Marine Management Organisation

Experimental Statistics

United Kingdom commercial sea fisheries landings by Exclusive Economic Zone of capture: 2012 - 2018

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The cover photograph, taken by Simon Dixon, shows a view from Ulva Ferry dock looking over to Ben More from the Isle of Mull, Scotland.

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Version History

The statistics presented in this report and accompanying data sets are badged as experimental. Where appropriate, and relevant to the UK Code of Practice for Official Statistics, this report will be updated to benefit the end user.

A version history table which shows a log of changes to the report is provided below for transparency and so end users are aware of their version. See section two for more detail.

Version	Date	Comments
1.0	03/10/2019	Full release alongside accompanying annual UK-registered vessel landings by EEZ between 2012 and 18, table on quota landings estimates from the UK EEZ and ICES statistical rectangle factors lookup table.

Contents

Figures

1. Introduction

This is the third annual release of the Economic Exclusive Zone (EEZ) analysis with the two previous releases being in the form of an experimental report annex to the MMO's annual report titled 'UK Sea Fisheries Statistics 2018', a National Statistics publication[1]. This EEZ report has found its own space as an experimental report and aims to deliver additional value in the form of improved estimates and more user-friendly accompanying datasets (which allows for further analysis or, if desired, a more in-depth view of the data).

As with previous years this report provides a breakdown of the UK's commercial sea fisheries landings by the nationality of the waters in which the fish were caught.

The primary output of this analysis should be seen as the accompanying datasets both at species level covering UK-registered vessel landings from individual countries waters and at quota stock level covering fish captured and landed by vessels from the UK, other European Union Member States (hereafter referred to as OMS) and Norway. The focus of this report is to supplement these underlying datasets and provide additional value in the form of (1) promoting a greater understanding of the methodology involved (2) providing summative commentary highlighting interesting results (3) covering how the data should be interpreted including relevant caveats and data limitations.

Exclusive Economic Zone (EEZ)

The term Exclusive Economic Zone, hereafter abbreviated to EEZ, 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 22 to 370 kilometers) from the coast. Where EEZs would overlap a median line is used to delineate the sovereignty of waters.

[1] https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2018

Figure 1 – The UK EEZ

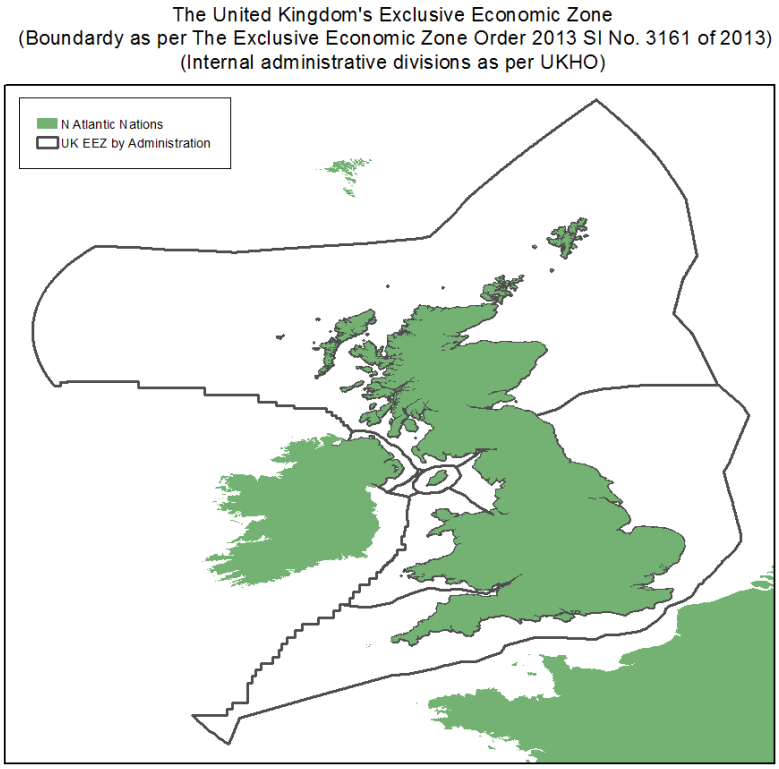
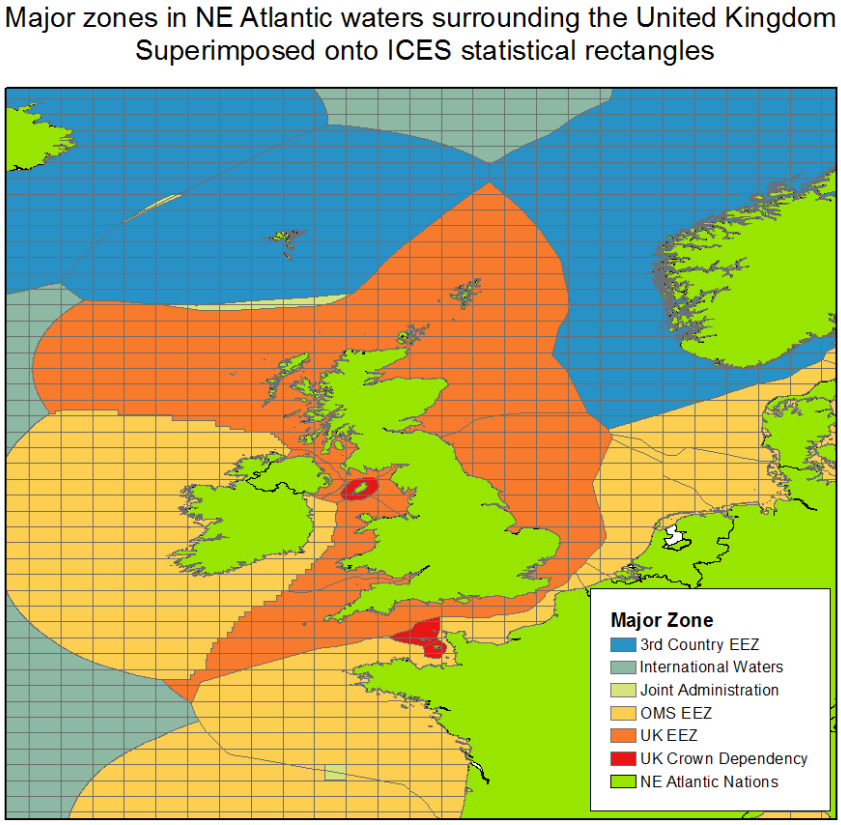


Figure 2 – ICES Rectangles versus major zones (H1) and EEZs



2. Data Sources and Methodology

The methodology and data sources of the Economic Exclusive Zone Analysis were laid out in detail in the 2017 report[2]. The fundamental methodology behind this analysis remains the same. As such, to avoid duplication, this section will focus on changes and improvements to the method (particularly those that have led to improved species and stock level estimates) whilst briefly revisiting the key aspects of the underlying method.

As with last year, the statistics presented here are experimental statistics and are distinct from those published in the Sea Fisheries Statistics report. Experimental statistics are new statistical products in development and so are subject to revision as: updated information is received; further quality assurance is completed; and, methodologies are enhanced. These statistics have been produced in compliance with the UK Code of Practice for Official Statistics[3]. This method section will cover key enhancements in the method since last year's release which aim to improve the utility of the underlying data and accuracy of EEZ-level estimates provided thus showcasing the evolution of this statistical product.

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. This area broadly covers the North East Atlantic Ocean as well as the adjacent North Sea and Baltic Sea. 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.

2.1 Estimating landings by Economic Exclusive Zone

The ICES Rectangle of activity is a widely available layer of spatial information (originating primarily from vessel logbooks) that can be used to assess where a fish was extracted from the sea. From the available data we can define landings by the nationality of waters outside of Union waters with confidence as vessels are required what is known as a zone of capture which states specifically which countries waters a fish was captured in (e.g. Svalbard, International waters, Norway). However, inside Union waters it is more challenging particularly where a landing is reported from an ICES Rectangle that borders two or more EEZs. To establish the correct proportion of landings that should be distributed to each EEZ we have produced (see underlying dataset 'ICES Rectangle Spatial Factors') and applied spatial factors to UK and non-UK landings. The spatial factor

[2] United Kingdom commercial sea fisheries landings by Exclusive Economic Zone of capture: 2012 – 2017(released 27th September 2018) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/743847/Exclusive_Economic_Zone_Analysis_UK_commercial_sea_fisheries_landings_by_EEZ_of_capture_2012_to_2017.pdf

[3] https://www.statisticsauthority.gov.uk/osr/code-of-practice/

shows which EEZ an ICES Rectangle intersects with and, if it borders multiple EEZs the proportion of the sea surface area of that Rectangle in each of the EEZs. The fundamental assumption of the usage of spatial apportioning is that there will be an even spatial distribution of fish over the surface of a Rectangle; this is one of the key caveats of this work as the impact may it has may be greater of sessile species such as Scallops where a concentrated bed of abundance is perhaps more likely than even distribution.

Rectangle apportioning example

Rectangle 37F5 in the southern North Sea is shared between the EEZs of Germany and the Netherlands. With 78% of the waters being Dutch and 22% of the waters being German. Following the apportioning method described above 200 tonnes (78%) of the 257 tonnes landed in total from the rectangle by UK vessels in 2017 were allocated to the Netherlands EEZ, with the remainder 57 tonnes (22%) being allocated to the German EEZ.

To reduce the need to apportion we have adjusted spatial factors were a zone of capture if available. For example if a landings is from a Rectangle bordering the Norwegian and Scottish EEZ rather than apportioning this using spatial factors first the zone of capture would be assessed. If in this example the zone of capture read EU (incl. UK) we would be able to distribute all landings to the Scottish EEZ with confidence thus eliminating the need for apportioning.

Landings vs. Catches

Landings mean those fish that once taken from the sea are physically landed into a port or transhipped at sea to another vessel to be landed into a port at a later time. **Catches** mean all fish taken from the sea regardless of whether they are landed or discarded back into the sea. We do not set out catches here and so these statistics cannot be used to deduce overall extraction rates from the EEZs concerned.

The source for OMS landings data, primarily used for comparative/contextual purposes in this report, maintains the same as last year[4], however, additional rigour has been applied to the raw data to try and identify and where possible eliminate erroneous data or data that has been reported under a specific special condition which is causing issues in this context (e.g. has been reported for a specific effort scheme causing duplication of landings). As before JRC's Fleet Economic Performance data set (2017 edition) was used to add value estimates to the OMS 2012-16 landings; additional effort was made to improve the quality (i.e. by removing unknown gear type from the calculation) and

[4] Data by Quarter-Rectangle, JRC Fisheries Dependent Information (2017 Edition). https://stecf.jrc.ec.europa.eu/dd/effort/graphs-quarter

specificity (e.g. by limiting to major fishing area 27 only) of the data used to estimate OMS landed value.

Other noteworthy improvements to the method include (but are not limited to) the introduction of greater detail in gear and length group aggregations, upper and lower bounds (which are used to assess the extreme theoretical limits either side of our spatial estimate) built into the underlying dataset, upper and lower bounds improved through corrections using zone of capture information, more landings data being pulled through to be apportioned to EEZ level (e.g. distant water landings such as the Falklands Islands), minor spatial factor improvements to reducing the impact of apportioning error when applying spatial factors (this occurs when, due to a geoprocessing issue, a Rectangles spatial coverage may not add to exactly 100%), additional effort put into correcting the raw input data, the addition of landings from the Baltic sea (also from STECF FDI data), and a more user friendly underlying dataset which is now provided in long format rather than the more cumbersome wide format.

2.2 Estimating quota stock landings from UK Economic Exclusive Zone

The quota stock method detailed in section 2.4 (page 9-10) of the previous EEZ report remains largely unchanged with the exception of the introduction of more accurate estimates on Norwegian uptake within UK waters and some minor amendments to the stock area lookup used to determine which stock a given landings should be assigned to. The figures provided in section 3.3 of this report include many revisions, however, it should be understood that these differences there can best be explained by more rigorous treatment of the OMS species level landings data rather than changes to the stock method itself. As before FIDES uptake data (the best reference dataset) was used to sense check the stock attribution; generally the two were closely aligned but in the cases of >5% differences these were investigated further – in all cases the difference can be attributed to differences in FDI raw data and FIDES data.

TACs and Fishing Quotas

Total allowable catches (TACs) are catch limits (expressed in tonnes or numbers) that are set for most commercial fish stocks. These are proposed based on scientific advice from advisory bodies. Most stocks are set annually in December by the Council of Fisheries Ministers. TACs are shared between EU countries in the form of quotas which are then distributed nationally to determine the quantity of a specific species or grouping of species that can be landed from a given area (called a TAC area) in the following year.

2.3 Limitations and Uncertainties

As with any process of estimation the apportioned statistics presented here have uncertainties associated with them. The uncertainty in this analysis is introduced primarily through the assumption of evenly distributed catching of fish across entire Rectangles. While necessary, this assumption may not be valid in all circumstances. For example where the species concerned is relatively immobile and constrained by habitat to small areas all catches will likely concentrate on that part of the Rectangle that forms a suitable habitat for the species in question. This may thus lead to misattribution of landings for this species when apportioning between EEZs. A potential solution to this would be to introduce species level habitat mapping to improve confidence in apportioning for non-pelagic species where Rectangles are split between two or more EEZs. As the coverage of such data is very limited (by species and spatially) this has not been possible.

In the previous report the upper and lower bounds (used to provide context on the theoretical minimum and maximums of our estimate if the assumption of even spatial distribution fails) were based on spatial factors alone. This meant the bounds showed uncertainty in estimates where there is certainty in landings. This has been resolved by correcting the spatial factors used for the bounds using a zone of capture (if available). For example landings by UK vessels in Norwegian and Faroese waters will not be supplied with an upper/lower bound as we can say with relative certainty that the fish was landed from that EEZ.

The limitation related to small inaccuracies in Rectangle factors has been partially addressed through proportionally assigning spatial factors until they reach 1 or 100% coverage. Other data limitations discussed the previous report still hold true; specifically issues around data gathering and missing logbook information.

3. Landings by Economic Exclusive Zone

To provide context for the landing figures presented later in this section in the North East Atlantic EEZs (FAO Area 27) the UK fleet landed 692,000 tonnes of fish, valued at £975 million, during 2018. This is a drop from 719,000 tonnes of fish, valued at £968 million seen in 2017. Between 2012 and 2016 the UK landed an average of 678,000 tonnes of fish (£812 million) from this region. For comparison, OMS vessels landed 2,679,000 tonnes of fish (valued at £2.44 billion) from the same area (avg. 2012-16)[5]. The four following heat maps show how these landings are spatially distributed around the NE Atlantic by weight and value using a 2012-16 time period to allow for direct comparison between UK and OMS landings activity.

After the maps the next section provides landings estimates by EEZ of capture; the EEZA17 report gave a structured overview of UK and OMS activity from each potential vessel nationality and EEZ combination. Rather than repeating this the aim of the section here is to present a freer flowing commentary drawing attention to some interesting aspects of the data and highlighting what breakdowns are possible using the underlying UK species level dataset that accompanies this report. The focus is on UK vessels most recent activity (2018), however, where appropriate, comparisons to OMS landings will be made to place the landings into context; in these cases an average 2012-16 figure will be used. The time period used will be clearly shown for each figure.

[5] Note that unlike last year's report the OMS figure this year includes landings from the Baltic Sea

Figure 3 - UK Rectangle activity, by tonnage (avg. 2012-16)

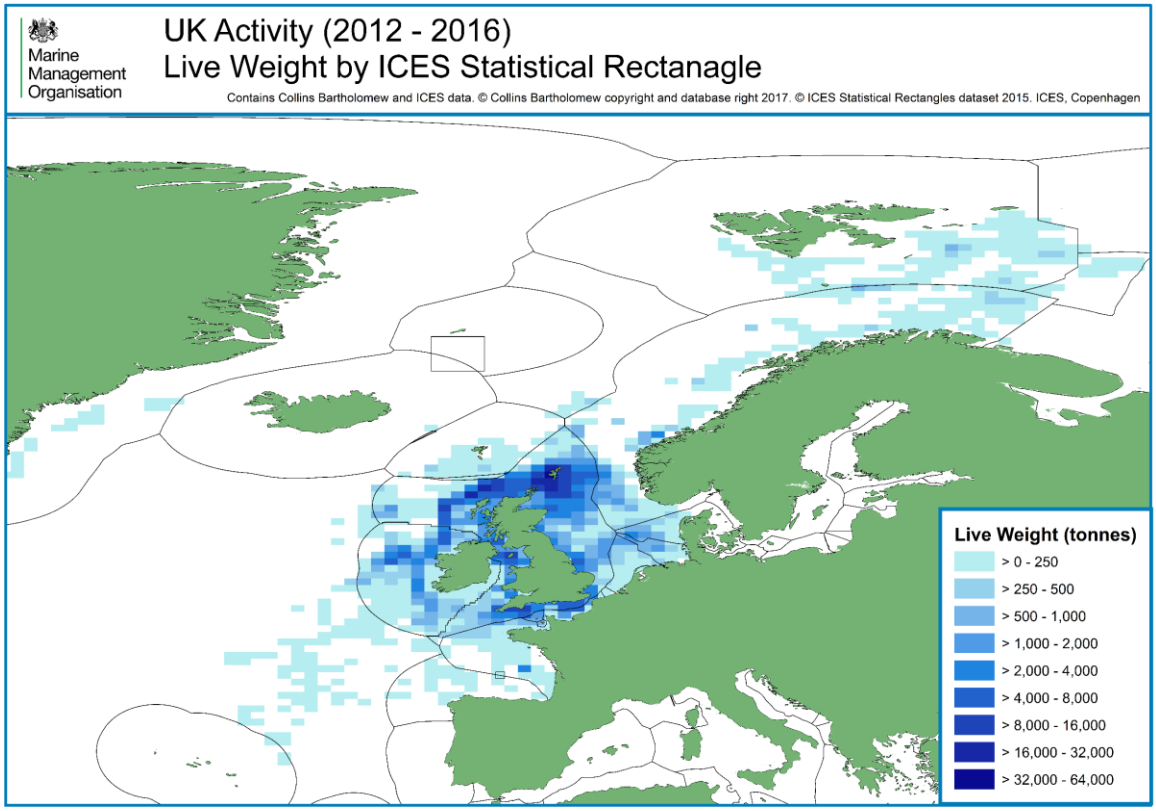


Figure 4 - OMS Rectangle activity, by tonnage (avg. 2012-16)

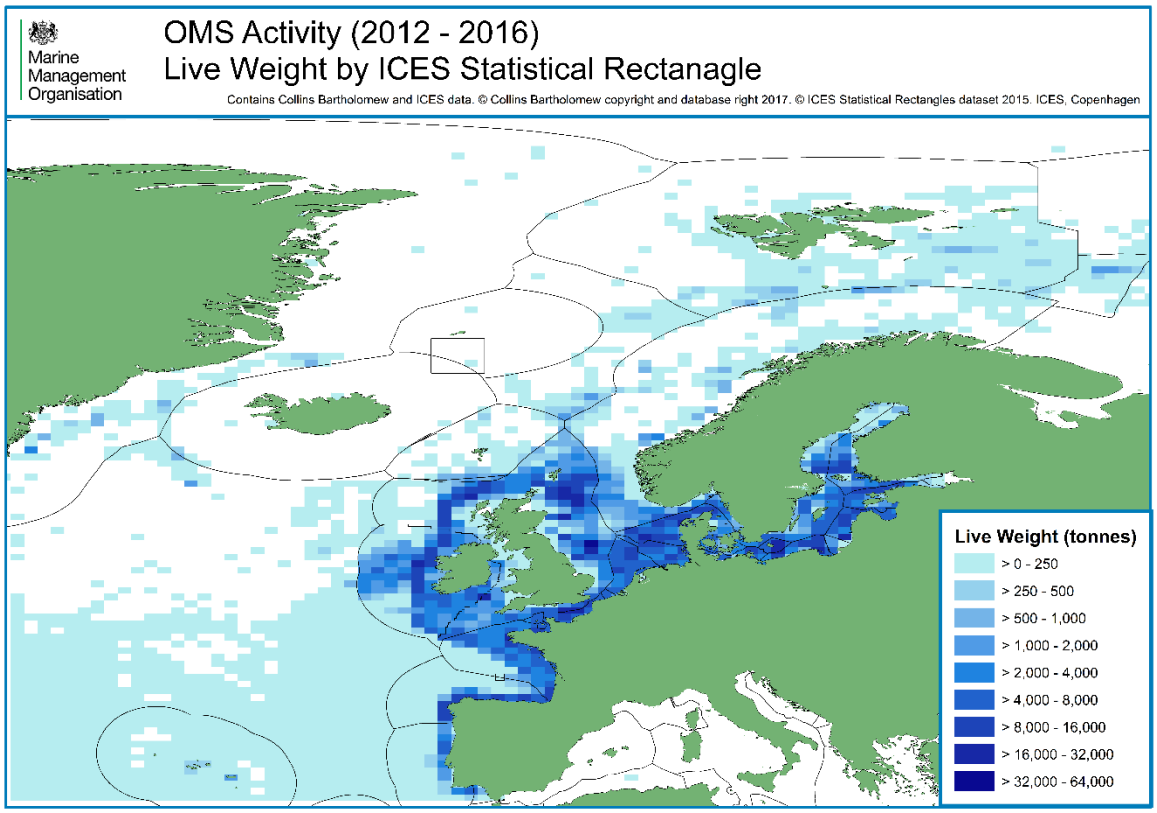


Figure 5 - UK Rectangle activity, by landed value (avg. 2012-16)

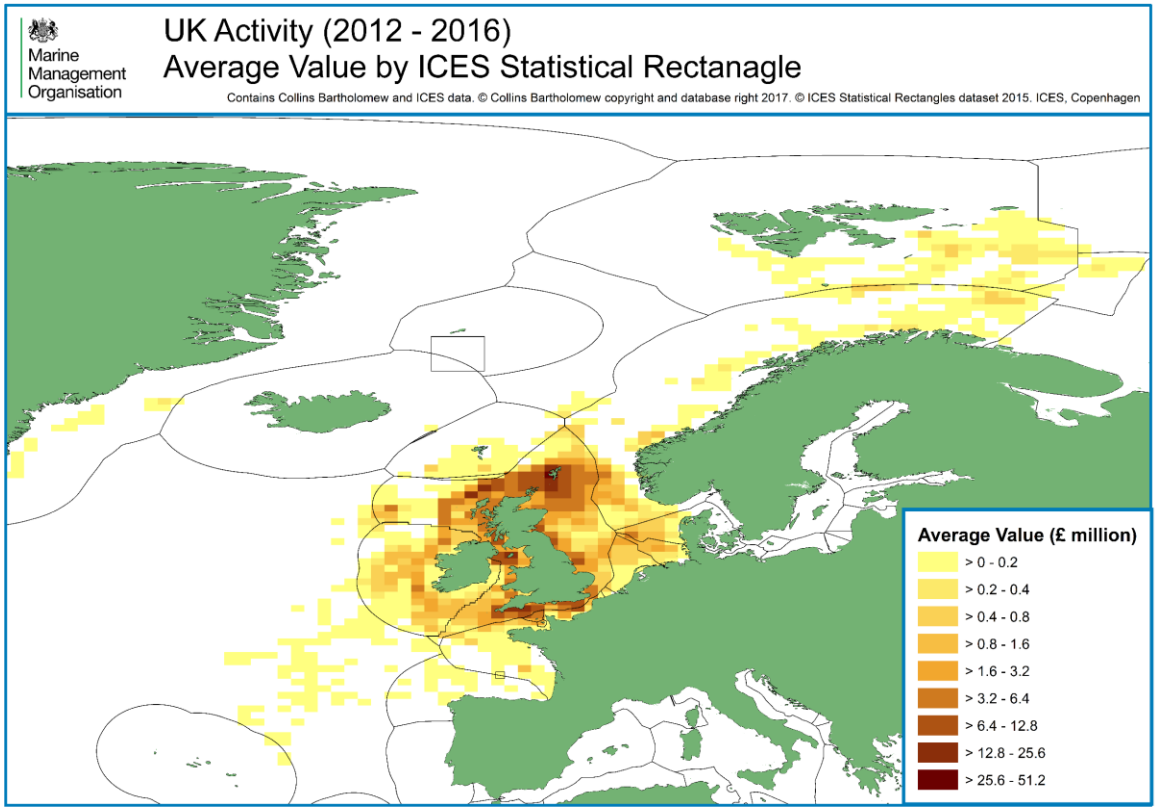
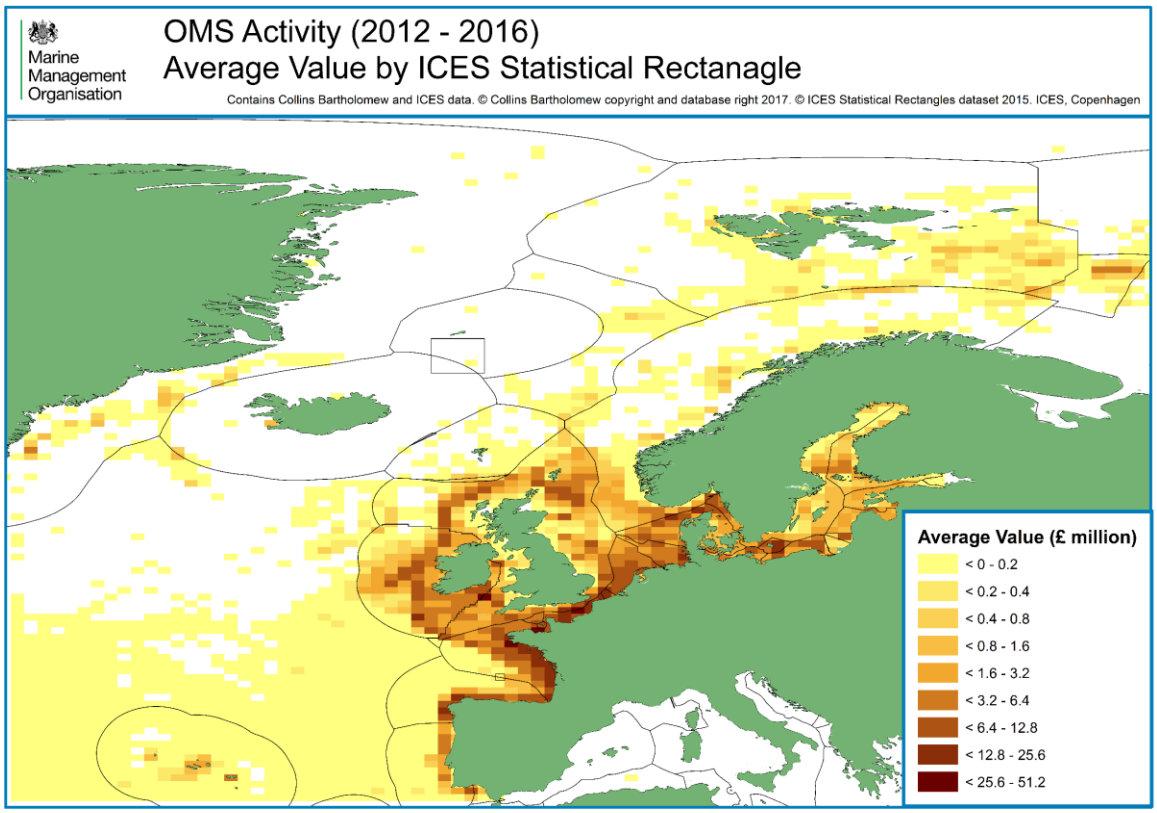


Figure 6 - OMS Rectangle activity, by landed value (avg. 2012-16)



3.1 UK vessel landings by Economic Exclusive Zone of capture

This section provides an overview of which national waters the UK fleet has historically captured fish from. Figures from UK and OMS waters had to be spatially apportioned, however, we can provide UK vessel landings from third country and international waters with confidence due to the requirement for vessels landing from these areas to submit specific zones of captures.

In 2018, UK-registered vessels landed a total of 697,000 tonnes of fish and shellfish with a landed value of £989 million. Of this 80% by tonnage (84% by value) was from UK waters, 15% by tonnage (9% by value) was from OMS waters, 4% by tonnage (6% by value) was from third country waters with the rest originating from international waters.

Figure 7 - UK landings by major zonal division, by tonnage

Spatial estimate of UK landings from major zonal divisions, live weight tonnage (t)

	2012	2013	2014	2015	2016	2017	2018
Total landings	628,045	626,799	757,915	708,698	700,636	724,941	697,510
Total apportioned landings (*)	**627,708**	**626,752**	**757,907**	**708,692**	**700,635**	**724,566**	**697,498**
From UK waters							
Lower estimate from UK EEZ	436,107	474,138	563,878	521,715	536,671	542,506	524,337
Spatial estimate from UK EEZ	**481,924**	**513,391**	**601,934**	**556,176**	**574,153**	**580,468**	**558,015**
Upper estimate from UK EEZ	500,024	530,366	621,717	572,028	590,927	598,419	573,623
From OMS							
Lower estimate from OMS EEZ	75,768	56,360	96,569	92,544	62,793	75,597	87,353
Spatial estimate from OMS EEZ	**93,866**	**73,333**	**116,350**	**108,394**	**79,566**	**93,548**	**102,960**
Upper estimate from OMS EEZ	139,684	112,587	154,407	142,856	117,048	131,510	136,638
From 3rd C waters							
Spatial estimate from 3rd Country EEZ	**48,814**	**35,363**	**34,366**	**36,811**	**41,222**	**43,351**	**31,182**
From International waters							
Spatial estimate from International waters	**3,104**	**4,664**	**5,257**	**7,311**	**5,694**	**7,200**	**5,341**

The following table displays the same information as above but this time split by landed value given in £mn.

Figure 8 - UK landings by major zonal division, by landed value

Spatial estimate of UK landings from major zonal divisions, landed value (£mn)

	2012	2013	2014	2015	2016	2017	2018
Total landings	787.9	741.3	864.1	776.4	946.7	979.3	989.0
Total apportioned landings (*)	**787.6**	**741.1**	**864.1**	**776.4**	**946.7**	**978.6**	**989.0**
From UK waters							
Lower estimate from UK EEZ	548.1	553.8	633.5	557.5	709.1	736.4	762.1
Spatial estimate from UK EEZ	**612.8**	**612.4**	**694.7**	**613.6**	**779.3**	**811.1**	**831.4**
Upper estimate from UK EEZ	637.1	634.5	721.8	634.3	804.9	836.8	856.9
From OMS							
Lower estimate from OMS EEZ	95.9	61.6	93.2	88.7	71.5	62.3	65.1
Spatial estimate from OMS EEZ	**120.3**	**83.7**	**120.3**	**109.4**	**97.1**	**88.0**	**90.5**
Upper estimate from OMS EEZ	184.9	142.3	181.5	165.5	167.3	162.7	159.9
From 3rd C waters							
Spatial estimate from 3rd Country EEZ	**50.7**	**39.2**	**43.8**	**48.2**	**57.8**	**64.9**	**55.5**
From International waters							
Spatial estimate from International waters	**3.9**	**5.8**	**5.3**	**5.2**	**12.5**	**14.6**	**11.5**

Breaking the above figures down further to hierarchy level two we can see which individual national waters landings by UK vessels originate from. In 2018, the UK landed 546,000 tonnes from the UK's own EEZ (437,000 tonnes of fish and shellfish from the Scottish EEZ with the English EEZ accounting for 92,000 tonnes). The Irish EEZ was the third most important by tonnage in 2018 accounting for 79,000 tonnes of live weight.

Figure 9 - UK landing in 2018 by EEZ of capture, by tonnage

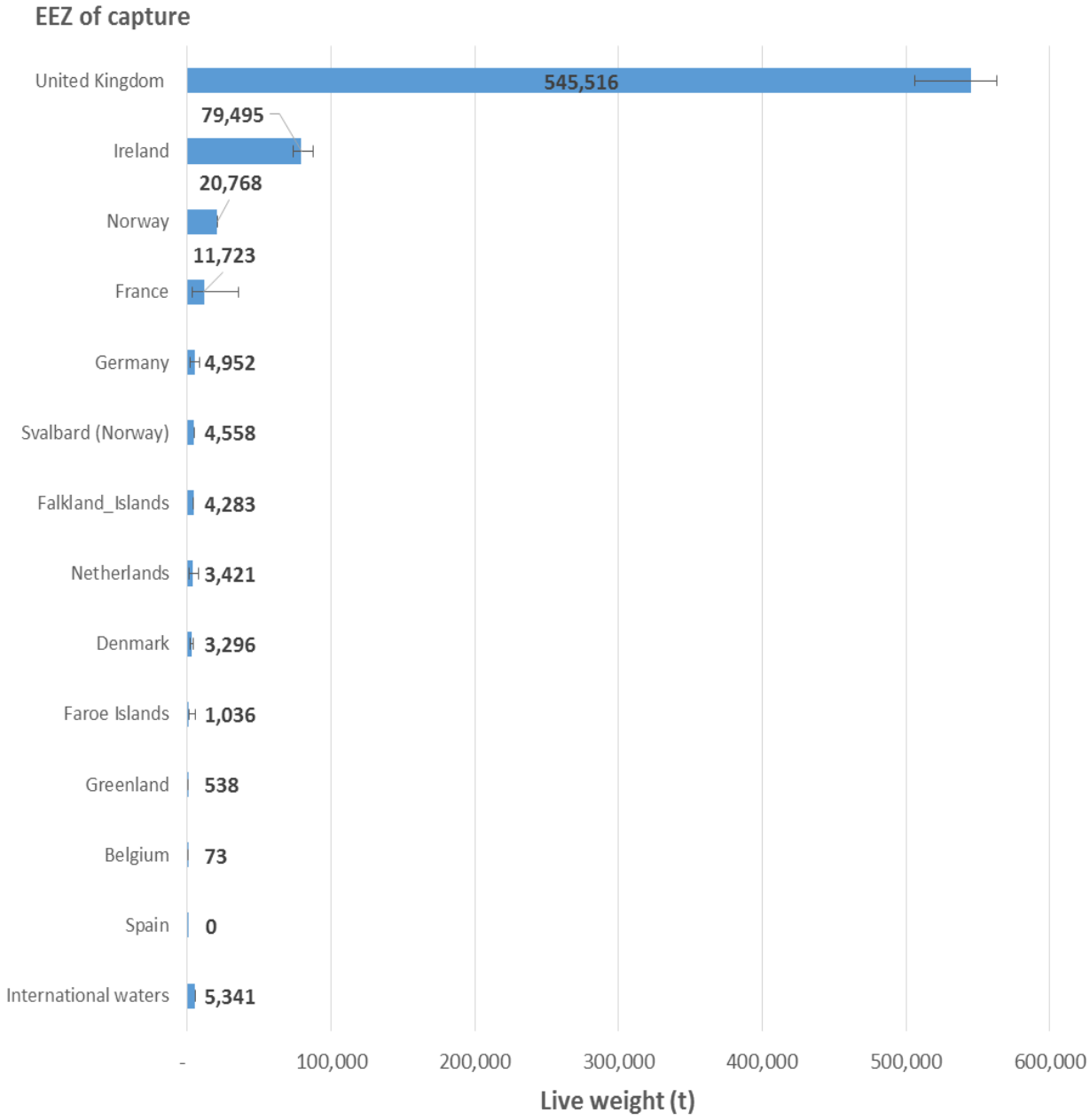
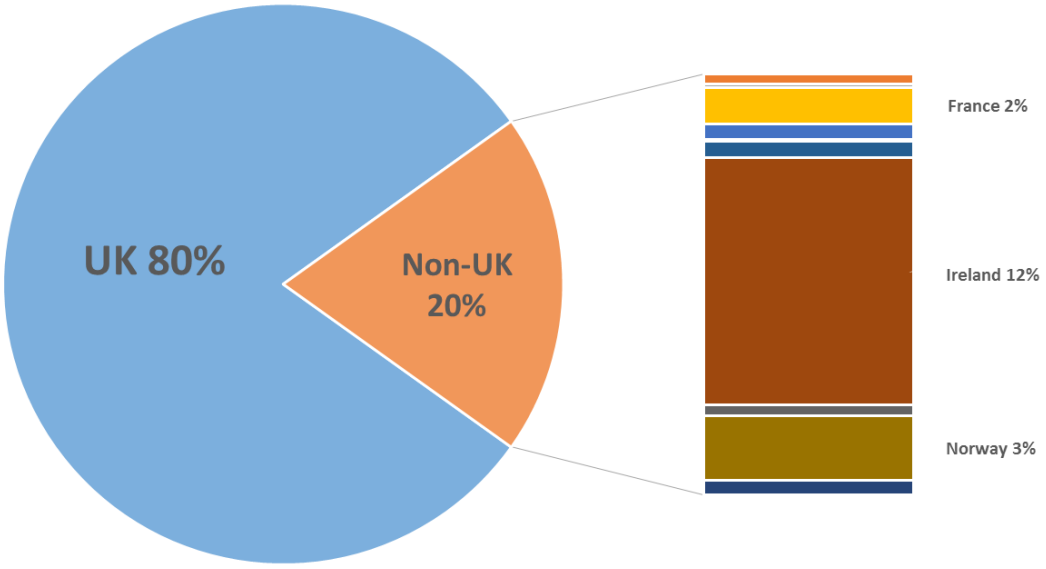
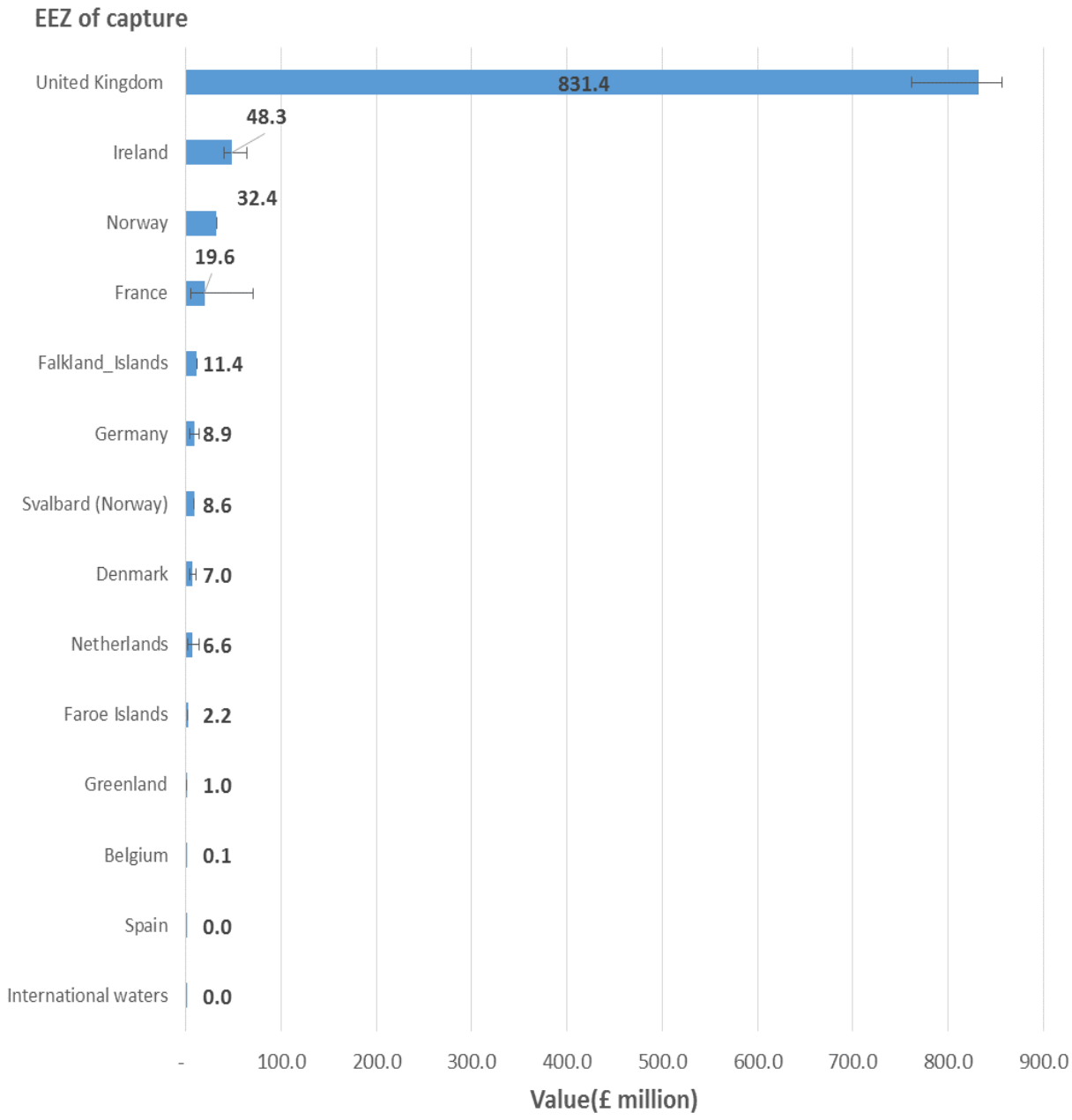


Figure 10 - UK landing in 2018 by EEZ of capture, by tonnage



The picture is very similar when viewing UK landed by EEZ of capture in terms of 2018 landed value. The UK fleet landed £831 million from their own EEZ accounting for 84% of all landed value from all waters. Scottish waters account for 69% of landed value, English waters 20% and Irish waters a further 5% with Norway also being important source of value for the UK fleet (£32 million landed in 2018).

Figure 11 - UK landing in 2018 by EEZ of capture, by landed value



The table below shows the top five species landed by UK vessels in each of the four major zonal divisions in 2018; mackerel from UK waters is by far the largest with an estimate of 186,000 tonnes live weight.

Figure 12 - UK top five species by major zonal division in 2018, by tonnage

From UK waters	Lower bound	Spatial estimate	Upper bound
Mackerel	185,255	185,647	185,989
Herring	96,026	99,122	100,945
Haddock	29,275	30,066	30,704
Edible crab	24,426	27,752	28,520
Nephrops	22,820	24,115	25,072
From OMS	**Lower bound**	**Spatial estimate**	**Upper bound**
Blue whiting	62,001	63,209	63,793
Plaice	4,471	5,616	7,805
Edible crab	4,431	5,200	8,525
King scallops	1,240	4,972	9,075
Mackerel	4,296	4,637	5,030
From 3rd C waters	**Lower bound**	**Spatial estimate**	**Upper bound**
Cod	N/a	13,856	N/a
Squid	N/a	4,196	N/a
Haddock	N/a	4,067	N/a
Herring	N/a	2,582	N/a
Saithe	N/a	2,280	N/a
From International waters	**Lower bound**	**Spatial estimate**	**Upper bound**
Northern prawn	N/a	1,247	N/a
Haddock	N/a	861	N/a
Mackerel	N/a	796	N/a
Cod	N/a	570	N/a
Swordfish	N/a	523	N/a

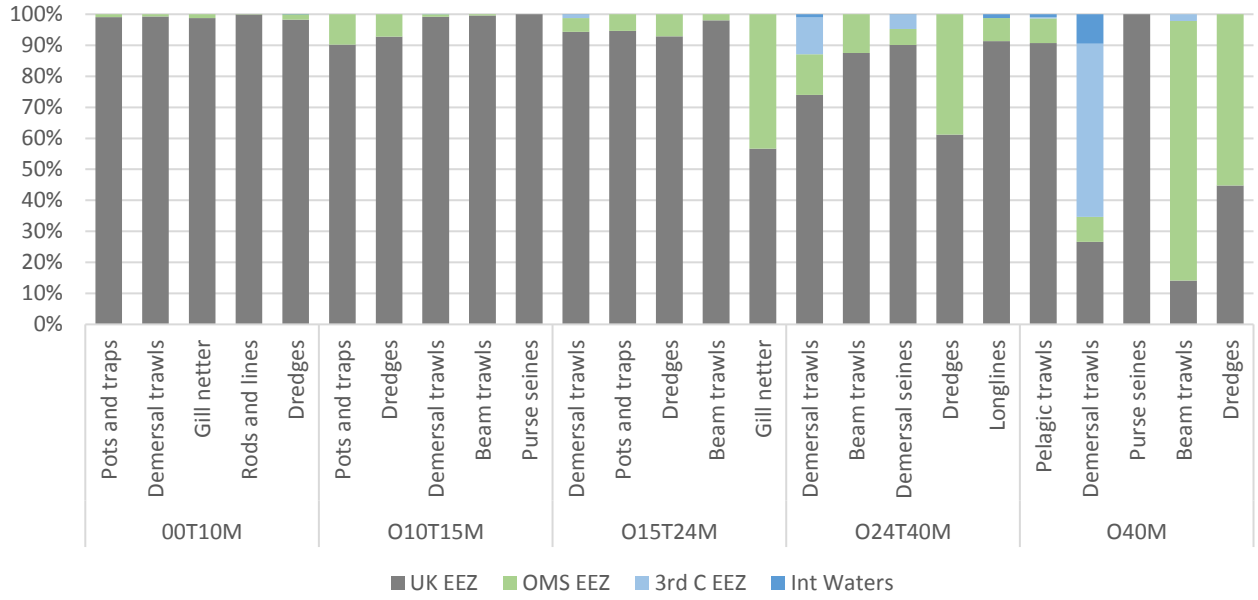
The Figure 13 shows a similar situation to Figure 12 but for landed value instead of tonnage; you can see the low value pelagic species Herring being overtaken by higher priced Nephrops, Crabs, Scallops and Cod.

Figure 13 - UK top five species by major zonal division in 2018, by landed value

From UK waters	Lower bound	Spatial estimate	Upper bound
Mackerel	196,087,377	196,396,155	196,661,340
Nephrops	73,970,811	77,221,283	79,493,999
Edible crab	58,032,247	66,372,923	68,202,537
King scallops	45,482,107	54,833,407	63,398,918
Cod	46,532,083	46,785,681	46,930,485
From OMS	**Lower bound**	**Spatial estimate**	**Upper bound**
Blue whiting	13,373,408	13,569,337	13,663,949
Monks or anglers	10,835,373	11,760,128	14,792,270
King scallops	2,886,747	11,451,796	20,803,300
Plaice	8,459,138	10,554,823	14,753,631
Edible crab	6,833,629	8,663,027	17,003,867
From 3rd C waters	**Lower bound**	**Spatial estimate**	**Upper bound**
Cod	N/a	26,454,565	N/a
Squid	N/a	11,343,944	N/a
Haddock	N/a	6,956,540	N/a
Hake	N/a	3,840,579	N/a
Saithe	N/a	1,893,610	N/a
From International waters	**Lower bound**	**Spatial estimate**	**Upper bound**
Northern prawn	N/a	3,750,006	N/a
Mackerel	N/a	2,223,156	N/a
Haddock	N/a	1,302,374	N/a
Swordfish	N/a	1,244,037	N/a
Cod	N/a	1,167,993	N/a

The figure below shows landings made by UK vessels in 2018 split by length group and those groups' five most 'valuable' gear groups. Specifically it shows the proportion of those group landed coming from each major zonal division. The graph shows an increase in landing value originating in non-UK waters as vessel increase with a high seen for over 40m beam trawlers in OMS waters.

Figure 14 - UK vessel top five gear types by length group by major zonal division in 2018, by landed value



3.2 UK and OMS landings from the UK Economic Exclusive Zone

This section gives a brief overview of the historical landings activity of UK and OMS

This UK EEZ represents 80% by tonnage and 84% by value of the UKs total NE Atlantic catch (average 2012-16). The figure below shows the UK in UK landings activity by tonnage split by UKFA vessel nationality.

Figure 15 - UK vessels in UK EEZ by DA, by tonnage (avg. 2012-16)

Vessel nationality	Lower bound	Spatial estimate	Upper bound
UK - Scotland	347,792	354,094	358,307
UK - England	111,554	139,196	148,954
UK - Northern Ireland	34,706	38,417	41,814
UK - Wales	6,088	7,055	7,084
UK - Isle of Man	5,344	5,400	5,416
UK - Jersey	1,011	1,087	1,107
UK - Guernsey	7	268	332
Grand total	506,502	545,516	563,012

The table below shows member state level landings by weight in the NE Atlantic and the UK EEZ with fields showing the proportion of total landings originating from UK waters.

Figure 16 - OMS landing from NE Atlantic and UK EEZ, by tonnage (avg. 2012-16)

	From NE Atlantic			From UK EEZ			Proportion from UK EEZ		
Member state	Lower bound	Spatial estimate	Upper bound	Lower bound	Spatial estimate	Upper bound	Lower bound	Spatial estimate	Upper bound
Denmark	522,520	625,936	730,244	207,265	236,735	266,390	40%	38%	36%
France	286,823	395,395	503,964	69,276	119,847	177,798	24%	30%	35%
Netherlands	249,464	317,112	385,249	141,911	173,036	206,030	57%	55%	53%
Ireland	209,085	255,713	302,598	61,532	86,360	108,024	29%	34%	36%
Spain	220,583	227,668	234,963	3,823	7,041	10,509	2%	3%	4%
Germany	182,466	212,577	243,023	61,860	74,006	83,899	34%	35%	35%
Sweden	152,034	179,120	207,329	20,201	22,997	25,361	13%	13%	12%
Poland	108,460	128,597	148,735	0	0	0	0%	0%	0%
Finland	118,080	118,470	118,861	0	0	0	0%	0%	0%
Latvia	58,708	60,181	61,653	0	0	0	0%	0%	0%
Estonia	54,770	56,712	58,948	0	0	0	0%	0%	0%
Lithuania	19,914	42,464	65,403	3,562	4,024	4,363	18%	9%	7%
Portugal	33,522	33,522	33,522	0	0	0	0%	0%	0%
Belgium	11,768	25,315	38,875	5,341	11,376	15,504	45%	45%	40%
OMS Total	2,228,196	2,678,782	3,133,367	574,773	735,423	897,879	26%	27%	29%

3.3 Landings of key quota stocks from UK Economic Exclusive Zone

This section provides apportioned estimates of landings of key quota stocks shared by the UK, non-UK EU member states and, in some cases, Norway. Estimates of the quantity of landings from the UK EEZ for all involved nations between 2012 and 2016 are given, alongside the total quantity of fish landed across the entire stock areas by all nations listed above.

The table below shows the five most valuable quota stocks landed from the UK's EEZ (avg. 2012-16) in each major sea area, along with two important widely distributed pelagic stocks. For quota stocks shared between the EU and Norway we have provided a breakdown of the landings of these quotas including and excluding the Norwegian contribution, this is footnoted in the table. The table displays our spatial estimate of the tonnage landed from the UK EEZ alongside the extreme upper and lower estimate and the total estimated stock landings.

The accompanying stock-level dataset to this report provides an extended list of stock estimates.

UK & OMS quota landings from UK EEZ (2012-2016)

Tonnes

North Sea Stocks								
Species	**Area**		**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Haddock	**North Sea[1]**	**Total stock area landings**	***nd*** [R]	**32,360** [R]	**29,843** [R]	**22,568** [R]	**22,957** [R]	**132,047** [R]
	IIa (EC), IV	Lower estimate from UK EEZ	*nd* [R]	30,470 [R]	27,712 [R]	21,030 [R]	21,584 [R]	124,215 [R]
		Spatial estimate from UK EEZ	***nd*** [R]	**30,583** [R]	**27,858** [R]	**21,139** [R]	**21,709** [R]	**124,786** [R]
	(HAD/2AC4.)[1]	Upper estimate from UK EEZ	*nd* [R]	30,642 [R]	27,922 [R]	21,216 [R]	21,797 [R]	125,122 [R]
	North Sea[2]	**Total stock area landings**	**24,320** [R]	**30,476** [R]	**27,057** [R]	**20,501** [R]	**21,403** [R]	**123,756** [R]
	IIa (EC), IV (EC)	Lower estimate from UK EEZ	23,420 [R]	29,755 [R]	26,177 [R]	20,038 [R]	20,898 [R]	120,288 [R]
		Spatial estimate from UK EEZ	**23,497** [R]	**29,868** [R]	**26,323** [R]	**20,147** [R]	**21,023** [R]	**120,859** [R]
	(HAD/2AC4.)[2]	Upper estimate from UK EEZ	23,544 [R]	29,927 [R]	26,388 [R]	20,224 [R]	21,111 [R]	121,194 [R]
Herring	**North Sea 4ab[1]**	**Total stock area landings**	***nd***	**453,800** [R]	**465,782** [R]	**438,019** [R]	**513,167** [R]	**1,870,768** [R]
	IV (EC and Norway	Lower estimate from UK EEZ	*nd*	306,510 [R]	328,226 [R]	310,241 [R]	358,088 [R]	1,539,373 [R]
	North of 53° 30'N)	**Spatial estimate from UK EEZ**	***nd***	**340,096** [R]	**354,324** [R]	**326,825** [R]	**373,950** [R]	**1,643,240** [R]
	(HER/4AB.)[1]	Upper estimate from UK EEZ	*nd*	347,327 [R]	362,960 [R]	340,938 [R]	383,043 [R]	1,688,493 [R]
	North Sea 4ab[2]	**Total stock area landings**	**256,467** [R]	**289,034** [R]	**311,155** [R]	**277,581** [R]	**329,171** [R]	**1,463,408** [R]
	IV (EC)	Lower estimate from UK EEZ	236,308 [R]	250,264 [R]	271,797 [R]	251,306 [R]	298,722 [R]	1,308,397 [R]
		Spatial estimate from UK EEZ	**248,045** [R]	**283,850** [R]	**297,895** [R]	**267,890** [R]	**314,584** [R]	**1,412,264** [R]
	(HER/4AB.)[2]	Upper estimate from UK EEZ	254,225 [R]	291,080 [R]	306,532 [R]	282,002 [R]	323,677 [R]	1,457,517 [R]
Nephrops	**North Sea**	**Total stock area landings**	**13,357** [R]	**10,709** [R]	**13,664** [R]	**9,295** [R]	**13,242** [R]	**60,267** [R]
	IIa (EC), IV (EC)	Lower estimate from UK EEZ	10,834 [R]	8,458 [R]	10,929 [R]	6,551 [R]	8,470 [R]	45,242 [R]
		Spatial estimate from UK EEZ	**11,390** [R]	**8,860** [R]	**11,636** [R]	**7,204** [R]	**9,415** [R]	**48,505** [R]
	(NEP/2AC4-C)	Upper estimate from UK EEZ	11,642 [R]	9,053 [R]	11,939 [R]	7,493 [R]	9,783 [R]	49,911 [R]
Saithe	**North Sea[1]**	**Total stock area landings**	***nd***	**69,880** [R]	**62,864** [R]	**61,196** [R]	**57,552** [R]	**280,615** [R]
	IIa (EC), IV	Lower estimate from UK EEZ	*nd*	44,005 [R]	31,295 [R]	39,847 [R]	35,774 [R]	175,026 [R]
		Spatial estimate from UK EEZ	***nd***	**46,844** [R]	**33,346** [R]	**41,323** [R]	**37,779** [R]	**184,626** [R]
	(POK/2A3A4)[1]	Upper estimate from UK EEZ	*nd*	47,943 [R]	34,041 [R]	41,659 [R]	38,694 [R]	188,277 [R]
	North Sea[2]	**Total stock area landings**	**29,123** [R]	**34,179** [R]	**25,345** [R]	**25,565** [R]	**26,082** [R]	**140,294** [R]
	IIa (EC), IV (EC)	Lower estimate from UK EEZ	24,104 [R]	26,972 [R]	19,529 [R]	21,594 [R]	21,633 [R]	113,833 [R]
		Spatial estimate from UK EEZ	**25,335** [R]	**29,811** [R]	**21,580** [R]	**23,070** [R]	**23,638** [R]	**123,433** [R]
	(POK/2A3A4)[2]	Upper estimate from UK EEZ	25,940 [R]	30,910 [R]	22,275 [R]	23,406 [R]	24,553 [R]	127,085 [R]
Sole	**North Sea**	**Total stock area landings**	**10,960** [R]	**12,984** [R]	**12,324** [R]	**11,148** [R]	**12,271** [R]	**59,688** [R]
	II, IV	Lower estimate from UK EEZ	1,803 [R]	2,310 [R]	2,126 [R]	1,724 [R]	1,729 [R]	9,693 [R]
		Spatial estimate from UK EEZ	**3,562** [R]	**4,429** [R]	**4,130** [R]	**3,368** [R]	**3,341** [R]	**18,830** [R]
	(SOL/24-C.)	Upper estimate from UK EEZ	7,385 [R]	9,246 [R]	8,968 [R]	7,523 [R]	7,615 [R]	40,738 [R]

[1] jointly managed EU-Norway North Sea stock, including Norwegian waters and vessels, with no Norwegian data available for 2012.

[2] jointly managed EU-Norway North Sea stock, excluding Norwegian waters and vessels.

West Coast Stocks								
Species	**Area**		**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Anglerfish / Monkfish	**West Coast**	**Total stock area landings**	**5,074** [R]	**5,894** [R]	**4,917** [R]	**5,349** [R]	**7,217** [R]	**28,452** [R]
	Vb (EC), VI, XII, XIV	Lower estimate from UK EEZ	3,399 [R]	4,021 [R]	3,654 [R]	3,819 [R]	5,649 [R]	20,541 [R]
		Spatial estimate from UK EEZ	**3,617** [R]	**4,313** [R]	**3,994** [R]	**4,093** [R]	**5,878** [R]	**21,894** [R]
	(ANF/56-14)	Upper estimate from UK EEZ	3,876 [R]	4,636 [R]	4,241 [R]	4,359 [R]	6,124 [R]	23,235 [R]
Hake	**West Coast**	**Total stock area landings**	**41,568** [R]	**51,484** [R]	**49,773** [R]	**55,408** [R]	**70,649** [R]	**268,882** [R]
	Vb (EC), VI, VII, XII,	Lower estimate from UK EEZ	9,976 [R]	9,455 [R]	11,088 [R]	8,462 [R]	13,211 [R]	52,191 [R]
	XIV	**Spatial estimate from UK EEZ**	**12,109** [R]	**12,928** [R]	**13,755** [R]	**11,469** [R]	**17,856** [R]	**68,117** [R]
	(HKE/571214)	Upper estimate from UK EEZ	14,558 [R]	16,474 [R]	16,789 [R]	15,065 [R]	23,421 [R]	86,307 [R]
Horse Mackerel	**West Coast**	**Total stock area landings**	**162,949** [R]	**145,926** [R]	**107,582** [R]	**70,445** [R]	**75,033** [R]	**561,935** [R]
	IIa (EC), IVa, Vb (EC), VI, VII	Lower estimate from UK EEZ	18,148 [R]	25,443 [R]	20,326 [R]	19,863 [R]	17,404 [R]	101,183 [R]
	(ex VIId),VIIIabde, XII, XIV	**Spatial estimate from UK EEZ**	**32,297** [R]	**40,403** [R]	**28,345** [R]	**22,160** [R]	**18,719** [R]	**141,924** [R]
	(HER/5B6ANB)	Upper estimate from UK EEZ	44,177 [R]	48,865 [R]	34,496 [R]	24,596 [R]	25,960 [R]	178,094 [R]
Nephrops	**West Coast**	**Total stock area landings**	**14,352** [R]	**12,875** [R]	**12,819** [R]	**11,860** [R]	**14,761** [R]	**66,666** [R]
	Vb (EC), VI	Lower estimate from UK EEZ	14,156 [R]	12,789 [R]	12,607 [R]	11,662 [R]	14,546 [R]	65,761 [R]
		Spatial estimate from UK EEZ	**14,330** [R]	**12,867** [R]	**12,805** [R]	**11,842** [R]	**14,723** [R]	**66,567** [R]
	(NEP/5BC6.)	Upper estimate from UK EEZ	14,340 [R]	12,872 [R]	12,817 [R]	11,857 [R]	14,755 [R]	66,640 [R]
Saithe	**West Coast**	**Total stock area landings**	**8,548** [R]	**9,448** [R]	**7,111** [R]	**9,127** [R]	**7,293** [R]	**41,528** [R]
	Vb (EC), VI, XII, XIV	Lower estimate from UK EEZ	8,025 [R]	9,000 [R]	6,836 [R]	8,976 [R]	7,167 [R]	40,003 [R]
		Spatial estimate from UK EEZ	**8,078** [R]	**9,047** [R]	**6,905** [R]	**8,990** [R]	**7,186** [R]	**40,207** [R]
	(POK/56-14)	Upper estimate from UK EEZ	8,175 [R]	9,113 [R]	6,977 [R]	9,015 [R]	7,206 [R]	40,485 [R]

Area 7 Stocks (Includes Irish Sea, Celtic Sea and English Channel areas)								
Species	**Area**		**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Anglerfish / Monkfish	**Area 7**	**Total stock area landings**	**30,125** R	**29,733** R	**29,605** R	**29,487** R	**32,374** R	**151,324** R
	VII	Lower estimate from UK EEZ	3,596 R	3,159 R	2,587 R	3,130 R	3,239 R	15,711 R
		Spatial estimate from UK EEZ	**9,570** R	**8,495** R	**7,719** R	**8,182** R	**8,736** R	**42,702** R
	(ANF/07.)	Upper estimate from UK EEZ	14,310 R	12,846 R	11,909 R	12,392 R	13,173 R	64,629 R
Megrims	**Area 7**	**Total stock area landings**	**15,859** R	**18,855** R	**12,419** R	**12,663** R	**13,355** R	**73,152** R
	VII	Lower estimate from UK EEZ	1,160 R	1,577 R	1,047 R	1,006 R	1,066 R	5,856 R
		Spatial estimate from UK EEZ	**4,017** R	**5,109** R	**3,299** R	**3,085** R	**3,474** R	**18,985** R
	(LEZ/07.)	Upper estimate from UK EEZ	6,349 R	7,922 R	5,072 R	4,661 R	5,275 R	29,279 R
Nephrops	**Area 7**	**Total stock area landings**	**19,671** R	**17,202** R	**16,199** R	**15,754** R	**17,613** R	**86,440** R
	VII	Lower estimate from UK EEZ	5,382 R	5,222 R	4,900 R	5,112 R	4,861 R	25,477 R
		Spatial estimate from UK EEZ	**10,589** R	**9,494** R	**9,527** R	**9,216** R	**9,599** R	**48,426** R
	(NEP/07.)	Upper estimate from UK EEZ	15,725 R	13,471 R	13,487 R	13,102 R	13,418 R	69,204 R
Sole	**Area 7**	**Total stock area landings**	**4,069** R	**5,238** R	**4,608** R	**3,422** R	**2,526** R	**19,864** R
	VIId	Lower estimate from UK EEZ	325 R	267 R	365 R	267 R	223 R	1,446 R
		Spatial estimate from UK EEZ	**1,539** R	**1,751** R	**1,969** R	**1,459** R	**1,094** R	**7,813** R
	(SOL/07D.)	Upper estimate from UK EEZ	2,623 R	3,213 R	3,161 R	2,297 R	1,639 R	12,934 R
Whiting	**Area 7**	**Total stock area landings**	**14,687** R	**18,293** R	**16,355** R	**17,308** R	**18,792** R	**85,435** R
	VII (ex VIIa)	Lower estimate from UK EEZ	1,950 R	2,850 R	2,415 R	2,436 R	2,856 R	12,507 R
		Spatial estimate from UK EEZ	**6,446** R	**8,768** R	**7,730** R	**8,784** R	**9,682** R	**41,410** R
	(WHG/7X7A-C)	Upper estimate from UK EEZ	9,125 R	12,523 R	11,115 R	11,913 R	13,054 R	57,731 R
Widely Distributed Stocks								
Species	**Area**		**2012**	**2013**	**2014**	**2015**	**2016**	**Total**
Blue Whiting	**Northern**	**Total stock area landings**	**51,049** R	**113,300** R	**158,547** R	**197,817** R	**213,555** R	**734,269** R
	I,II,III,IV,V,VII,VIIIabde,	Lower estimate from UK EEZ	7,841 R	42,730 R	65,404 R	98,857 R	120,041 R	334,872 R
	XII,XIV (EC and Int)	**Spatial estimate from UK EEZ**	**10,900** R	**42,870** R	**65,635** R	**100,675** R	**122,507** R	**342,587** R
	(WHB/1X14)	Upper estimate from UK EEZ	15,404 R	42,955 R	65,956 R	105,971 R	124,546 R	354,832 R
Mackerel	**All North-East Atlantic**	**Total stock area landings**	**359,841** R	**335,561** R	**577,586** R	**504,660** R	**451,808** R	**2,229,456** R
	stock areas	Lower estimate from UK EEZ	228,766 R	234,646 R	397,647 R	320,620 R	350,529 R	1,532,209 R
		Spatial estimate from UK EEZ	**240,673** R	**245,319** R	**412,180** R	**332,058** R	**360,842** R	**1,591,071** R
	(MAC/-)	Upper estimate from UK EEZ	246,380 R	253,846 R	420,195 R	335,439 R	367,868 R	1,623,727 R