.dk/ViewCharts.aspx?key=16701
RJC/07D.	rjc.27.3a47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15623
RJC/2AC4-C	rjc.27.3a47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15623
RJC/67AKXD	rjc.27.7afg	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15623
RJC/67AKXD	rjc.27.7e	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15623
RJH/04-C.	rjh.27.4c7d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15623
RJH/07D.	rjh.27.4c7d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15623
SAN/234_1R	san.sa.1r	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14067
SOL/07A.	sol.27.7a	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14536
SOL/07D.	sol.27.7d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14317
SOL/07E.	sol.27.7e	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14506
SOL/24-C.	sol.27.4	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14338
SOL/7FG.	sol.27.7fg	https://standardgraphs.ices.dk/ViewCharts.aspx?key=16761
SOL/7HJK.	sol.27.7h-k	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14537
SPR/7DE.	spr.27.7de	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14079
T/B/2AC4-C	tur.27.4	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14296
T/B/2AC4-C	bll.27.3a47de	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15609
WHB/1X14	whb.27.1-91214	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14401
WHG/07A.	whg.27.7a	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14474
WHG/2AC4.	whg.27.47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15613
WHG/7X7A-C	whg.27.47d	https://standardgraphs.ices.dk/ViewCharts.aspx?key=15613
WHG/7X7A-C	whg.27.7b-ce-k	https://standardgraphs.ices.dk/ViewCharts.aspx?key=14474

Annex B: Methodology

The methodology for data from 2000 and earlier included in this publication is described in earlier versions of the methodology:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/9200 38/Methodology.pdf.

Fleet (Section 1)

Statistics on the UK fishing fleet in this publication are based on the fleet of fishing vessels as registered with the Register of Shipping and Seamen. To this is added details of fishing vessels as registered with the Crown Dependencies (Isle of Man and the Channel Islands) to form the full UK fleet. The UK fleet has been broken down for analysis by individual country based on the administration ports where vessels were licensed as at the end of year the report covers. Vessels which are registered but do not have an administration port at this time are not counted against any country,

Fish Producer Organisation membership (Section 1)

In the UK, FPOs (Fish Producer Organisations) are granted responsibility by Fisheries Administrations for the management of fish quotas for vessels in their membership. Vessel owners notify UK Fisheries Administrations when transferring between FPOs for the purposes of quota management. A comprehensive database of membership of FPOs is maintained which augments the vessel data provided by the Register of Shipping and Seamen.

Employment data (Section 1)

Data on fishers' numbers are collected separately by the Marine Management Organisation (MMO) for England, Marine Scotland, the Department of Agriculture, Environment and Rural Affairs for Northern Ireland (DAERA) and the Welsh Assembly Government (WAG). The Departments in Jersey, Guernsey and the Isle of Man do not contribute data on fishers' numbers. In Scotland and Northern Ireland, staff in coastal offices are issued with a census of all vessels in their responsibility and asked to provide data on the number of part-time and regular fishers on each vessel. Marine Scotland and DAERA process and compile these data to provide estimates of fisher's numbers on vessels at each port of administration.

In England and Wales, a census of fishing vessels over 10 metres in overall length is performed. For the large number of fishing vessels 10 metres and under in length, a stratified sample of vessels is taken, with strata defined by administration port, vessel length and gross tonnage. A 20 per cent sample is drawn from each stratum. As in Scotland and Northern Ireland, staff in coastal offices provide data on the number of part-time and regular fishers on each vessel in their administration based on enquiries and local knowledge.

For the purposes of the survey, a fisher is defined as a person working at sea on a commercial fishing vessel, such as skippers or crew members. The definition excludes persons not working at sea, such as administrators and land-based processing staff. Fishers are classified as regular or part-time according to whether commercial fishing is their main occupation.

Data collected for England and Wales are processed by the MMO. Checks are made on the quality and reliability of data returned and every effort is made to minimise non-response. Where no data were available on fishers' numbers for a vessel the value was assumed to be the average number of fishers on vessels in the same stratum, such that no bias was caused by non-response. Estimates from the survey for England and Wales are combined with those supplied by Marine Scotland and DAERA to provide overall UK estimates.

Activity and landings (Section 2 and 3)

The data in Sections 2 and 3 is administrative data which the UK is legally required to collect to enable management of the seas. The data collected via these means is used for the majority of MMO statistical products, not just this annual publication.

The data collection and processing for this administrative data is described here:

https://www.gov.uk/guidance/fishing-activity-and-landings-data-collection-and-processing.

Amendments to the administrative data collected (Section 2)

Following quality assurance, MMO statistics make some amendments to the administrative data collected ahead of producing the datasets and tables for the Sea Fisheries Statistics publication.

Amendments were made this year to the 2020 value data. Firstly, where sales note mismatches were identified as causing gaps in landed value, the affected sales note's value information were manually inputted into the final data sets by applying an average price per tonne derived from the mismatching sale notes to affected landings. This primarily affected ICES area 27.1 cod landed value. Further records were identified as missing value (primarily for mackerel, blue whiting, and horse mackerel landings). For these records a general annual average price per tonne was applied to the relevant live weight landings to produce estimated landed value. For example, mackerel landings were assigned value based on a price per tonne of £991 for 2020. For context on scale, this fix was applied to around 6,000 tonnes of mackerel landings in 2020 which equates to approximately 3 per cent of UK mackerel landings that year.

All mussel landings with a zero landings value have been removed from the dataset used to create Section 2 and the underlying datasets. These landings were identified to be landings of mussel seed which, rather than being sold for human consumption at this point are re-laid for aquaculture. They are then harvested and sold at a later stage. As these landings are not sold at the point of initial dredging they have been removed and the data recalculated.

Estimated landings by EEZ (Section 2)

Most figures in Sections 2 and 3 are based on administrative data collected direct from vessels, with some amendments to improve the quality (described above). From 2021, data relating to the area of capture (EEZ) are based on reported areas, however prior to this period, the data relies on estimated areas to determine the EEZ. For years prior to 2021 the MMO hold robust data on catches by ICES rectangle. This rectangle data is used as the basis for estimating landings by EEZ. An example to illustrate follows:

If an ICES rectangle is fully in UK waters, we can assume 100% of the catch assigned to that rectangle is from UK waters. However, EEZ lines intersect and cut across ICES rectangles so this assumption cannot be applied in all instances.

For example, in the English Channel, the ICES rectangles span both UK and French waters. Imagine the sea surface of an ICES rectangle falls in a way so that exactly 50 per cent of the ICES rectangle is in UK waters and 50 per cent is in French waters.

Based on the per cent of the sea surface that falls in each nation's EEZ we can make an assumption that 50 per cent of the catch reported against that ICES rectangle was from French waters and 50 per cent was from UK waters. This same calculation can be done for all ICES rectangles and aggregated up to various groupings to estimate e.g., the percentage of landings by the UK fleet from UK waters compared to the percentage of landings from EU waters.

In reality, in the example of the English Channel described above, a vessel may have actually landed 100% of their catch on the UK side of the EEZ. Because of this, for each estimate we can calculate a confidence interval around the estimated value. Confidence intervals are presented in the charts in this section. When considering individual vessel landings, these estimates will have very wide confidence intervals. However, when we aggregate this data to the UK fleet level (for example), the confidence in our estimates is much higher.

The method described above relies on us knowing what fraction of the sea surface of an ICES rectangle falls in each nation's EEZ. To obtain this information a spatial dataset containing the boundaries of all world EEZs was segmented by a spatial dataset containing the boundaries of the ICES rectangles. From this, the fraction of total sea surface area, excluding any land area, occupied by each national EEZ was calculated for each rectangle.

The underlying dataset titled *UK_fleet_landings_by_rectangle_stock_and_estimated_EEZ_2016_2020* published alongside this report includes the estimated EEZ and region of capture based on the method described above. In this dataset there are a small number of unapportioned landings – i.e. landings which cannot be attributed to an EEZ or region. This is because these landings have an unknown ICES rectangle. They are included in the dataset for completeness but only make up 0.04 per cent of all landings.

Please refer to last year's Economic Exclusive Zone analysis report³² for further details on the methodology and assumptions used for these figures.

Trade (Section 4)

HM Revenue & Customs (HMRC) is responsible for collecting the UK's international trade in goods data. The data are compiled from trade declarations made using commodity codes from the UN Tariff (HS Nomenclature) and its EU derivative the Intrastat Classification Nomenclature (ICN). These data are sent annually to the MMO, who process the data for this publication.

Landings of fish into the UK by foreign vessels are typically included in import statistics; however, statistics on imports and landings by foreign registered vessels may not strictly be comparable. Arrivals of fish should be reported where the economic owner of the vessel is outside the UK. In some cases, the countries of vessel registration and economic ownership may differ. A further complication is that import statistics do not include fish landed into the UK by foreign vessels which have a final destination outside the UK. Lastly, in some cases there exists a value threshold for declaration of imports. For these reasons it is possible that imports of fish may be below the quantity of landings reported for foreign registered vessels.

Exports include dispatches of fish by UK economically owned vessels when landing outside the UK. For similar reasons to those for imports, these are not directly comparable with landings by UK registered vessels abroad.

³² UK commercial sea fisheries landings by Exclusive Economic Zone of capture report 2019 - GOV.UK (www.gov.uk)

Annex C: Revisions policy

The Marine Management Organisation policy is to revise or produce revised figures each year to ensure that users have access to the latest data available. Revisions typically affect fishing effort, catches and trade data, where data from logbooks, landing declarations, sales notes and trade declarations may occasionally be received or amended several months after the event. The magnitude of revisions to tables is typically larger for more recent years although the size of revisions is usually very small.

There are several causes of the revisions made in this publication:

- 1. **Receipt of additional data.** Despite strict data reporting requirements, some data are not received or entered at the time of publication. This typically affects data for more recent years.
- Revisions to data sources. Corrections are made to database entries throughout the year where
 these are found to be incorrect. In addition, for landings data systematic corrections are made to
 implausible quantities and values prior to production of the publication to reduce the influence of
 outliers.
- 3. **Rectification of data processing errors.** Where data are found to have been incorrectly processed for a previous publication, these errors are corrected as soon as possible.

Users should always refer to the latest figures published by the Marine Management Organisation. Previous editions of all publications are made available online on the Marine Management Organisation website should users wish to examine the effect of revisions in further detail.

The Marine Management Organisation adheres to the Department for the Environment, Food and Rural Affairs' policy on revisions and errors. Further information can be found in the Statement on Revisions and Errors at: https://www.gov.uk/government/publications/defra-policy-statement-on-revisions-and-corrections.

Annex D: Associated publications

Annual Sea Fish Statistics

All associated tables, underlying datasets and documents relating to this publication can be downloaded here:

https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2021

MMO National and Official Statistics publications

- Monthly UK sea fisheries statistics: https://www.gov.uk/government/collections/monthly-uk-sea-fisheries-statistics
- UK fishing vessel lists: https://www.gov.uk/government/collections/uk-vessel-lists
- Effort use statistics: https://www.gov.uk/government/collections/effort-use-statistics
- Quota use statistics: https://www.gov.uk/government/statistical-data-sets/quota-use-statistics

Sea fisheries publications by other UK nations and international bodies

- Scottish Sea Fisheries Statistics: https://www.gov.scot/collections/sea-fisheries-statistics/
- Department for Agriculture, Environment and Rural Affairs in Northern Ireland, fisheries policy and statistics: https://www.daera-ni.gov.uk/articles/animal-health-fisheries-food-and-forestry-statistics
- FAO Yearbook of Fishery and Aquaculture Statistics: http://www.fao.org/fishery/publications/yearbooks/en
- Eurostat Agriculture, Forestry and Fisheries Statistics: https://ec.europa.eu/eurostat/en/web/products-statistical-books/-/KS-FK-17-001

Other Useful websites

- Sea Fish Industry Authority: https://www.seafish.org/
- Maritime and Coastguard Agency: https://www.gov.uk/government/organisations/maritime-and-coastguard-agency
- Marine Accident Investigation Branch: https://www.gov.uk/government/publications/marine-accident-investigation-branch-current-investigations
- Centre for Environment, Fisheries and Aquaculture Science:
 https://www.gov.uk/government/organisations/centre-for-environment-fisheries-and-aquaculture-science
- International Council for the Exploration of the Sea (ICES): https://www.ices.dk/Pages/default.aspx
- FQA Register: https://www.fqaregister.service.gov.uk/
- HMRC Trade data tool: https://www.uktradeinfo.com/

Annex E: Further Information

National Statistics Designation

National Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards. The continued designation of these statistics as National Statistics was confirmed in February 2019 following a compliance check³³ by the Office for Statistics Regulation. The statistics last underwent a full assessment against the Code of Practice for Official Statistics³⁴ in 2014.

Pre-release access to statistics

Some ministers and officials receive access to these statistics up to 24 hours before release. Details of the arrangements for doing this and a list of the ministers and officials that receive pre-release access to these statistics can be found in the DEFRA statement of compliance³⁵ with the Pre-Release Access to Official Statistics Order 2008.

Contact

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³³ https://osr.statisticsauthority.gov.uk/correspondence/compliance-check-of-uk-sea-fisheries-statistics/

³⁴ https://code.statisticsauthority.gov.uk/

³⁵ https://www.gov.uk/government/publications/defra-group-pre-release-access-to-official-statistics-compliance-statement