



NUI Galway
OÉ Gaillimh



The Socio-Economic Marine Research Unit (SEMURU)
National University of Ireland, Galway

Research Note

**Assessment of the effects of Brexit on Irish and EU
fisheries in the NE Atlantic**

Daniel Norton and Stephen Hynes



Whitaker
Institute

Assessment of the effects of Brexit on Irish and EU fisheries in the NE Atlantic

Daniel Norton and Stephen Hynes,

Socio-Economic Marine Research Unit, Whitaker Institute NUI Galway

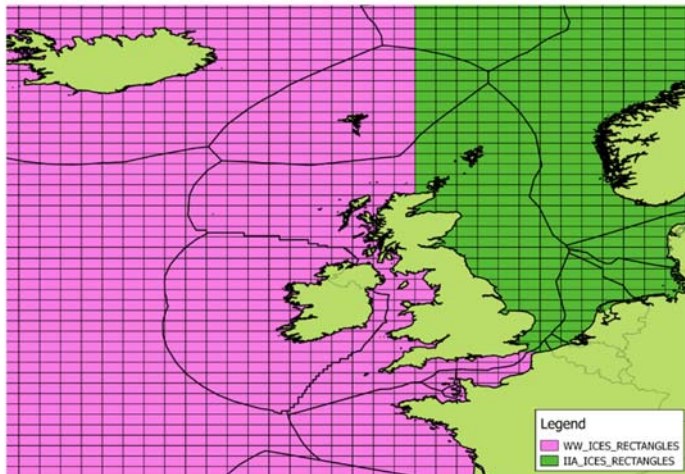
The UK will vote in June of this year on whether they should continue as members of the European Union (EU). If the UK votes in favour of leaving the EU there could be dramatic changes in the use of EU waters for capture fisheries. This short note examines the EU member states currently fishing in British waters, what the Irish fleet are landing from those waters and what might happen if Britain took control of those waters following Brexit.

The main data source for this analysis is the data used by the Scientific, Technical and Economic Committee for Fisheries, (STECF) which is the advisory body for the EU Commission on fisheries management [available at <https://datacollection.jrc.ec.europa.eu/dd/effort>]. There are a number of STECF datasets based on EU Council Regulations which cover the north east Atlantic area but only two will be used here.

The data covers landings by EU member states (MSs) and is spatially available at the spatial scale of ICES statistical rectangles (0.5° latitude by 1.0° longitude). As there is spatial overlap between datasets and they cannot be aggregated together, it was decided to follow the approach taken by Gerristan and Lordan (2014) and use one dataset in each of the different spatial areas.

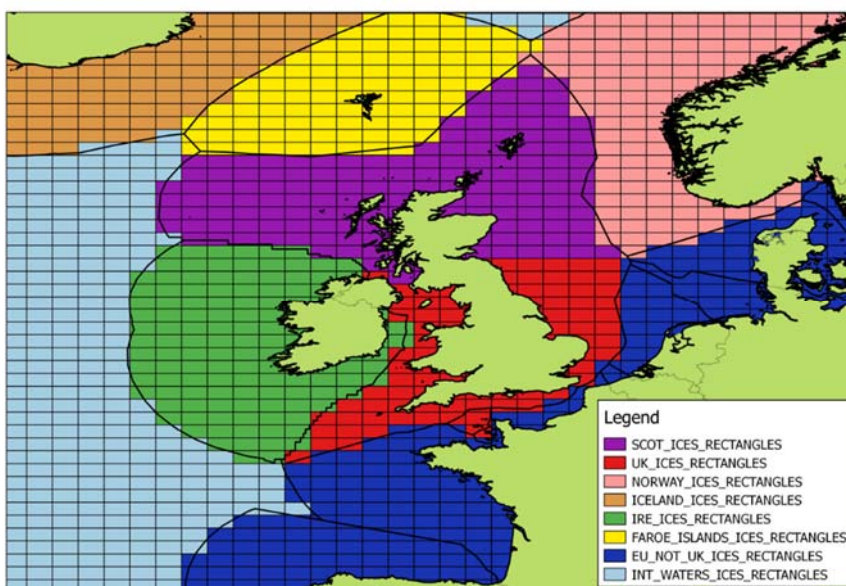
The two datasets used are the *Annex IIA* dataset which was employed to estimate catches within the North Sea Region [ICES AREA IV] and *Western Waters* dataset which was employed to estimate the catches to the west of the UK. It also included the Celtic Sea, Irish Sea and English Channel. In addition the Western Waters dataset was stripped of the BSA data to avoid double counting. Figure 1 shows the areas covered by both datasets. The statistical package R was used to combine the datasets and for all analysis except production of maps which was done using QGIS.

Figure 1. STECF Geographical Coverage



The Exclusive Economic Zones (EEZ) were based on those supplied by Marine Regions which is managed by the Flanders Marine Institute [<http://www.marineregions.org>] in a GIS format. QGIS was used to allocate the ICES statistical rectangles to the relevant EEZ except for the hypothetical Scottish EEZ which was done by the author. Figure 2 shows an outline of the ICES statistical rectangles. Note that ICES statistical rectangles are not perfectly aligned with the boundary of the EEZs. The results should be therefore be interpreted as estimates rather than actual catches within EEZs.

Figure 2. EU Exclusive Economic Zones



The STECF datasets used covered the years 2013 and 2014 and were checked against the ICES datasets for ICES areas IV, VII and VIId and only minor differences were found. Two years of data was analysed as there can be big differences between years especially for pelagic fisheries. A big change between 2013 and 2014 was an increase in quota and catch for mackerel.

Results

Table 1 shows the breakdown of landings in tonnes by EU nations within UK EEZ waters. Note that this is EU nations only and other non-EU states also have landings in these waters¹. The total landings by Ireland within the combined dataset for NE Atlantic is estimated at 273,398 tonnes in 2014 and 251,765 tonnes in 2013. Therefore the percentage of Irish landings within the UK EEZ that could be affected by is estimated at 34% for 2014 and 28.9 % for 2013.

Table 1. Landings by EU member states within the UK EEZ in tonnes

Country	2014	2014%	2013	2013%
Belgium	11,141	0.9%	10,794	0.9%
Denmark	240,261	18.9%	280,115	24.3%
England and Wales	141,547	11.1%	91,070	7.9%
Spain	5,681	0.4%	5,499	0.5%
France	101,034	8.0%	93,160	8.1%
Guernsey	340	0.0%	282	0.0%
Jersey	1,029	0.1%	2	0.0%
Germany	66,670	5.3%	79,422	6.9%
Isle of Man	4,378	0.3%	2,187	0.2%
Republic of Ireland	93,320	7.4%	72,714	6.3%
Netherlands	147,406	11.6%	127,747	11.1%
Northern Ireland	49,385	3.9%	37,611	3.3%
Scotland	388,448	30.6%	319,299	27.7%
Sweden	18,900	1.5%	32,903	2.9%
UK (total)	585,127	46.1%	450,450	39.1%
Total	1,269,540		1,152,805	
Non UK MS Total	684,413	53.9%	702,355	60.9%

Table 2 gives a more detailed decomposition of the Irish catch in the UK EEZ. The table represents the top 14 species which account for 99% of Irish landings in the UK EEZ. In

¹ The interested reader should consult the ICES catch data for a coarser breakdown by ICES areas within the UK EEZ [available at <http://www.ices.dk/marine-data/dataset-collections/Pages/Fish-catch-and-stock-assessment.aspx>].

addition, it also shows the value of the Irish catch in UK EEZ. Except for King Scallop and Whelk Prices, all fish prices for 2014 were taken from the 2015 Stock Book [available at <http://oar.marine.ie/handle/10793/1047>] and for 2013 from the 2014 Stock Book [available at <http://oar.marine.ie/handle/10793/1121>]. The prices for the King Scallop and Whelk were the same for both years and were taken from the Shellfish Stocks and Fisheries Review 2014 [available at <http://oar.marine.ie/handle/10793/1063>].

It is noteworthy that in 2014 the UK landings in other EU member states EEZs (including Ireland) was 114,997 tonnes out of 1,363,243 tonnes of total landings within the EU MSs in the NE Atlantic region covered by this dataset. This represents 8.4% of landings in the other EU MSs in the NE Atlantic. In the Irish EEZ, UK landings were 83,694 tonnes out of total landings in the Irish EEZ of 403,668 tonnes. This represented 73% of UK landings in other EU MSs EEZs.

Similarly in 2013 UK landings in other EU MSs EEZs was 69,165 tonnes out of 1,363,243 representing 5.1%. Of landings within the Irish EEZ of 404,080 tonnes, the UK had landings of 42,530 tonnes.

Table 2. Decomposition of the Irish catch in the UK EEZ

		2014				2013			
Name	FAO CODE	Landings (tonnes)	%	Estimated 2014 Prices	Estimated 2014 Value	Landings (tonnes)	%	2013 Prices	Estimated 2014 Value
Mackerel	MAC	66,076	70.8%	€740	€48,896,048	37,320	51.3%	€25	€30,788,802
Boarfish	BOR	8,092	8.7%	€122	€987,224	11,001	15.1%	€36	€1,496,163
Horse Mackerel	JAX	8,075	8.7%	€635	€5,127,625	13,924	19.1%	€17	€8,591,151
Nephrops	NEP	3,449	3.7%	€442	€1,521,582	2,869	3.9%	€491	€4,175,334
Herring	HER	2,722	2.9%	€301	€819,388	3,221	4.4%	€99	€1,285,207
King Scallop	SCE	1,140	1.2%	€900	€1,026,000	982	1.4%	€900	€883,800
Megrim	LEZ	605	0.6%	€3,011	€1,822,137	543	0.7%	€2,786	€1,513,439
Monkfish	ANF	467	0.5%	€3,255	€1,521,582	445	0.6%	€3,331	€1,481,429
Haddock	HAD	450	0.5%	€1,657	€745,816	377	0.5%	€1,436	€541,803
Whiting	WHG	385	0.4%	€1,138	€438,130	63	0.1%	€1,125	€70,583
Blue whiting	WHB	330	0.4%	€487	€160,710	671	0.9%	€740	€496,170
Cod	COD	243	0.3%	€2,420	€587,794	188	0.3%	€2,234	€419,903
Whelk	WHE	198	0.2%	€1,200	€237,660	179	0.2%	€1,200	€214,464
Hake	HKE	168	0.2%	€2,419	€405,932	84	0.1%	€1,435	€120,554
Other		920	1.0%			848	1.2%		
Total		93,320			€87,245,636	72,714			€66,991,279

Examining the UK landings in the Irish EEZ alone in Table 3 shows that they are slightly less valuable than Irish landings in 2014 (based on Irish stock book prices).

Table 3. UK landings in the Irish EEZ

UK fleet	Species	Landings (tonnes)	%	Price per tonne (2014)	Estimated Value (2014)
Scottish	Mackerel	33,092	39.5%	€740	€24,488,207
Scottish	Blue whiting	22,314	26.7%	€487	€10,867,141
English and Welsh	Mackerel	7,710	9.2%	€740	€5,705,040
NIR	Mackerel	3,269	3.9%	€740	€2,418,907
English and Welsh	Horse Mackerel	2,849	3.4%	€635	€1,808,874
English and Welsh	Monkfish	2,108	2.5%	€3,255	€6,860,797
Northern Irish	Blue whiting	1,943	2.3%	€487	€946,035
English and Welsh	Hake	1,658	2.0%	€2,419	€4,010,231
English and Welsh	Megrim	1,478	1.8%	€3,011	€4,450,930
Scottish	Hake	1,248	1.5%	€2,419	€3,020,043
Northern Irish	Edible Crab	1,203	1.4%	€1,490	€1,792,568
Scottish	Monkfish	968	1.2%	€3,255	€3,149,751
Northern Irish	Green Crab	364	0.4%	€620	€225,539
Northern Irish	Haddock	293	0.4%	€1,657	€486,206
Northern Irish	Whiting	280	0.3%	€1,138	€318,376
Northern Irish	Whelk	273	0.3%	€1,200	€327,965
Scottish	Ling	222	0.3%	€1,223	€271,730
Northern Irish	Nephrops	209	0.2%	€5,442	€1,137,596
Scottish	Megrim	175	0.2%	€3,011	€527,120
Scottish	Nephrops	158	0.2%	€5,442	€859,899
	Other	1,880	2.2%		
Total		83,694	100.0 %		€73,672,955

Implications

The impact that Brexit might have on Irish fishing will depend on a range of factors but particularly on the arrangements agreed between the EU and Britain following exit in

terms of fishing rights in EU waters. In a worst case scenario where the UK exclude all non-UK vessels from their EEZ, Ireland would lose out on €87 million worth of landings (93,320 tonnes) from UK waters, based on 2014 catch data. Furthermore, even if the UK were in turn excluded from the rest of the EU waters, their quota may be redistributed across the remaining EU fleet. In 2013 Ireland had a 5% share in total landings across the EU fleet (European Commission, 2016); if that proportion was maintained in terms of redistribution of the 114,997 tonnes of fish landed by the British fleet outside its own waters post- exclusion, it would mean an approximate 5,750 tonnes increase for Ireland which is only a fraction of the loss to the Irish fleet from exclusion from UK waters².

It is also worth pointing to other research being conducted by Teagasc (Donnellan and Hanrahan, 2016) where they estimate the impact of Brexit on the food sector. Even in the smallest impact scenario they estimate an annual 1.4% loss in Irish food exports. This would have an adverse impact on prices right across Irish fisheries, aquaculture and seafood processing. The authors note that there is likely to be a higher degree of risk associated with Brexit for those Irish food businesses with a substantial dependence on the UK market. This is an important consideration for the Irish seafood market where the UK is our second biggest export destination after France.

Should the UK ultimately choose to leave the EU there will be a much greater need for a detailed sectoral analysis of the implications for the Irish fishing industry based on more accurate post-Brexit trade and fisheries policy arrangements.

References

Donnellan and Hanrahan (2016). Brexit: Possible Implications for the the Irish Agri-Food Sector Agricultural Economics Society of Ireland Seminar, Department of Agriculture, Food and the Marine, Celbridge, Kildare. April 13th.

² This is a very simplified assumption in relation to the Irish share of the redistributed UK catch; this would more likely be done on an allocation key which is stock specific. The analysis above also assumes that following Brexit that the UK alone would attempt to take the entire volume of highly migratory pelagics previously taken by the combined EU in its waters prior to Brexit. It should be noted however that the fishing rights for the highly migratory species are not zonally attached in this way and that this would be an unlikely outcome. None the less because it is a possibility we have presented it here as a worst case scenario.

European Commission (2016). Facts and figures on the Common Fisheries Policy.
Luxembourg: EU Publications Office

