Marine Management Organisation

Provisional Statistics

Landings of selected shared quota stocks from UK waters: 2012 – 2016

This release contains provisional estimates of landings of some commercial sea fishery 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's territorial waters and Exclusive Economic Zone (jointly abbreviated to the UK EEZ) for all nations between 2012 and 2016 are given, alongside the total quantity of fish landed across the entire stock areas by all nations. These estimates were created for use as internal management information. We are releasing them now to allow their inclusion in future fisheries policy related publications and to gauge public interest in these statistics. The figures contained are provisional and will be subject to revision as updated information is received and as further quality assurance is completed. Due to their provisional nature these statistics are presented as high level aggregates without further breakdown. The specific stocks presented here have been selected to cover a representative geographical range, covering species of interest to the UK fishing industry and UK consumers. This selection is not exhaustive. It is planned that these provisional data will be followed by a more detailed final form statistical release as an annex covering a wider range of quota stocks accompanying the UK Sea Fisheries Statistics 2017 annual publication in September 2018.

Table 1 – Landings (tonnes) of selected shared quota stocks (2012 – 2016)

Species	Area	TAC Code	Measure	2012	2013	2014	2015	2016	Total
Sole	Eastern Channel	SOL/07D	Total Landings All Waters	3,973	5,134	4,524	3,389	2,474	19,493
			Low Limit UK Waters	324	267	364	267	223	1,445
			Spatial Estimate UK Waters	1,519	1,740	1,957	1,451	1,087	7,755
			High Limit UK Waters	2,595	3,197	3,144	2,286	1,629	12,850
Cod	Celtic Sea	COD/7XAD34	Total Landings All Waters	8,429	6,099	4,131	4,361	3,474	26,495
			Low Limit UK Waters	1,593	981	595	706	618	4,492
			Spatial Estimate UK Waters	4,572	3,122	2,149	2,028	1,647	13,519
			High Limit UK Waters	6,025	4,045	2,819	2,740	2,182	17,811
Haddock	Celtic Sea	HAD/7X7A34	Total Landings All Waters	20,050	12,846	10,103	8,909	7,881	59,789
			Low Limit UK Waters	4,107	2,713	1,549	1,625	1,388	11,382
			Spatial Estimate UK Waters	10,711	6,655	5,330	4,290	3,766	30,752
			High Limit UK Waters	13,765	8,514	6,771	5,819	5,002	39,870
Whiting	Celtic Sea	WGH/7X7A-C	Total Landings All Waters	14,695	18,302	16,373	17,331	18,795	85,495
			Low Limit UK Waters	1,556	2,434	1,658	1,942	2,400	9,990
			Spatial Estimate UK Waters	6,447	8,768	7,730	8,785	9,682	41,412
			High Limit UK Waters	9,139	12,565	11,116	11,914	13,054	57,788

Species	Area	TAC Code	Measure	2012	2013	2014	2015	2016	Total
Haddock	Irish Sea	HAD/07A	Total Landings All Waters	354	245	510	769	996	2,874
			Low Limit UK Waters	67	61	41	96	96	361
			Spatial Estimate UK Waters	204	144	259	429	560	1,597
			High Limit UK Waters	336	239	491	762	988	2,816
Megrim	North West Scotland	LEZ/56-14	Total Landings All Waters	1,688	1,521	1,474	1,561	2,221	8,465
			Low Limit UK Waters	1,181	1,061	976	913	1,483	5,615
			Spatial Estimate UK Waters	1,306	1,158	1,108	1,075	1,669	6,316
			High Limit UK Waters	1,479	1,284	1,274	1,268	1,861	7,166
Saithe	North West Scotland	POK/56-14	Total Landings All Waters	9,583	11,961	8,422	9,920	7,496	47,382
			Low Limit UK Waters	6,505	9,512	5,839	7,368	5,025	34,249
			Spatial Estimate UK Waters	8,953	11,366	8,053	9,627	7,260	45,259
			High Limit UK Waters	9,139	11,532	8,254	9,777	7,398	46,100
Anglerfish	North Sea	ANF/2AC4-C	Total Landings All Waters	5,785	5,608	7,021	9,190	10,849	38,453
			Low Limit UK Waters	5,062	4,875	6,215	8,234	9,416	33,801
			Spatial Estimate UK Waters	5,469	5,267	6,589	8,803	10,199	36,326
			High Limit UK Waters	5,475	5,271	6,601	8,840	10,213	36,400
Saithe	North Sea	POK/2A3A4 [a,b]	Total Landings All Waters	nd	95,458	77,370	72,908	69,077	355,557
			Low Limit UK Waters	nd	42,515	29,824	38,676	34,048	168,376
			Spatial Estimate UK Waters	nd	46,712	33,085	41,502	37,650	184,548
			High Limit UK Waters	nd	47,811	33,781	41,857	38,572	188,232
Saithe	North Sea	POK/2A3A4 [c]	Total Landings All Waters	29,386	34,039	24,953	25,603	25,938	139,920
			Low Limit UK Waters	23,313	25,482	18,058	20,423	19,907	107,183
			Spatial Estimate UK Waters	25,598	29,679	21,319	23,249	23,509	123,355
			High Limit UK Waters	26,212	30,778	22,015	23,603	24,431	127,040
Sole	North Sea	SOL/24-C	Total Landings All Waters	10,994	13,005	12,355	11,167	12,297	59,818
			Low Limit UK Waters	1,803	2,309	2,126	1,724	1,729	9,692
			Spatial Estimate UK Waters	3,562	4,429	4,130	3,368	3,340	18,829
			High Limit UK Waters	7,386	9,252	8,980	7,524	7,614	40,757

[a] jointly managed EU-Norway North Sea stock, including Norwegian waters and vessels.
[b] no Norwegian data available for 2012.
[c] jointly managed EU-Norway North Sea stock, excluding Norwegian waters and vessels.

Data Sources and Methodology:

Three data sources were used to estimate these statistics; 1. UK landings data: Fishing vessel logbook data from UK administrative data systems[1], 2. Landings by non-UK EU Member States vessels: JRC Fisheries Dependent Information (FDI) dataset[2], 3. Landings by Norwegian vessels: Logbook data supplied by Norway when Norwegian vessels fish in EU waters. The quota stock TAC codes and definitions were taken from the EU's annual regulation fixing fishing opportunities corresponding to the year in question[3].

[1] See Appendix 4 (p141-148) UK Sea Fisheries Statistics 2016 for more information
[2] https://stecf.jrc.ec.europa.eu/dd/effort (data by Quarter-Rectangle)
[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016R0072 (2016 version)

Spatial Apportioning of Landings to EEZs

The majority of the landings data used in this analysis were reported at the ICES statistical rectangle spatial level. This is the lowest, broadly available unit of spatial reporting available for landings data in European waters. Alongside these rectangles were data on the species of fish being landed, the quantity landed and the nationality of the fishing vessels. All Norwegian and some UK logbook data showed the nationality of the waters from which the fish were taken.

As the FDI, and some UK logbook, data were reported to the ICES statistical rectangle level and did not specify the EEZ of capture, a spatial apportioning method was used to allocate these landings to the UK EEZ in rectangles jointly spanning the UK and other EEZs. To spatially apportion landings the total quantity of fish landed from a given rectangle was multiplied by the fraction of the sea surface area of the rectangle falling within the UK EEZ. For example if a rectangle was 50% in the UK EEZ and 50% in other nations' EEZs then 50% of the quantity landed from that rectangle would be apportioned to the UK EEZ. More detail on this method can be found in the MMO's UK Landings by EEZ 2012 - 2016 publication[4].

The quantity of landings originating in the UK EEZ estimates (table 1) have been set out alongside their extreme limits. These limits are not confidence ranges, instead they represent the maximum and minimum value possible based on reported landings by rectangle. They are intended only to give a sense of the precision of the spatial estimate, by showing its extreme bounds. The low limit assumes that only fish landed from rectangles 100% inside the UK EEZ were caught in the UK EEZ. This limit is almost certainly too low as it will discount all fish from rectangles less than 100% inside the UK EEZ even if the rectangle is almost entirely inside the UK EEZ. The high limit assumes that all fish landed from rectangles even only slightly inside the UK EEZ were caught in the UK EEZ. This limit is almost certainly too high as it will apportion to the UK EEZ all landings from rectangles that are almost entirely outside the UK EEZ. As such the spatial estimate is considered to be the most reliable estimate as it is linked to the sea surface area (i.e. the area within which fishing can occur); the limits simply show the absolute range over which the true value could lie.

Assigning Landings to Quota Stocks

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. For the aggregated FDI 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, that 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, with such attribution affecting <0.00001% of the total quantity of fish attributed to quota stocks in and around UK waters.

When allocating the FDI data to quota stocks there is the potential 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 dataset at quota stock level) was +2.6% per stock. Where a stock had an observed difference of outside ±5% we investigated

4 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/647579/United_Kingdom_commercial_sea_fisheries_landings_by_Exclusive_Economic_Zone_of_capture_2012___2016.pdf

further. In all cases the difference could be explained by differences in reported landings between the FDI dataset 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 datasets do not precisely match. A likely explanation is that FIDES data are submitted much earlier and may therefore have slightly more limited coverage, due to logbook processing times, than the later FDI dataset.

No data were available for total uptake of quotas by Norwegian vessels because we only had access to that fraction of Norwegian landings that originated from EU waters. So we had to make an assumption about Norwegian vessels' 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. Only one jointly managed stock is presented here (North Sea Saithe), and the estimates are presented with and without Norwegian waters and vessels.

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