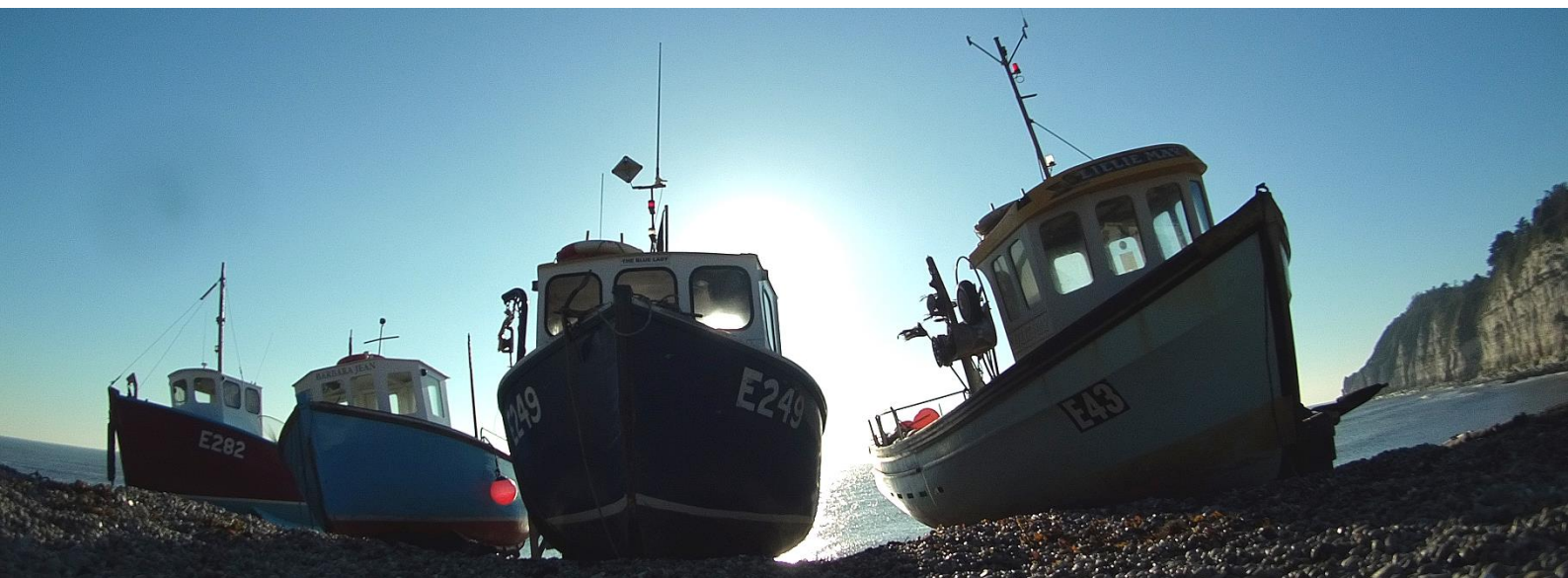**Marine Management Organisation**

Experimental Statistics

United Kingdom commercial sea fisheries landings by Exclusive Economic Zone of capture: 2012 - 2017

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Experimental Statistics

United Kingdom commercial sea fisheries landings by Exclusive Economic Zone of capture: 2012 - 2017

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1. Introduction

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. In this report we set out the data sources, methodologies and limitations involved in producing these statistics. Following this, summary statistics, tables, graphs and maps are presented alongside commentary on the statistics. To give appropriate context, estimates of the landings of other European Union Member States (hereafter referred to as OMS) are provided. Statistics for OMS were obtained from publicly available data sets (see section 2 for more detail) and as such the MMO takes no responsibility for their quality; they are given for context only. This report represents the second annual release of this experimental statistical data set at species level; as such many of the methods employed are similar to the first edition, however, a number of methodological changes have enhanced the accuracy and utility of the statistics. This report also gives estimates of the UK waters landings of major shared quota stocks, making use of UK, Norway and OMS landings data. These estimates provide the full list of quota stocks which were provisionally published, in part, in an *ad hoc* statistical release[1] (03/07/2018) to support the "*Sustainable fisheries for future generations*" HM Government white paper[2].

Exclusive Economic Zones (EEZs)

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 (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.

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[1] https://www.gov.uk/government/statistics/landings-of-selected-shared-quota-stocks-from-uk-waters-2012-2016
[2] https://www.gov.uk/government/consultations/fisheries-white-paper-sustainable-fisheries-for-future-generations/sustainable-fisheries-for-future-generations-consultation-document

Figure 1 – The UK EEZ

The United Kingdom's Exclusive Economic Zone
(Boundardy as per The Exclusive Economic Zone Order 2013 SI No. 3161 of 2013)
(Internal administrative divisions as per UKHO)

2. Data Sources and Methodology

This report is designed to supplement and expand on the MMO's annual report titled 'UK Sea Fisheries Statistics 2017', a National Statistics publication. The input data for this analysis are taken from the '2013 – 2017 UK Fleet Landings by ICES Rectangle' data set published with the main UK Sea Fisheries Statistics 2017 report, with 2012's data taken from the 2016 report[3]. So we do not set out here the methodology used to create the input UK landings data set as this is available within the main report. Instead we set out the method and data sources employed to determine the nationality of the waters of origin for UK commercial sea fisheries landings. Further to this, we employed a novel methodology using the EEZ species level data sets to produce estimates of the quantities of quota stocks taken from UK waters.

It should be noted that unlike UK Sea Fisheries Statistics 2017 the statistics presented here are experimental statistics and are distinct from those published in that 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[4]. We invite all end users to supply feedback regarding the usefulness and quality of these statistics through the end user survey in section 4.

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[3] https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2016
[4] https://www.statisticsauthority.gov.uk/osr/code-of-practice/

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.

2.1 UK landings data by ICES Rectangle

The UK gathers commercial sea fishing activity data from its fleet, in line with the requirements of the European Union's (EU's) Common Fisheries Policy (CFP), via logbooks and sales notes. For every trip undertaken vessels of greater than 10 m in overall length are required to set out which International Council for the Exploration of the Sea (ICES) Area and Statistical Rectangle[5] (see Figure 2) they took fish from. In addition, any vessel fishing outside of Union waters, those seas not within the EEZs of EU member states, is required to record the nationality/organisational control of the waters they fished in (e.g. Norway, North Atlantic Fisheries Organisation, and international waters). For vessels under 10 m in overall length, who do not submit logbooks, area of fishing information is estimated by local fisheries administration data entry staff after a vessel's return, based on known areas of activity of the vessel. For Scottish under 10 m vessels additional data is obtained from weekly FISH1 catch reports[6].

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.

From the available data we can define landings by the nationality of waters outside of Union waters with confidence. However, inside Union waters it is more challenging. Vessels using logbooks and administered by Marine Scotland record whether their Union waters catches are within non-UK Union waters or not, but not which specific OMS waters they were fishing in when outside the UK EEZ. For vessels administered in the UK, by authorities outside Scotland, logbooks simply record fishing within Union waters, but not which specific EEZ.

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[5] http://www.fao.org/cwp-on-fishery-statistics/handbook/general-concepts/fishing-areas-for-statistical-purposes/en/

[6] https://www.gov.scot/Topics/marine/Compliance/letters/FISH12016

In many instances the ICES statistical Rectangle reported in a logbook will have 100% of its sea water surface area within the EEZ of a single member state or will be reported in a zone outside Union waters. In which case we know with confidence the EEZ of capture from knowing the Rectangle. However, of the 1,519 ICES statistical Rectangles (hereafter known simply as Rectangles) in Union waters, 256 are shared by two or more EU member states. For these Rectangles we need a method of apportioning landings to the zones or EEZs.

Our estimates rely on the assumption that fish were caught evenly across the entire sea surface area of the Rectangle in question. By making this assumption it follows that the fraction of total landings originating from an EEZ is the same as the fraction of Rectangle sea surface area that the EEZ in question occupies. Thus we have been able to apportion landings from shared Union waters Rectangles by multiplying the total landings for that Rectangle by the fraction of sea water surface area occupied by the Member States in the Rectangle. It should be noted that UK landings data contain trips made outside of the NE Atlantic (Food and Agriculture Organisation of the UN, aka FAO, Area 27); these have not be considered in detail here.

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.

2.2 OMS landings data by ICES Rectangle

To place the UK statistics in the context we have produced estimates of landings by EEZ for OMS. To do this we utilised publicly available Rectangle level landings data published annually by the EU Commission's Joint Research Centre (JRC) as part of the Fisheries Dependent Information (FDI) data call. To most closely match the area of interest for this report we used the quarterly deep sea (DS) annex version of this data[7]. This data set has coverage for the NE Atlantic area, including the UK EEZ, but does not include the Mediterranean or Black seas and has poor coverage for distant waters (i.e. outside the NE Atlantic). As such it cannot be treated as a complete picture of overall OMS landings, but should instead be regarded as a comprehensive view of OMS landings from the waters in proximity to the UK EEZ. The FDI data do not contain the monetary values at first sale for the landings reported. As such this analysis used the JRC's Fleet Economic

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

Performance data set (2017 edition) to calculate average prices by year, member state, ICES division, gear category and species, which were converted to British Pound Sterling using the average annual exchange rate each year[8]. These are nominal prices and are not adjusted for inflation.

Extracted data were quality assured (QA'd) internally before use in this analysis. Duplicate entries were found in the DS annex version of the FDI landings data set for some member states reporting specific special conditions. These were identified and removed before progressing. In total, approximately 2% of the landings by tonnage were removed because they were duplicates. This only affected 'deep sea' species as listed in the EU proposal for establishing specific conditions to fishing for deep-sea stocks[9] (Annex 1, Section 1: Deep-sea species).

Before apportioning the data, categories were standardised to ensure comparability between OMS and UK landings data. The regulated/unregulated gear categories used in the OMS data[10] were aggregated to the categories used in the MMO's Sea Fisheries Statistics annual publication. ICES Rectangles were used to assign the FAO area/subarea and ICES divisions/subdivisions which were lacking in the OMS data. A further species name field was added to both UK and OMS data sets called 'Common name combined'. Species are listed in landings data using their three letter 3-Alpha species codes as standardised by the FAO Fisheries and Aquaculture Statistics and Information Branch (FIAS) for fishery statistics purposes[11]. The list is extensive covering 12,751 species, however, issues arise were species are present in both a specific code (e.g. HOM for Atlantic horse mackerel; *Trachurus trachurus*) and a grouped code (e.g. JAX used for jack and horse mackerels nei; *Trachurus spp.*). Different member states (including the UK) make use of these groupings to different extents and their usage also varies over time. Therefore the 'Common name combined' field acts to aggregate these codes to allow for direct comparison between UK and OMS vessel landings at a species level.

We followed the same apportioning methodology for the OMS data set as for UK data. The important difference between the two data sets is that the UK data contained logbook records denoting the specific zone of capture. Zone of capture was present in the OMS data, however, it was much less specific (EU waters or Non-EU waters) than the UK version. As such more Rectangles shared between EEZs had to be apportioned compared to the UK data. The potential biases introduced by the apportioning method in the OMS data are likely to be much greater than those in the UK data, given the much larger fraction of OMS data that were apportioned.

As mentioned above, fleet economic performance data published by the JRC[12], were used to calculated average species prices per tonne landed (originally given in Euros). By calculating prices for six distinct criteria combinations for the 1,846 species found within

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[8] OFX yearly average rates https://www.ofx.com/en-gb/forex-news/historical-exchange-rates/yearly-average-rates/
[9] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52012PC0371&from=EN
[10] FDI 2017 data call https://stecf.jrc.ec.europa.eu/c/document_library/get_file?uuid=2036b812-ecab-40d6-a918-6e8ef5f74049&groupId=43805
[11] ASFIS List of Species for Fishery Statistics Purposes http://www.fao.org/fishery/collection/asfis/en
[12] STECF Fleet Economic Performance 2017 https://stecf.jrc.ec.europa.eu/dd/fleet

the economic performance data set. These criteria combinations (summarised in Table 1) cover vessel nationality, species, year, ICES division and gear category. Prices were calculated at this detailed level to ensure price variability was averaged out. To calculate an average price at least one tonne of fish had to be reported in a given combination in Table 1. This limit was set to avoid the average price being biased by low volume landings, which often have prices very different to the price given to high volumes of the same species. Should a combination have less than one tonne then a hierarchy approach was taken to find a combination with at least one tonne landed. The percentage of total tonnage prices estimated by each Table 1 hierarchy level combination is summarised in Table 2. Records that were lacking data on tonnage and/or value were excluded when calculating the average prices. This issue was most prevalent in 2016, where the JRC noted in their commentary report that the data were in some cases "provisional, incomplete and/or subject to revision".

Table 1 - Order of preference of species value criteria combinations

Order of Preference	Criteria
1st	Species, year, member state, gear type, FAO area
2nd	Species, year, member state, gear type
3rd	Species, year, member state
4th	Species, year
5th	Species, all years
6th	Species group, year

Table 2 - Per cent breakdown of OMS landings (live weight) estimated by each criteria combination

Year	1st	2nd	3rd	4th	5th	6th	Total
2012	78%	8%	10%	5%	0.01%	0.001%	100%
2013	76%	3%	9%	12%	0.004%	0.1%	100%
2014	79%	4%	10%	7%	0.01%	0.2%	100%
2015	83%	3%	11%	3%	0.01%	0.1%	100%
2016	54%	1%	0.5%	44%	0.3%	0.1%	100%
Total	**74%**	**4%**	**8%**	**14%**	**0.06%**	**0.1%**	**100%**

At the time of analysis the most recent publicly accessible version of both the OMS Rectangle level and the economic performance data sets was 2017, meaning the latest year for which data were available was 2016. To our knowledge no publicly available data set of landings by third countries (i.e. Norway, the Faeroe Isles or Iceland) is available at Rectangle level. Therefore, we have not been able to reproduce this specific analysis for these nations.

2.3 Obtaining factors for ICES Rectangle sea surface area by EEZ

The method described above relies on knowing what fraction of the total sea water surface area of a Rectangle each nation's EEZ occupies. To obtain this information spatial analysis was required. A spatial data set containing the boundaries of all world EEZs[13] was segmented by a spatial data set containing the boundaries of the ICES Rectangles[14]. The spatial data were projected in ArcGIS (version 10.2.2) using an ETRS89 Lambert Azimuthal Equal-Area projection, centred on Western Europe. From this, the fraction of total sea surface area, excluding any land area, occupied by each national EEZ was calculated for each Rectangle. In addition to giving the whole UK EEZ we have also disaggregated it, based on UK Hydrological Office (UKHO) data into the UK's devolved fisheries administration areas and contiguous Crown Dependencies (i.e. Isle of Man and the Channel Islands); British overseas territories (e.g. Falklands Islands, Gibraltar) are excluded from this analysis.

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

Major zones in NE Atlantic waters surrounding the United Kingdom Superimposed onto ICES statistical rectangles
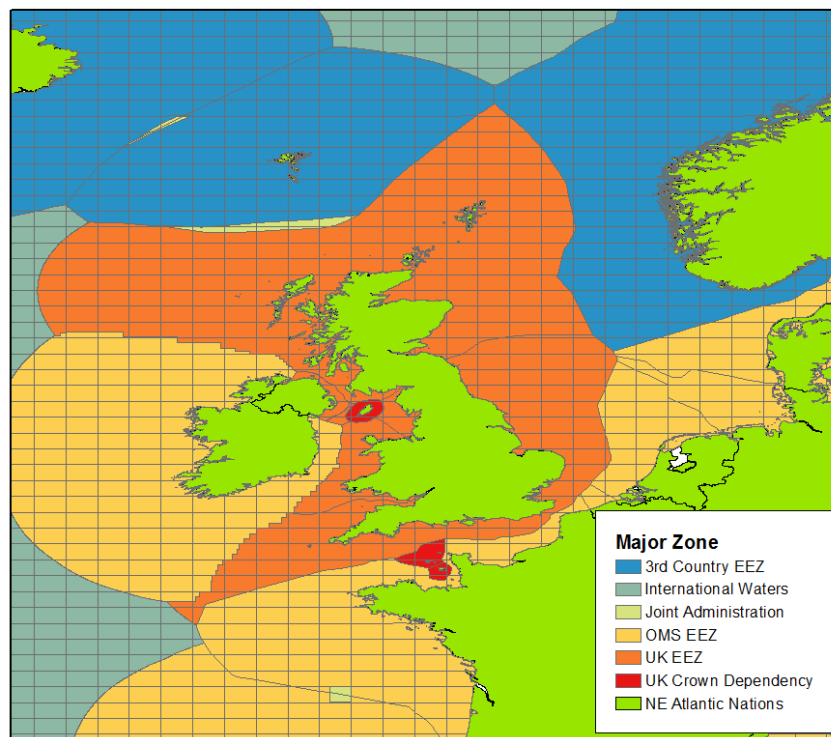
As mentioned previously, for those Rectangles shared between two or more EEZs it may be necessary to estimate the division of landings originating from each of the EEZs involved. Table 3 below summarises the percentage of total UK vessel quantity or value that needed to be apportioned as a measure of the degree of estimation required in the six year time series presented here. The data were apportioned according to 2 distinct hierarchies, the first (H1) being the four major zonal divisions: UK waters, OMS waters, third country waters and international waters (see Figure 2). The second hierarchy (H2)

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[13] http://www.marineregions.org/downloads.php (World EEZ v9)
[14] http://www.ices.dk/marine-data/maps/Pages/ICES-statistical-rectangles.aspx

apportioned the data down to the national EEZ level (e.g. France, Norway) for non-UK nations and to the UK fisheries administration level (i.e. England, Wales, Scotland, Northern Ireland and Crown Dependencies) for the UK EEZ. As H2 disaggregates to a smaller spatial scale than H1, it follows that the per cent of data apportioned is greater in H2 than H1.

Table 3 – Percentage of UK data apportioned (by hierarchy, quantity and value)

Year	H1 (Quantity)	H1 (Value)	H2 (Quantity)	H2 (Value)
2012	10%	11%	20%	21%
2013	9%	11%	18%	20%
2014	8%	10%	17%	20%
2015	7%	10%	16%	20%
2016	8%	10%	15%	19%
2017	8%	10%	16%	20%
Total	**8%**	**10%**	**17%**	**20%**

For UK data there were instances where the Rectangle was unknown, where possible these were manually apportioned to an EEZ of capture if a specific zone of capture was recorded by the vessel (e.g. Norway). This affected 1% by tonnage and value of UK landings. No unknown Rectangles were present in the OMS data.

Owing principally to the less specific zone of captures available for OMS data it follows that the method used requires more estimation and therefore more apportioning at H1 and H2 as described in Table 4 below.

Table 4 – Percentage of OMS data apportioned (by hierarchy, quantity and value)

Year	H1 (Quantity)	H1 (Value)	H2 (Quantity)	H2 (Value)
2012	21%	24%	29%	33%
2013	19%	22%	27%	31%
2014	21%	22%	31%	32%
2015	18%	23%	29%	32%
2016	17%	22%	28%	33%
Total	**19%**	**23%**	**29%**	**32%**

2.4 Estimating quota stock landings from UK EEZ

Further to the species level estimates presented previously a quota stock level breakdown is presented this year, using the experimental methodology discussed below.

The quota stock data set was originally produced for use as internal management information. We are releasing this more comprehensive list (Table 10) and a full list[15] following the inclusion of these statistics in the analytical annex of HM Government's "*Sustainable fisheries for future generations*" white paper[16] released in July this year.

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.

In addition to the UK and OMS data sets produced as part of this report, the quota stock method also incorporated landings data supplied by Norway when their vessels fish in Union waters[17]. Unlike some of the UK data and all of the OMS data the Norwegian landings showed the nationality of the waters from which the fish were taken definitively. Therefore Norwegian landings data did not require any apportioning.

The quota stock TAC codes and definitions were taken from the EU's annual regulation fixing fishing opportunities corresponding to the year in question[18]. For UK and Norwegian logbook data, quota stocks were assigned accurately using data available in the logbook in the manner used for official quota stock uptake reporting[19]. For the OMS data, lacking the detail available in logbook data, the specific quota stock(s) of a given record had to be estimated. This was done by an extension of the spatial apportioning method described above. Where an ICES Rectangle was shared between two or more quota stock management areas, landings were split between each quota stock management area in proportion to their sea surface area in the Rectangle. If part of a Rectangle fell outside of any quota stock management area, the fraction of the fish potentially landed from that area were attributed to a non-TAC category for the species in question. Allocation to a non-TAC category was uncommon for quota stocks in UK waters, as most fishing occurs away from the boundaries of the stock areas. Such attribution to an non-TAC category affected less than 0.00001% of the total quantity of fish attributed to quota stocks in and around UK waters. When allocating the OMS data to quota stocks there is the potential

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[15] https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2017
[16] https://www.gov.uk/government/consultations/fisheries-white-paper-sustainable-fisheries-for-future-generations/sustainable-fisheries-for-future-generations-consultation-document
[17] https://webgate.ec.europa.eu/fides/cr/index.cfm?event=reports.ersfollowup (06/06/2018)
[18] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0072 (2016 Version)
[19] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0120&from=en

for misattribution of landings to adjacent quota stocks. To determine the importance of this issue, outputs were compared annually with stock level uptake reported to the EU Commission using the Fisheries Data Exchange System (FIDES). The average difference between our total estimated landings by stocks and those reported on FIDES (the best reference data set at quota stock level) was +2.6% per stock. Where a stock had an observed difference of outside ±5% we investigated further. In all cases the difference could be explained by differences in reported landings between the FDI data set and those reported on FIDES. In no cases did we detect significant under/over-attribution of landings to a quota stock. There are a number of potential explanations as to why the FDI and FIDES data sets do not precisely match. One explanation is that some of the FDI data needs to be apportioned even at total stock area level and may therefore deviate from the reported total landings. Another explanation is that FIDES data are submitted much earlier and may therefore have slightly more limited coverage, due to logbook processing times, than the more recent FDI data set.

No data were available for total uptake of quotas by Norwegian vessels because we only had access to Norwegian landings that originated from EU waters. So we had to make an assumption about Norwegian vessels' total uptake of the jointly managed stocks analysed. For these stocks the median total uptake of quota by EU vessels was 94%, with most being close to 100%. Based on this, we made the assumption that Norwegian uptake of the same stocks would mirror EU uptake and would therefore approximate 100%. Using this assumption we estimated that Norwegian vessels' landings of these stocks from non-EU waters was equal to their total allocated quota for the stocks minus their landings from EU waters. There are six EU-Norway jointly managed stocks.

2.5 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.

Given the potential for error in the method, charts and tables (where appropriate) in this report are presented with upper and lower limits denoting the theoretical maximum and minimum value for the apportioned estimation in question. The lower limit is calculated by allocating landings to a given zone only where it occupies all of the sea water surface area of a given Rectangle. This limit is almost certainly too low as it will discount all fish from Rectangles less than 100% inside a given EEZ even if the Rectangle is almost entirely inside that EEZ. The upper limit assumes that all fish landed from Rectangles even slightly inside an EEZ were caught in that EEZ. This limit is almost certainly too high as it will

apportion landings from Rectangles that are almost entirely outside the EEZ in question. These are extreme theoretical limits but their distance from each other and the apportioned estimate provides a sense of the precision of the spatial estimate. Where the range is relatively wide the apportioned value is relatively imprecise and where the range is relatively narrow the apportioned value is relatively precise. For UK data the precision of these statistics depends primarily on what fraction of the data has had to be apportioned to create the statistic. When using UK data to look at the UK's EEZ as a whole a relatively small number of Rectangles have had to be apportioned, therefore apportioned estimates at this high level are relatively precise. In contrast, when looking at smaller spatial areas, for example Area VIId and Area VIIe (the English Channel) a relatively large number of the Rectangles are shared between nations and so the amount of apportioning is larger, producing more imprecise estimates. The two figures below give extreme examples of these differences from the stock level data set. Figure 3 shows the spatial estimate for landings of West of Scotland *Nephrops* from the UK's EEZ along with the low and high limits, this stock has few Rectangles that were split between more than one EEZ therefore there is a small range between the low and high limits. Figure 4 shows the spatial estimate for landings of English Channel plaice from the UK's EEZ along with the low and high limits, this stock exists in a sea area where a relatively large number of the Rectangles are shared between EEZs and so the amount of apportioning is larger, producing a larger range between the lower and upper limits and a more imprecise estimate; estimates with wide upper/lower bound ranges should be treated with caution.

Figure 3 – Annual landings from the UK EEZ of West of Scotland *Nephrops*
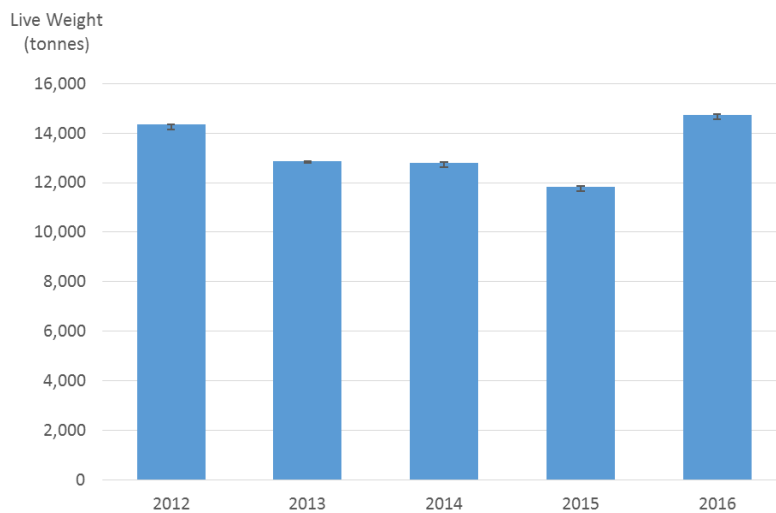
Figure 4 – Annual landings from the UK EEZ of Channel Plaice (7DE)
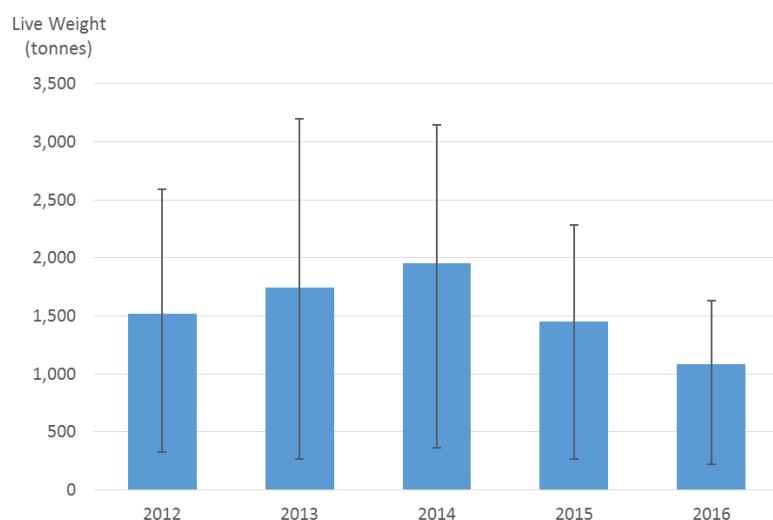
Although minor it is worth noting there are small inaccuracies in the Rectangles factors used for the apportioning of landings. Owing to the spatial analysis method employed some Rectangle spatial factors do not sum to exactly 100%. This meant that landings apportioned involving these Rectangles will be slightly lower than reported landings total. The difference between apportioned and reported landings due to apportioning error ranges from 0.0002% to 0.0148% on average between 2012 and 2016.

UK administrative data gathering systems are subject to robust and ongoing quality assurance processes to identify and correct data input errors. These process are set out in the appendices of the UK Sea Fisheries Statistics 2017 publication[20]. In respect to the OMS data; the MMO do not control the quality of the data sources used in this analysis and as such cannot guarantee the accuracy of the statistics presented should the input data be of poor quality. The MMO notes that the FDI and fleet economic performance data calls are compulsory for member states and that the JRC follows a pre-and-post submission QA process involving data format checks with business rules and expert working group review and analysis. Nonetheless there is still room for deficiencies in the data provided to the JRC by individual member states in terms of completeness and accuracy. Some of the known coverage issues in the data are highlighted in the JRC data coverage data set[21].

On occasion UK logbook records are missing key information, such as the Rectangle, zone or ICES division of capture. In these cases UNK (i.e. unknown) values are captured. This creates ambiguity as to where the fish were caught. In cases where the ambiguity is such that no objective determination could be made as to the provenance of the landings the data are not apportioned or assigned to a zone. This means that the totals of the four major zonal divisions from H1 do not sum to the overall reported landings by UK vessels.

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[20] SFS 2017 Appendix 4 pp141 – 150 https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2017

[21]https://datacollection.jrc.ec.europa.eu/coverage/graphs-effort

On average between 2012 and 2017 approximately 0.3% by live weight and 0.2% by value was left spatially unassigned. As stated previously unknown Rectangle landings were not present in the OMS data.

3. Landings by Economic Exclusive Zone (EEZ)

In the North East Atlantic EEZs (FAO Area 27) the UK fleet landed 719,000 tonnes of fish, valued at £968 million, during 2017. NE Atlantic landings represent 99 per cent of the total tonnage landed by the UK fleet. The average landings per year by UK vessels from the NE Atlantic between 2012 and 2016 was 678,000 tonnes valued at £816 million. For comparison, OMS vessels landed 2,109,000 tonnes of fish (valued at £2.27 billion) from the same area (avg. 2012-16). Remember this figure does not include landings from the Mediterranean, Black Sea or distant waters landings.

The Rectangle heat maps below show the spatial extent of Rectangle landings (by live weight and value) from the UK and OMS data sets.

Figure 5 - UK landings live weight by ICES Statistical Rectangle (avg. 2012-16)

UK Activity (2012 - 2016)
Live Weight by ICES Statistical Rectanagle
Contains Collins Bartholomew and ICES data. © Collins Bartholomew copyright and database right 2017. © ICES Statistical Rectangles dataset 2015. ICES, Copenhagen

Live Weight (tonnes)
- > 0 - 250
- > 250 - 500
- > 500 - 1,000
- > 1,000 - 2,000
- > 2,000 - 4,000
- > 4,000 - 8,000
- > 8,000 - 16,000
- > 16,000 - 32,000
- > 32,000 - 64,000

Figure 6 - UK landings value by ICES Statistical Rectangle (avg. 2012-16)

UK Activity (2012 - 2016)
Average Value by ICES Statistical Rectanagle
Contains Collins Bartholomew and ICES data. © Collins Bartholomew copyright and database right 2017. © ICES Statistical Rectangles dataset 2015. ICES, Copenhagen

Average Value (£ million)
- > 0 - 0.2
- > 0.2 - 0.4
- > 0.4 - 0.8
- > 0.8 - 1.6
- > 1.6 - 3.2
- > 3.2 - 6.4
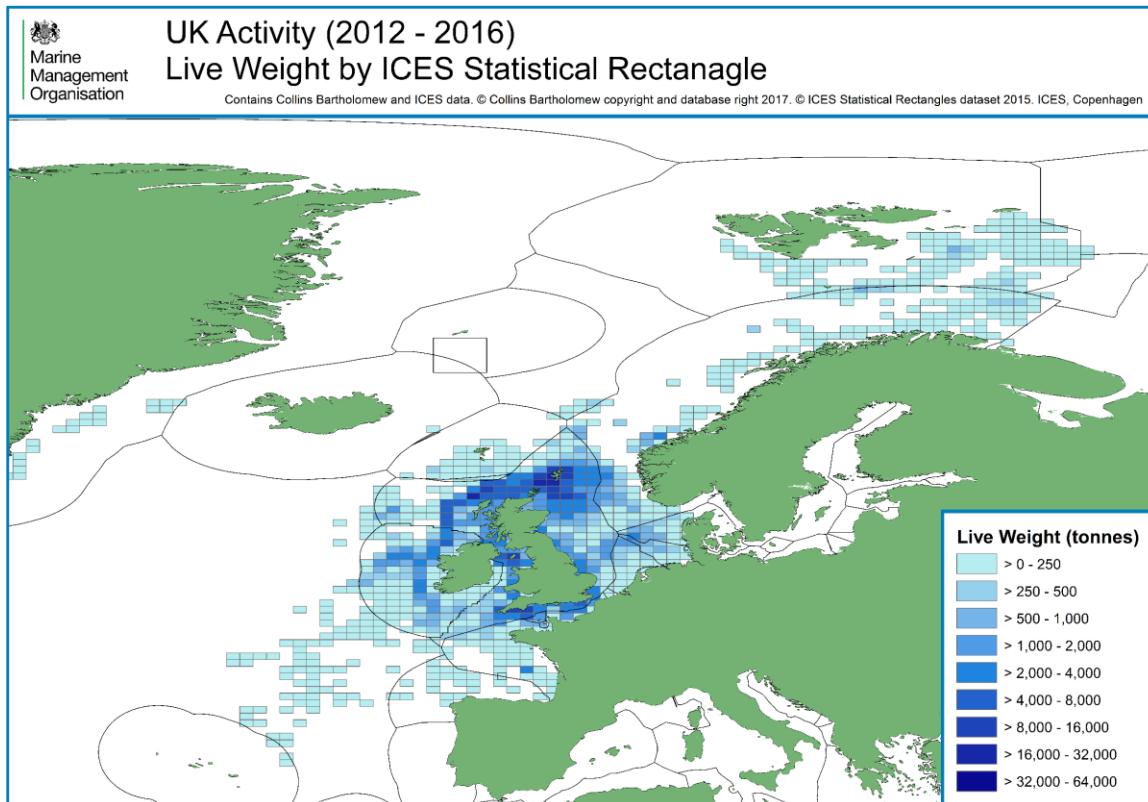- > 6.4 - 12.8
- > 12.8 - 25.6
- > 25.6 - 51.2
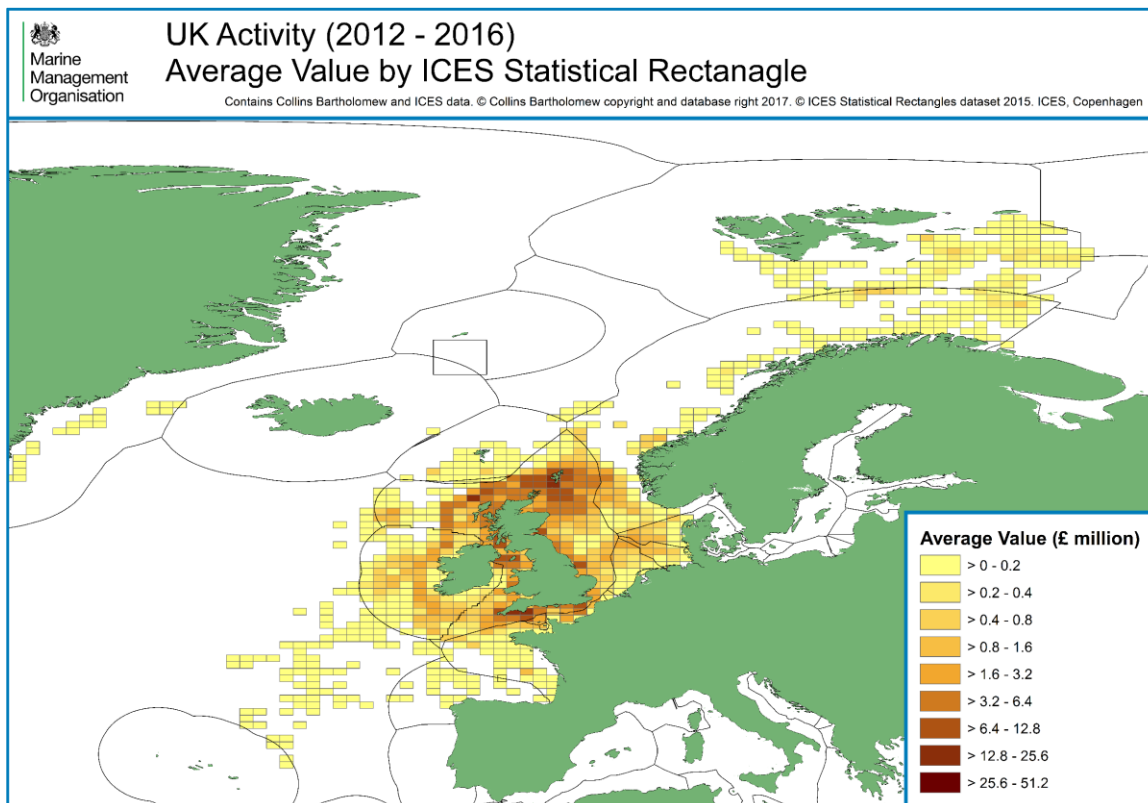
Figure 7 - OMS landings live weight by ICES Statistical Rectangle (avg. 2012-16)
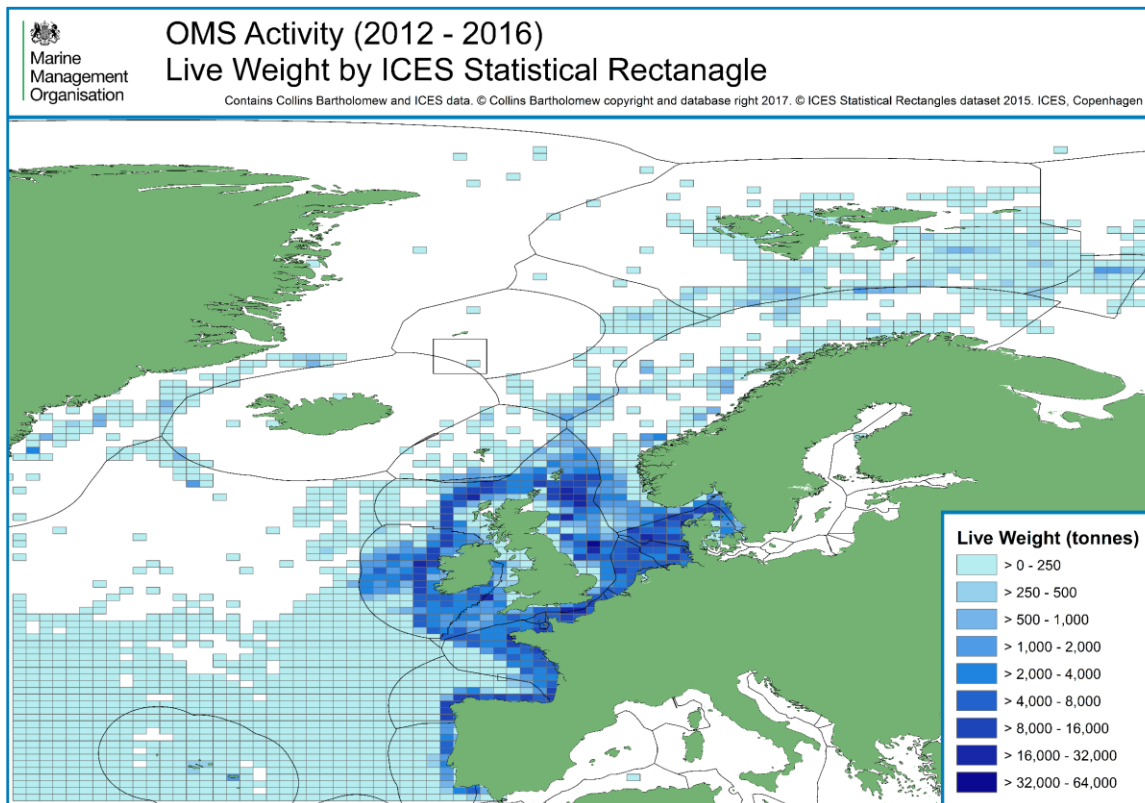
Figure 8 - OMS landings value by ICES Statistical Rectangle (avg. 2012-16)
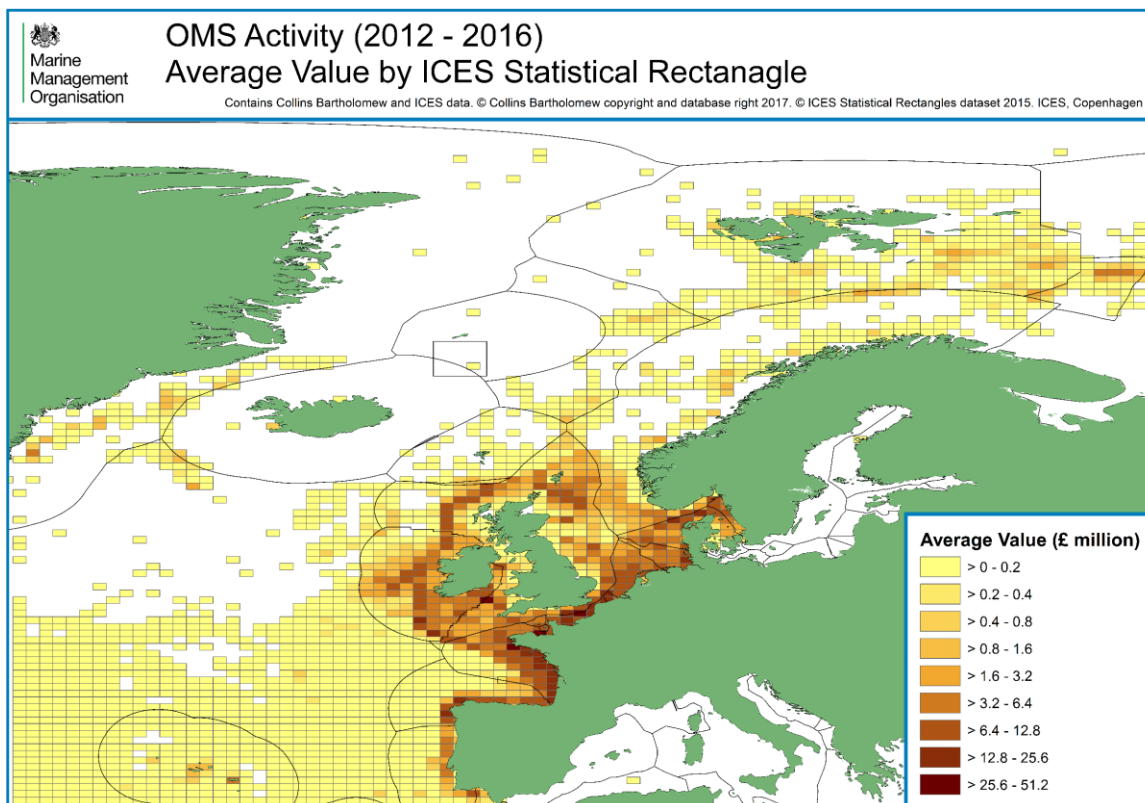
3.1 Landings by major zonal division

The sections below detail the estimated landings by the UK fleet originating from the major zonal divisions of H1 (UK waters, OMS waters, 3rd Country waters and international waters), with comparisons made to the estimated landings of OMS where appropriate. Remember figures below represent those landings from the NE Atlantic waters (FAO Area 27).

In 2017 the UK landed the vast majority of its NE Atlantic catch from its own EEZ (81% by quantity and 84% by value, 81 and 83% of total UK quantity and value landed respectively). The 'OMS EEZs' zone was the next most important major zonal division at 13% by quantity and 9% by value. This pattern was mirrored in the 2012-16 average landings from NE Atlantic where UK vessels landed 80% of their quantity from the UK EEZ (81% value) and 14% of their quantity from the OMS EEZs (13% by value).

For comparison, OMS vessels captured 58% of their NE Atlantic fish by tonnage (68% by value) within non-UK Union waters. The UK EEZ is the next most important zone accounting for 35% of landed live weight and 23% by landings value (avg. 2012-16).

Figure 9 - UK vessel landings in the NE Atlantic by major zonal division (H1): avg. 2012 - 2016 (showing uncertainty range)[22]

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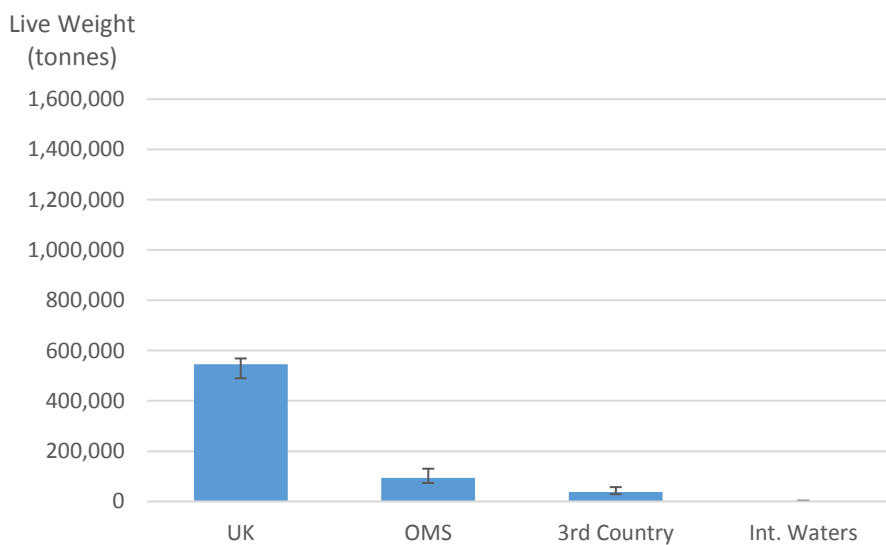
[22] UK landings in NE Atlantic international waters were 1,100 tonnes (£0.8mn) per year (avg. 2012-16)

Figure 10 - OMS vessel landings in the NE Atlantic by major zonal division (H1): avg. 2012 - 2016 (showing uncertainty range)
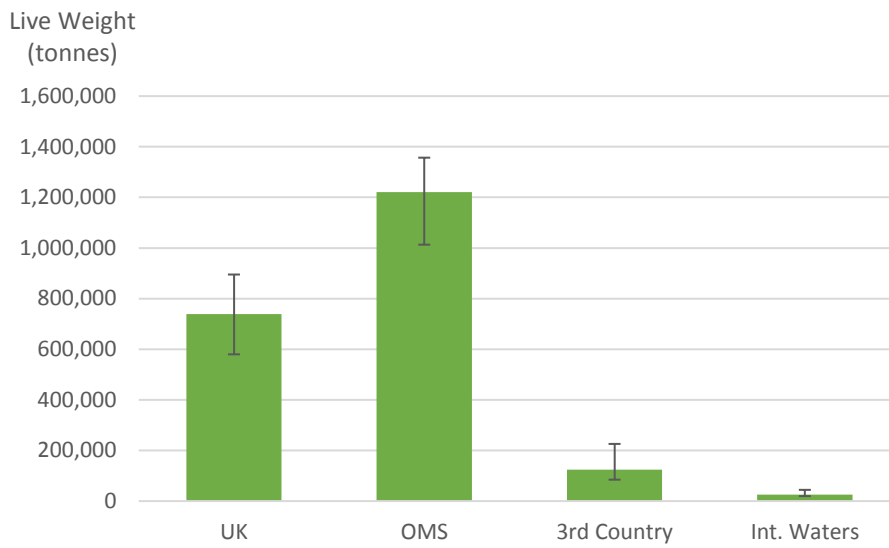
Figure 11 - UK vessel landings value in the NE Atlantic by major zonal division (H1): avg. 2012 - 2016 (showing uncertainty range)
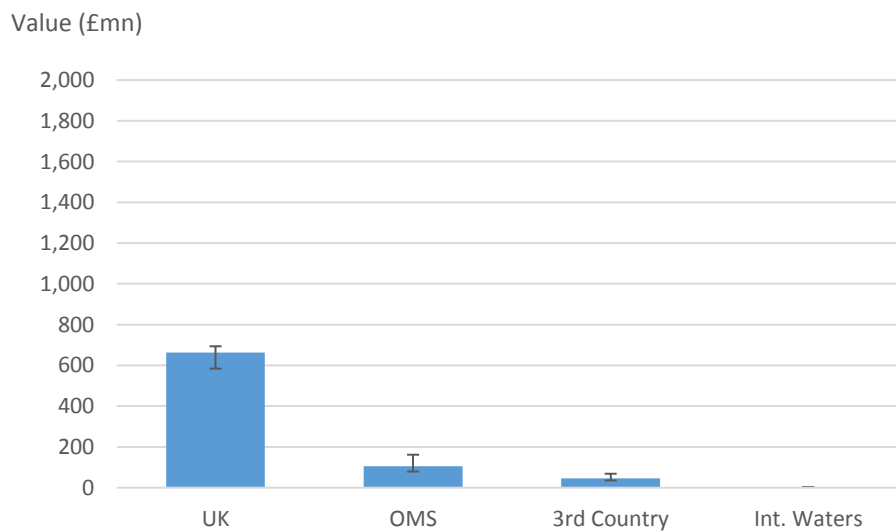
Figure 12 - OMS vessel landings value in the NE Atlantic by major zonal division (H1): avg. 2012 - 2016 (showing uncertainty range)
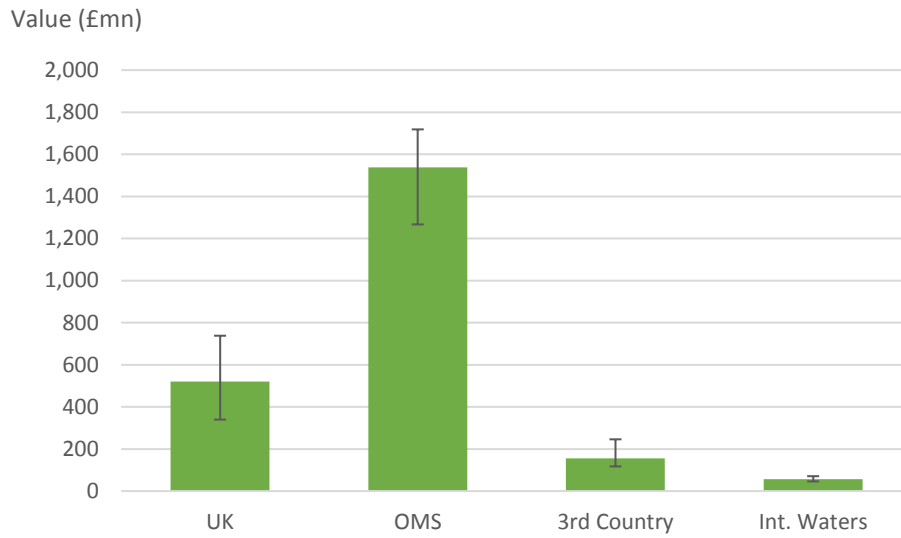
3.2 Landings from the UK EEZ

In 2017, UK vessels landed 719,000 tonnes of fish worth £968 million from the NE Atlantic waters, of which approximately 581,000 tonnes (£811 million) were caught in the UK EEZ, representing 81% of quantity and 84% of value landed. This was above the 2012-16 average where the UK fleet landed 546,000 tonnes per annum valued at £663 million from the UK EEZ, representing 80% of UK landings by quantity and 81% by value. As shown in Figure 15, the vast majority (91% by quantity and value) of these landings were by Scottish and English registered vessels.

Figure 13 – Annual UK vessel landings from the UK EEZ (showing uncertainty range)
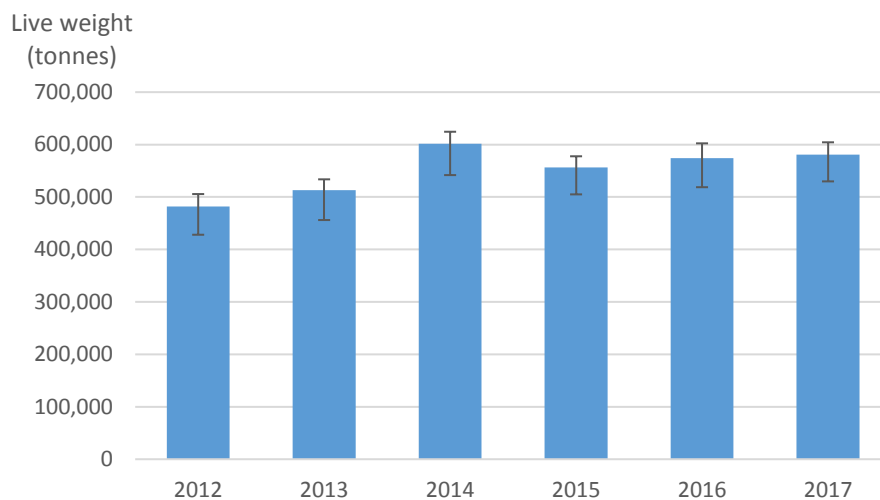
Figure 14 - Annual UK vessel landings value from the UK EEZ (showing uncertainty range)
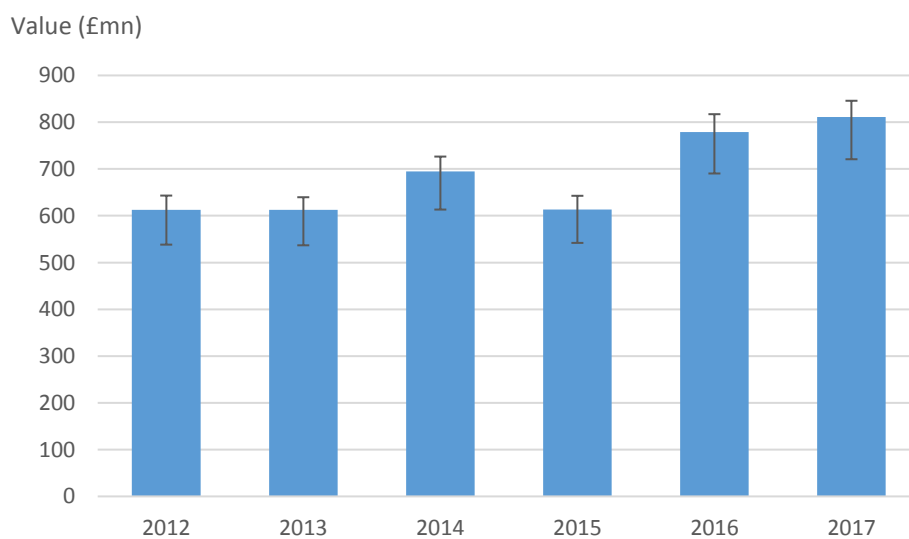
Figure 15 - UK vessel landings from the UK EEZ by devolved vessel nationality: avg. 2012-16 (showing uncertainty range)
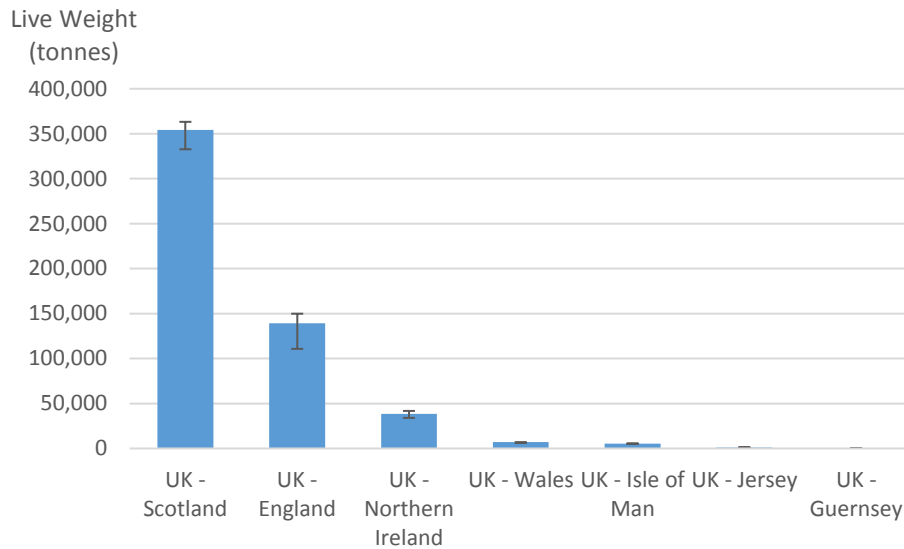
Figure 16 - UK vessel landings value from the UK EEZ by devolved vessel nationality: avg. 2012-16 (showing uncertainty range)
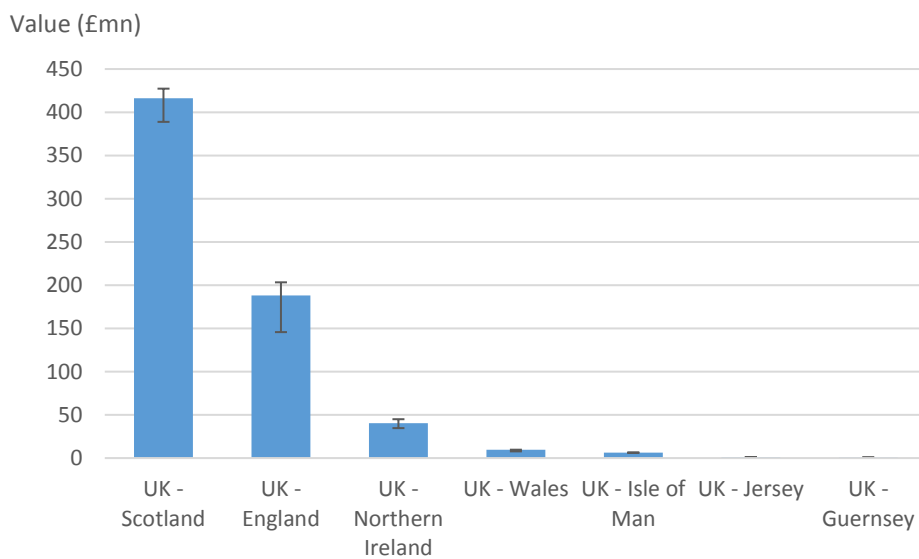
For comparison, the OMS fleet landed 739,000 tonnes per annum estimated to be worth £521 million from the UK EEZ (avg. 2012-16). Between 2012 and 2016 a total of nine OMS landed more than 5,000 tonnes per annum from the UK EEZ. The three most important OMS fleets in terms of live weight tonnage landed from the UK EEZ over this period were (1) Denmark 237,000 tonnes, £90 million (2) Netherlands, 177,000 tonnes, £92 million and (3) France, 120,000 tonnes, £171 million. France accounted for the highest proportion of OMS landings value between 2012 and 2016 suggesting French vessels, in general, landed higher value species from the UK EEZ than Denmark or the Netherlands. It is worth noting that the value landed from the UK EEZ by France is subject to a relatively large amount of apportioning due to the amount of fish landed from English Channel

Rectangles; this can be seen in the large upper/lower limit range given for French landings value from the UK EEZ in Figure 20.

Figure 17 – Annual OMS vessel landings from the UK EEZ (showing uncertainty range)

Figure 18 - Annual OMS vessel landings value from the UK EEZ (showing uncertainty range)
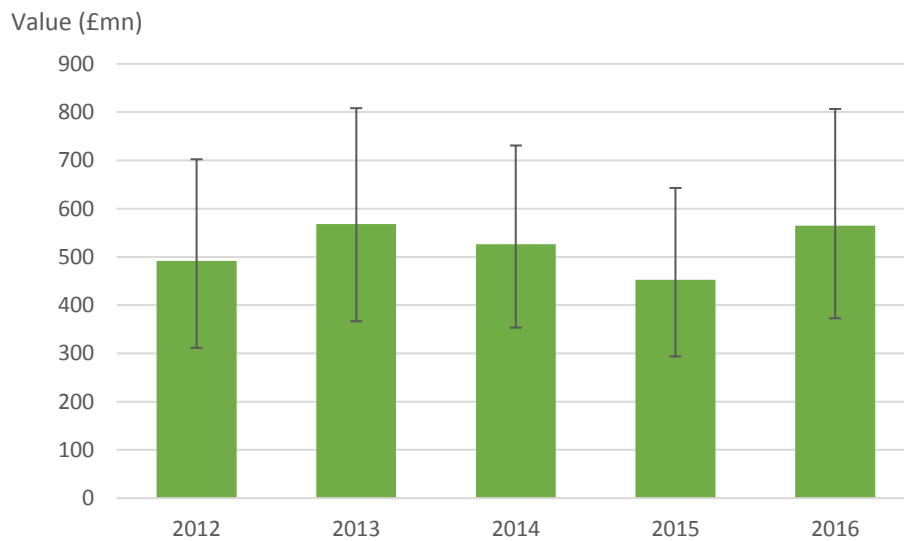
Figure 19 - OMS vessel landings from the UK EEZ by top five member state vessel nationalities: avg. 2012-16 (showing uncertainty range)
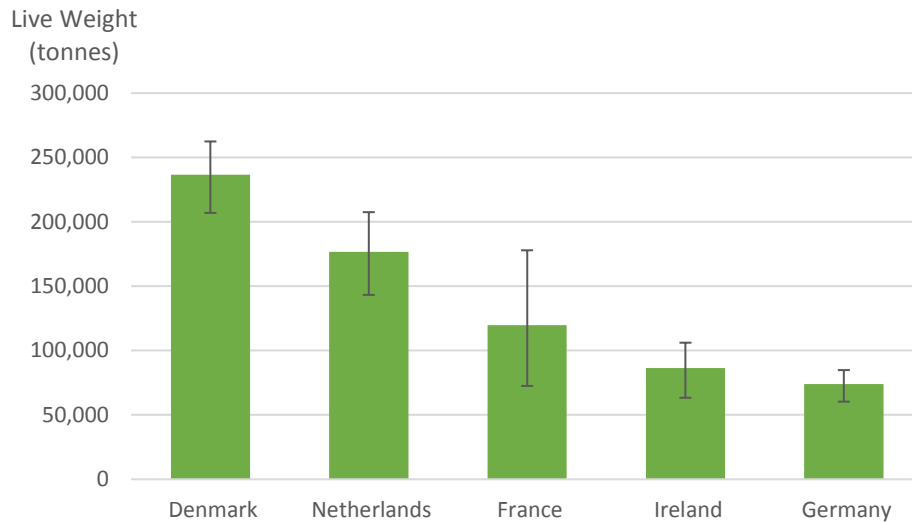
Figure 20 - OMS vessel landings value from the UK EEZ by top five member state vessel nationalities: avg. 2012-16 (showing uncertainty range)
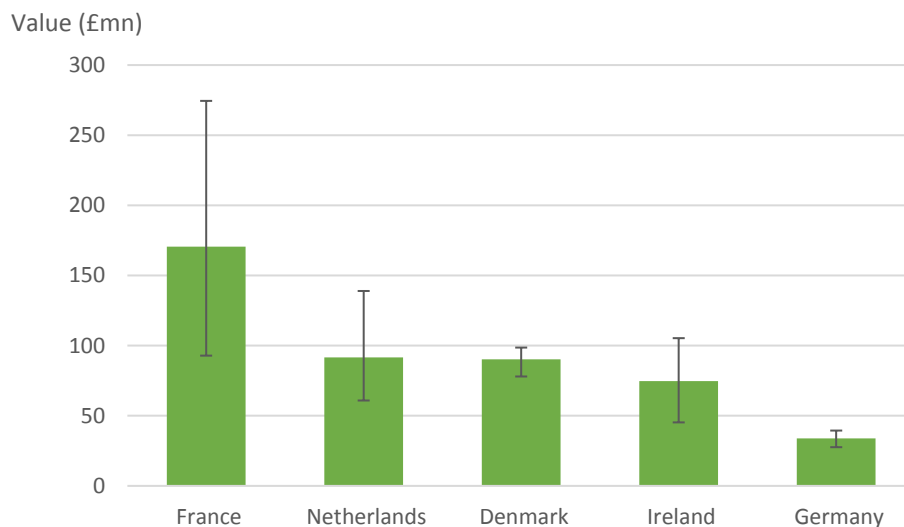
The top three most valuable species landed by UK vessels from the UK's EEZ in 2017 were mackerel (220,000 tonnes, £198 million), *Nephrops* (29,000 tonnes, £93 million) and king scallops (23,000 tonnes, £59 million). For OMS vessels, the three most valuable species landed from UK waters, on average between 2012 and 2016, were herring (250,000 tonnes, £95 million), mackerel (136,000 tonnes, £91 million) and sole (5,000 tonnes, £41 million).

The most important species group for UK vessels landing from UK waters by tonnage was pelagic (53%) and by value was shellfish (41%). For comparison the most important species group for OMS vessels landings from the UK EEZ by tonnage was pelagic (66%) and by value was demersal (48%). Only a small amount of shellfish species (3% by

tonnage and 9% by value) were reported as being landed by OMS vessels from the UK EEZ.

Table 5 - UK vessels top five species landed from UK waters (avg. 2012-16)

Species Name	Value (£mn)			% Total Value
	Low Limit	Spatial Estimate	High Limit	
Top 5	**338**	**364**	**377**	**55%**
Mackerel	141	146	148	22%
Nephrops	87	93	96	14%
King Scallops	45	53	56	8%
Edible Crab	32	37	38	6%
Haddock	32	36	38	5%
Others	**246**	**298**	**317**	**45%**
Grand Total	**584**	**663**	**694**	**100%**

Table 6 - OMS vessels top five species landed from UK waters (avg. 2012-16)

Species Name	Value (£mn)			% Total Value
	Low Limit	Spatial Estimate	High Limit	
Top 5	**207**	**277**	**358**	**53%**
Herring	74	**95**	109	18%
Mackerel	81	**91**	96	17%
Sole	20	**41**	82	8%
Monks	15	**26**	38	5%
Hake	16	**24**	32	5%
Others	**133**	**244**	**380**	**47%**
Grand Total	**340**	**521**	**738**	**100%**

Table 7 below summarises the three most valuable species to each UK devolved administration or crown dependency vessel nationality based on their recorded landings value over a five year period (2012-16). The figures show the importance of non-quota shellfish species such as edible crab, lobsters and king scallops to vessels from England, Wales and the crown dependencies. Finfish (mackerel, haddock and herring) are joined by *Nephrops* as the most valuable species landed by Scottish and Northern Irish vessels within the UKs waters. Table 8 provides a comparative table for OMS' most valuable species caught within UK waters.

Table 7 - Three most valuable species landed from the UK EEZ, split by UK devolved authority and crown dependency vessel nationality (avg. 2012-16)

UK - England
1st	Edible Crab
2nd	Lobsters
3rd	King Scallops

UK - Guernsey
1st	Edible Crab
2nd	Lobsters
3rd	Blonde Ray

UK - Isle of Man
1st	King Scallops
2nd	Queen Scallops
3rd	Edible Crab

UK - Jersey
1st	Whelks
2nd	Blonde Ray
3rd	Edible Crab

UK - N Ireland
1st	*Nephrops*
2nd	Mackerel
3rd	Herring

UK - Scotland
1st	Mackerel
2nd	*Nephrops*
3rd	Haddock

UK - Wales
1st	Whelks
2nd	Lobsters
3rd	King Scallops

UK - All
1st	Mackerel
2nd	*Nephrops*
3rd	King Scallops

Table 8 - Three most valuable species landed from the UK EEZ, split by key member state vessel nationality (avg. 2012-16)

Belgium
1st	Sole
2nd	Plaice
3rd	Monks

Denmark
1st	Herring
2nd	Mackerel
3rd	Sand Eels

France
1st	Saithe
2nd	Monks
3rd	Hake

Germany
1st	Herring
2nd	Mackerel
3rd	Blue Whiting

Ireland
1st	Mackerel
2nd	*Nephrops*
3rd	Herring

Netherlands
1st	Herring
2nd	Sole
3rd	Mackerel

Sweden
1st	Herring
2nd	Sand Eels
3rd	Mackerel

OMS - All
1st	Herring
2nd	Mackerel
3rd	Sole

In 2017, the most valuable ICES divisions in the UK EEZ to UK vessels were Area IVa (262,000 tonnes, £313 million), Area VIa (169,000 tonnes, £199 million) and Area VIIe (39,000 tonnes, £89 million). For OMS vessels, on average between 2012 and 2016, the most valuable divisions in the UK EEZ were Area IVa (273,000 tonnes, £138 million), Area VIa (161,000 tonnes, £102 million) and Area IVb (160,000 tonnes, £55 million).

3.3 Landings from the OMS EEZs

In 2017, UK vessels landed 94,000 tonnes (£88 million) from OMS EEZs, representing 13% of quantity and 9% of value landed from the NE Atlantic (FAO Area 27). Between 2012 and 2016 the UK fleet landed an average of 94,000 tonnes per annum valued at £106 million from OMS EEZs. This is 14% (13% by value) of the UKs annual landings in the NE Atlantic (avg. 2012-16). These landings were split between seven OMS' EEZs, on average the three most important OMS' EEZs for the UK by value were; Ireland (65,000 tonnes, £66 million), France (14,000 tonnes, £17 million) and Denmark (7,000 tonnes, £10 million). For comparison, the OMS fleet landed 1,220,000 tonnes per annum at an estimated landed value of £1.54 billion from the OMS EEZ (avg. 2012-16).

Table 9 - Three most valuable species landed from individual member state EEZs by the UK fleet (avg. 2012-16)

Belgium EEZ		Denmark EEZ		France EEZ		Germany EEZ	
1st	Sole	1st	Plaice	1st	King Scallops	1st	Plaice
2nd	Whelks	2nd	Sole	2nd	Monks	2nd	Edible Crab
3rd	Brill	3rd	Turbot	3rd	Mackerel	3rd	Sole

Ireland EEZ		Netherlands EEZ		Spain EEZ		OMS - All	
1st	Mackerel	1st	Plaice	1st	Tuna	1st	Mackerel
2nd	Monks	2nd	Sole	2nd	Monks	2nd	Plaice
3rd	Hake	3rd	Turbot	3rd	Pilchards	3rd	Monks

The top three most valuable species landed by UK vessels from OMS EEZs in 2017 were monks/anglers (4,000 tonnes, £12 million), plaice (8,000 tonnes, £12 million) and king scallops (4,000 tonnes, £10 million). For OMS vessels, the three most valuable species landed from OMS waters, on average between 2012 and 2016, were hake (72,000 tonnes, £163 million), sole (16,000 tonnes, £127 million) and *Nephrops* (16,000 tonnes, £101 million). The most important species type landed by UK vessels from OMS waters by tonnage was pelagic (60% of total). The most important by value was demersal which accounted for 51% of the total (avg. 2012-16). The most important species group landed by OMS vessels from OMS waters was pelagic in terms of tonnage (49% of total) and demersal in terms of value (53% of total, avg. 2012-16).

In 2017, the most valuable ICES divisions in OMS EEZs for UK vessels were Area IVb (14,000 tonnes, £22 million), Area VIId (7,000 tonnes, £13 million) and Area VIIj (5,000

tonnes, £12 million). For comparison, the most important areas for OMS vessels in OMS waters between 2012 and 2016 were Area VIIIa (85,000 tonnes, £204 million), Area IVb (278,000 tonnes, £192 million) and Area VIIj (101,000 tonnes, £132 million).

Figure 21 – Annual UK vessel landings from the OMS EEZs (showing uncertainty range)
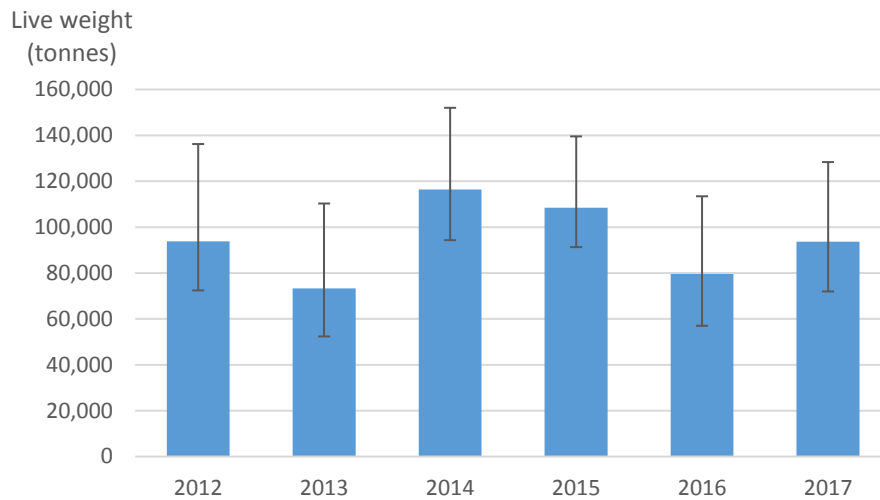
Figure 22 - Annual UK vessel landings value from the OMS EEZs (showing uncertainty range)
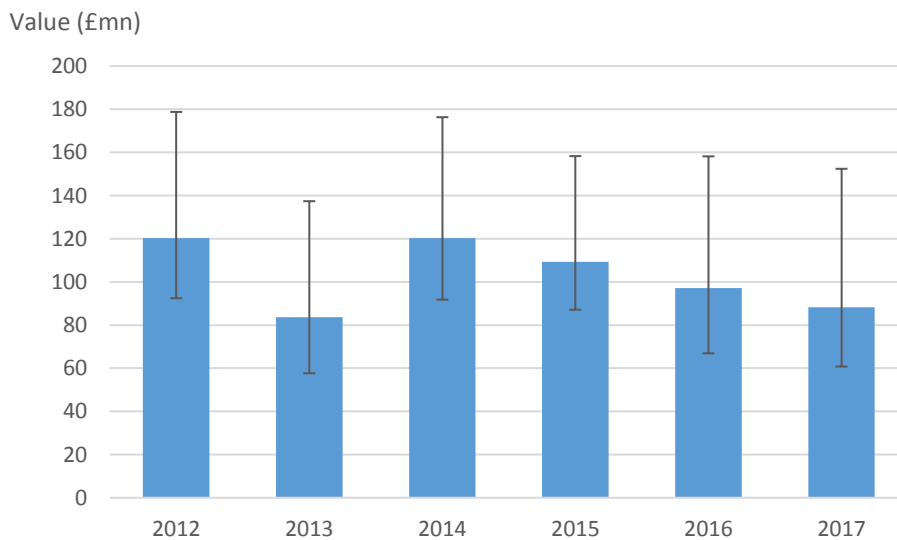
Figure 23 – Annual OMS vessel landings from the OMS EEZs (showing uncertainty range)
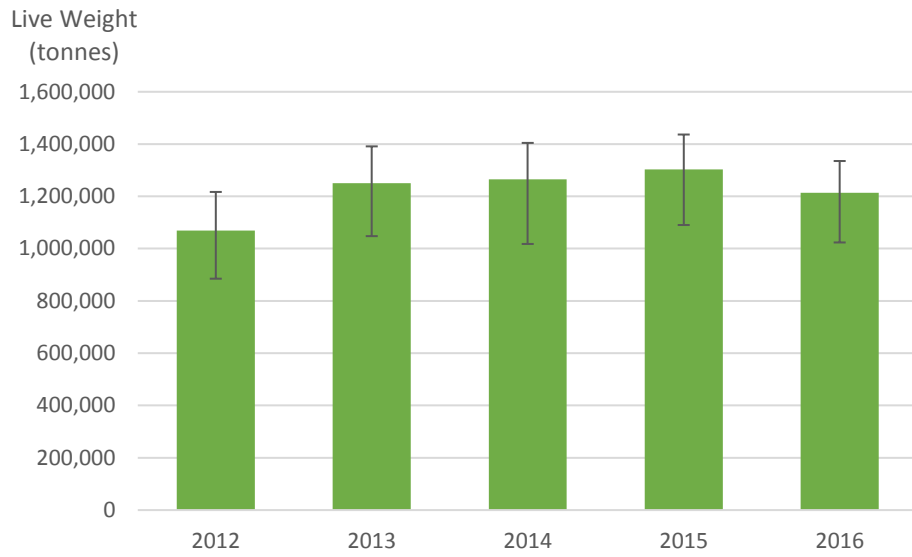
Figure 24 - Annual OMS vessel landings from the OMS EEZs (showing uncertainty range)
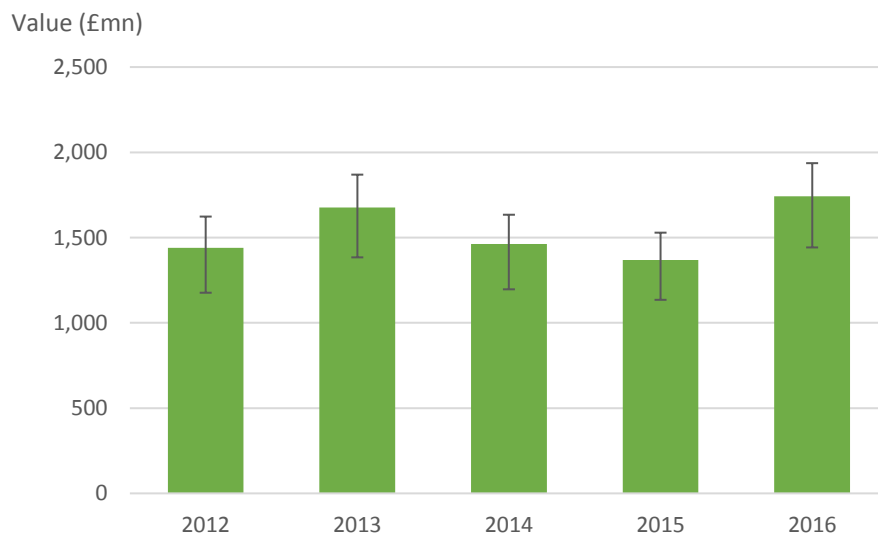
3.4 Landings of key quota stocks from the UK EEZ

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 most valuable quota species landed by UK and OMS from the UK's EEZ is mackerel. In this report all NE Atlantic mackerel quota stocks were combined due to complexity arising from mackerel stock areas and flexibilities between them. We estimate that 318,232 tonnes of mackerel, worth £226.8 million was landed from the UK's EEZ by UK and OMS vessels each year (average 2012-2016). This equates to approximately 71.9% of the total landings of mackerel by UK and OMS vessels in the North-East Atlantic were landings from the UK's EEZ.

Table 10 - Landings of selected shared quota stocks from UK waters

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*	46,921	38,696	34,914	42,910	163,440
	IIa (EC), IV	Lower estimate from UK EEZ	*nd*	26,578	23,134	16,950	17,376	84,038
		Spatial estimate from UK EEZ	*nd*	30,584	27,909	21,157	21,711	101,362
	(HAD/2AC4.)[1]	Upper estimate from UK EEZ	*nd*	30,643	27,974	21,234	21,800	101,651
	North Sea[2]	Total stock area landings	24,684	30,641	27,205	20,620	21,448	124,598
	IIa (EC), IV (EC)	Lower estimate from UK EEZ	20,436	25,863	21,599	15,958	16,691	100,547
		Spatial estimate from UK EEZ	23,499	29,870	26,375	20,165	21,026	120,933
	(HAD/2AC4.)[2]	Upper estimate from UK EEZ	23,546	29,928	26,440	20,242	21,114	121,270
Herring	North Sea 4ab[1]	Total stock area landings	*nd*	439,238	459,903	429,832	507,589	1,836,562
	IV (EC and Norway	Lower estimate from UK EEZ	*nd*	300,773	327,778	305,888	352,282	1,286,721
	North of 53° 30'N)	Spatial estimate from UK EEZ	*nd*	341,725	356,650	327,157	374,772	1,400,303
	(HER/4AB.)[1]	Upper estimate from UK EEZ	*nd*	348,697	365,298	341,275	383,868	1,439,138
	North Sea 4ab[2]	Total stock area landings	256,913	292,451	314,531	278,217	330,148	1,472,260
	IV (EC)	Lower estimate from UK EEZ	233,769	244,527	271,350	246,952	292,916	1,289,514
		Spatial estimate from UK EEZ	248,215	285,479	300,222	268,221	315,406	1,417,542
	(HER/4AB.)[2]	Upper estimate from UK EEZ	254,411	292,451	308,869	278,217	324,502	1,458,451
Nephrops	North Sea	Total stock area landings	13,378	10,711	13,677	9,298	13,244	60,307
	IIa (EC), IV (EC)	Lower estimate from UK EEZ	9,808	7,822	9,527	5,546	7,468	40,171
		Spatial estimate from UK EEZ	11,390	8,860	11,640	7,203	9,415	48,509
	(NEP/2AC4-C)	Upper estimate from UK EEZ	11,632	9,052	11,943	7,491	9,782	49,901
Saithe	North Sea[1]	Total stock area landings	*nd*	95,458	77,370	72,908	69,077	314,814
	IIa (EC), IV	Lower estimate from UK EEZ	*nd*	42,515	29,824	38,676	34,048	145,063
		Spatial estimate from UK EEZ	*nd*	46,712	33,085	41,502	37,650	158,949
	(POK/2A3A4)[1]	Upper estimate from UK EEZ	*nd*	47,811	33,781	41,857	38,572	162,020
	North Sea[2]	Total stock area landings	29,386	34,039	24,953	25,603	25,938	139,920
	IIa (EC), IV (EC)	Lower estimate from UK EEZ	23,313	25,482	18,058	20,423	19,907	107,183
		Spatial estimate from UK EEZ	25,598	29,679	21,319	23,249	23,509	123,355
	(POK/2A3A4)[2]	Upper estimate from UK EEZ	26,212	30,778	22,015	23,603	24,431	127,040
Sole	North Sea	Total stock area landings	10,994	13,005	12,355	11,167	12,297	59,818
	II, IV	Lower estimate from UK EEZ	1,803	2,309	2,126	1,724	1,729	9,692
		Spatial estimate from UK EEZ	3,562	4,429	4,130	3,368	3,340	18,829
	(SOL/24-C.)	Upper estimate from UK EEZ	7,386	9,252	8,980	7,524	7,614	40,757

[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	5,910	6,429	5,566	5,991	7,885	31,781
	Vb (EC), VI, XII, XIV	Lower estimate from UK EEZ	3,395	3,568	3,595	3,834	5,728	20,121
		Spatial estimate from UK EEZ	4,189	4,590	4,453	4,533	6,416	24,181
	(ANF/56-14)	Upper estimate from UK EEZ	4,539	4,982	4,775	4,837	6,713	25,846
Hake	West Coast	Total stock area landings	43,622	54,764	51,040	56,362	72,324	278,112
	Vb (EC), VI, VII, XII,	Lower estimate from UK EEZ	10,114	10,259	11,008	8,236	12,779	52,396
	XIV	Spatial estimate from UK EEZ	13,261	14,772	14,773	12,238	18,579	73,623
	(HKE/571214)	Upper estimate from UK EEZ	15,941	18,517	17,955	15,900	24,386	92,699
Horse Mackerel	West Coast	Total stock area landings	172,979	151,612	108,393	71,059	75,463	579,506
	IIa (EC), IVa, Vb (EC), VI, VII	Lower estimate from UK EEZ	18,161	25,439	20,143	19,811	17,410	100,964
	(ex VIId), VIIIabde, XII, XIV	Spatial estimate from UK EEZ	37,032	42,944	28,763	22,574	18,904	150,218
	(HER/5B6ANB)	Upper estimate from UK EEZ	50,934	52,494	34,980	25,176	26,220	189,805
Nephrops	West Coast	Total stock area landings	14,354	12,880	12,821	11,861	14,766	66,681
	Vb (EC), VI	Lower estimate from UK EEZ	14,157	12,789	12,608	11,662	14,546	65,762
		Spatial estimate from UK EEZ	14,332	12,872	12,807	11,842	14,728	66,582
	(NEP/5BC6.)	Upper estimate from UK EEZ	14,353	12,877	12,819	11,857	14,760	66,666
Saithe	West Coast	Total stock area landings	9,583	11,961	8,422	9,920	7,496	47,382
	Vb (EC), VI, XII, XIV	Lower estimate from UK EEZ	6,505	9,512	5,839	7,368	5,025	34,249
		Spatial estimate from UK EEZ	8,953	11,366	8,053	9,627	7,260	45,259
	(POK/56-14)	Upper estimate from UK EEZ	9,139	11,532	8,254	9,777	7,398	46,100

Area 7 Stocks (Includes Irish Sea, Celtic Sea and English Channel areas)

Species	Area		2012	2013	2014	2015	2016	Total
Anglerfish /	**Area 7**	**Total stock area landings**	**30,528**	**29,972**	**29,662**	**29,598**	**32,594**	**152,354**
Monkfish	*VII*	Lower estimate from UK EEZ	2,517	2,268	2,201	2,526	2,499	12,011
		Spatial estimate from UK EEZ	**9,641**	**8,544**	**7,720**	**8,199**	**8,757**	**42,861**
	(ANF/07.)	Upper estimate from UK EEZ	14,444	12,935	11,932	12,422	13,211	64,944
Megrims	**Area 7**	**Total stock area landings**	**19,748**	**17,269**	**16,210**	**15,771**	**17,616**	**86,614**
	VII	Lower estimate from UK EEZ	5,092	5,030	4,716	4,986	4,707	24,531
		Spatial estimate from UK EEZ	**10,596**	**9,501**	**9,527**	**9,218**	**9,597**	**48,439**
	(LEZ/07.)	Upper estimate from UK EEZ	15,745	13,490	13,497	13,118	13,418	69,268
Nephrops	**Area 7**	**Total stock area landings**	**19,748**	**17,269**	**16,210**	**15,771**	**17,616**	**86,614**
	VII	Lower estimate from UK EEZ	5,092	5,030	4,716	4,986	4,707	24,531
		Spatial estimate from UK EEZ	**10,596**	**9,501**	**9,527**	**9,218**	**9,597**	**48,439**
	(NEP/07.)	Upper estimate from UK EEZ	15,745	13,490	13,497	13,118	13,418	69,268
Sole	**Area 7**	**Total stock area landings**	**3,973**	**5,134**	**4,524**	**3,389**	**2,474**	**19,493**
	VIId	Lower estimate from UK EEZ	324	267	364	267	223	1,445
		Spatial estimate from UK EEZ	**1,519**	**1,740**	**1,957**	**1,451**	**1,087**	**7,755**
	(SOL/07D.)	Upper estimate from UK EEZ	2,595	3,197	3,144	2,286	1,629	12,850
Whiting	**Area 7**	**Total stock area landings**	**14,695**	**18,302**	**16,373**	**17,331**	**18,795**	**85,495**
	VII (ex VIIa)	Lower estimate from UK EEZ	1,556	2,434	1,658	1,942	2,400	9,990
		Spatial estimate from UK EEZ	**6,447**	**8,768**	**7,730**	**8,785**	**9,682**	**41,412**
	(WHG/7X7A-C)	Upper estimate from UK EEZ	9,139	12,565	11,116	11,914	13,054	57,788

Widely Distributed Stocks

Species	Area		2012	2013	2014	2015	2016	Total
Blue Whiting	**Northern**	**Total stock area landings**	**55,360**	**120,024**	**173,661**	**200,192**	**218,601**	**767,838**
	I,II,III,IV,V,VII,VIIIabde,	Lower estimate from UK EEZ	12,147	48,380	72,656	100,275	118,046	351,505
	XII,XIV (EC and Int)	**Spatial estimate from UK EEZ**	**15,206**	**48,664**	**80,748**	**103,050**	**127,547**	**375,215**
	(WHB/1X14)	Upper estimate from UK EEZ	19,970	48,787	81,068	108,344	129,860	388,029
Mackerel	**All North-East Atlantic**	**Total stock area landings**	**356,221**	**333,444**	**573,215**	**503,824**	**447,742**	**2,214,445**
	stock areas	Lower estimate from UK EEZ	222,746	228,107	351,185	298,580	335,567	1,436,185
		Spatial estimate from UK EEZ	**240,673**	**245,319**	**412,267**	**332,058**	**360,842**	**1,591,158**
	(MAC/-)	Upper estimate from UK EEZ	246,803	254,694	423,681	338,132	372,813	1,636,123

3.5 Landings from third country EEZs

In 2017, the UK fleet landed a total of 42,000 tonnes (valued at £65 million) from third country waters, representing 6% quantity and 7% value from the UK fleets landings from NE Atlantic waters.

This was above the 2012-16 average of 37,000 tonnes (£46 million) per annum which represented 5% of the UKs quantity and 6% of the value within the NE Atlantic. The majority of these landings originated from Norwegian mainland waters (70% by quantity and 66% by value) and Norwegian Svalbard waters (24% by quantity and 26% by value).

The top three most valuable species landed by UK vessels from third country EEZs in 2017 were cod (21,000 tonnes, £40 million), haddock (5,000 tonnes, £9 million) and hake (2,000 tonnes, £4 million). The majority of fish landed by the UK fleet in third country waters were demersal type species (76% by quantity and 88% by value, avg. 2012-16).

The three most valuable ICES divisions in third country EEZs for UK vessels in 2017 were Area IVa (13,000 tonnes, £19 million), Area I (6,000 tonnes, £9 million) and Area IIb (6,000 tonnes, £8 million).

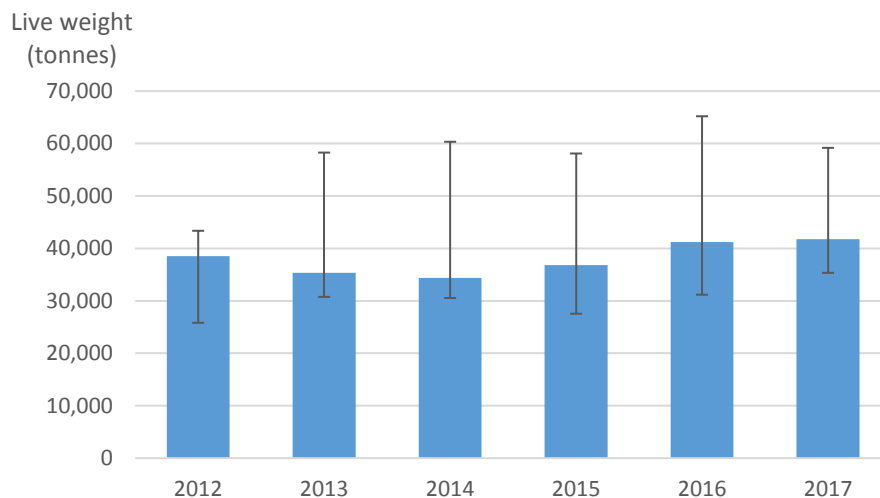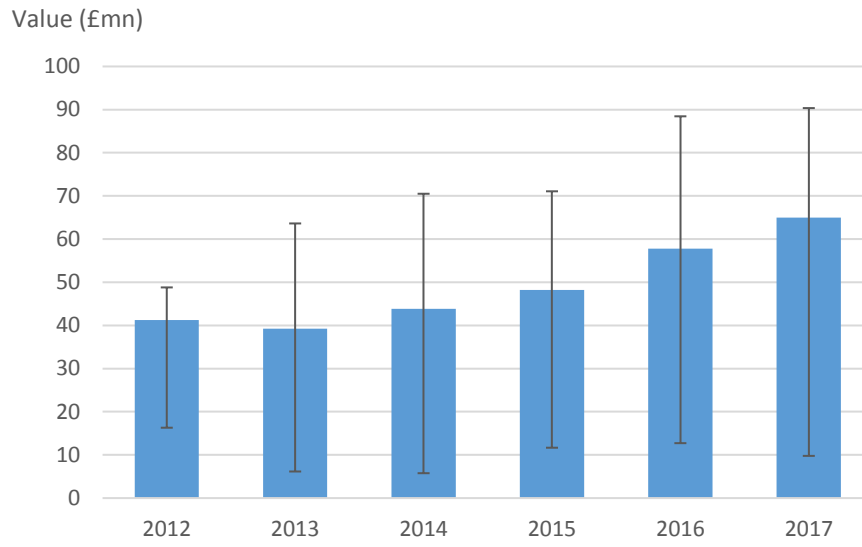### Figure 25 – Annual UK vessel landings from third country EEZs (showing uncertainty range)

Figure 26 - Annual UK vessel landings value from third country EEZs (showing uncertainty range)

3.6 Landings from international and distant waters

In 2017, the UK fleet landed a total of 3,000 tonnes (valued at £3 million) from NE Atlantic international waters, those under the jurisdiction of the North East Atlantic Fishing Commission. This was approximately three times higher than the 2012-16 average of 1,000 tonnes per annum valued at £0.8 million. On average NE Atlantic international waters represented 0.2% of the UKs landings by quantity and 0.1% by value.

The top three most valuable species landed by UK vessels from NE Atlantic international waters in 2017 were mackerel (2,000 tonnes, £1 million), haddock (628 tonnes, £1 million) and monks/anglers (47 tonnes, £0.2 million). Pelagic species are the most common species type landed by UK vessels in international waters (68% by quantity and 65% by value).

The majority (79% by quantity and 91% value) of the fish caught in NE Atlantic international waters were taken from Area VIb, IIa and X.

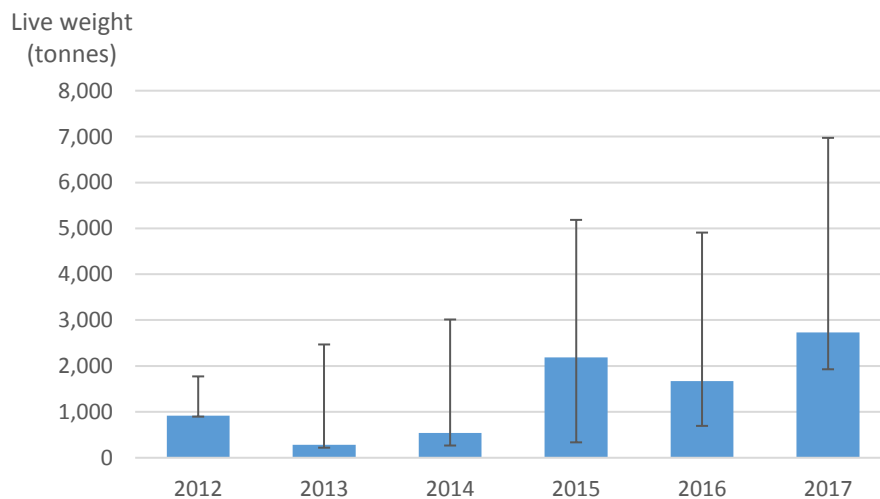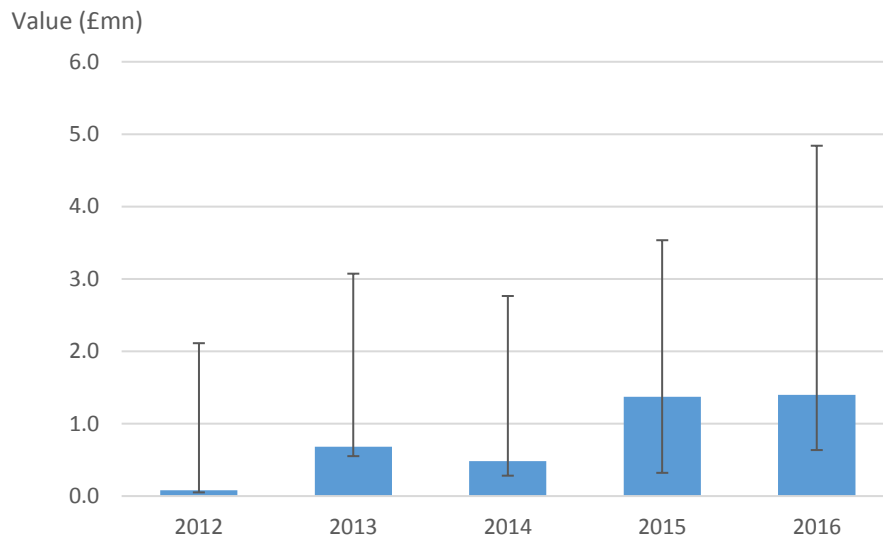**Figure 27 – Annual UK vessel landings from international waters (showing uncertainty range)**

Figure 28 - Annual UK vessel landings value from international waters (showing uncertainty range)

Value (£mn)

The focus of this report is on landings originating from North East Atlantic EEZs, however, it is worth noting the distant fleet landings present in the underlying UK data. On average (2012 – 2016), approximately 6,000 tonnes per annum of fish were landed from outside major fishing area 27. This equates to roughly 1% of the UK fleets total annual landings by weight. The top three FAO areas outside the NE Atlantic by live weight are Area 41 (SW Atlantic, 4,000 tonnes), Area 34 (E Central Atlantic, 900 tonnes) and Area 21 (NW Atlantic, 700 tonnes). The fleet were also active in Area 51 and 57 (Indian Ocean). Vessels from England, Scotland and Wales all fished outside area 27 between 2012 and 2016. Despite the home fleets of Scotland and England being much larger in terms of tonnage landed per annum, the Welsh fleets annual average live weight distant water landings accounted for 59% of the UK total. These Welsh fleet landings were exclusively from area 41 (SW Atlantic).

4. End user feedback

Your opinion matters

We would be very grateful if you could take a minute of your time to help us ensure this product meets your needs.

To leave feedback please go to:
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