Research and Information Service Briefing Paper

Paper 71/16 | 8th September 2016 | NIAR 346-16

Mark Allen and Dr Dan Hull

Northern Ireland's fisheries sectors – background and possible 'Brexit' considerations

1 Context

This briefing paper provides contextual information on the sea and inland fisheries sectors within Northern Ireland, as well as exploring potential considerations for the sectors following on from the UK referendum decision to leave the European Union on 23rd June. The paper was commissioned by the Agriculture, Environment and Rural Affairs Committee after the referendum result, and the terms of reference asked for an assessment of the possible implications that 'Brexit' may have on the local fishing sector. It should be stated that the full ramifications of this decision will not be known until such time as the UK has formally negotiated the terms of its exit from the EU, and as such some or all of the information in this paper will undoubtedly be subject to change.

It should be noted that the paper does not deal with either salt or freshwater aquaculture but does recognise that, whilst relatively small at present (78 current aquaculture licences within Northern Ireland[1]), this sector could well be affected by

[1] Information provided by DAERA

'Brexit'. The decision to focus on the sea and inland fisheries wild catching sectors is largely due to the greater scale of their current economic contribution to the local economy.

2 Key features of the sea and inland fisheries sectors

2.1 Sea fisheries sector in Northern Ireland

The sea fishing sector in Northern Ireland, in terms of catching, employs 859 people in Northern Ireland, 708 of whom are full time and 151 part time[2].

In terms of ports, the boats which constitute the sea fishing industry in Northern Ireland are mainly located in the three County Down fishing villages of Portavogie, Kilkeel and Ardglass. Based on 2015 figures, Ardglass and Kilkeel are within the UK's top 20 ports in terms of the tonnage of fish landed by UK vessels. Table 3, below, highlights the catch landed in each port in 2012-2015 as well as the approximate value of these catches in millions of pounds.

	2012[3] Quantity (tonnes)	2012[4] Value (£ millions)	2013[5] Quantity (tonnes)	2013[6] Value (£ millions)	2014[7] Quantity (tonnes)	2014[8] Value (£ millions)	2015[9] Quantity (tonnes)	2015[10] Value (£ millions)
Ardglass	6,800	7.8	7,800	6.9	6,900	6.3	4,300	5.6
Kilkeel	5,300	9.1	5,200	7.7	4,500	8.2	5,300	8.7
Portavogie	3,700	7.2	3,400	5.6	3,200	6.5	3,400	6.5
Total	15,800	24.1	16,400	20.2	14,600	21	13,000	20.8

Table 1: Total quantity and value of landings in Northern Ireland's three major fishing ports 2012-14

In terms of the actual types of fish that make up these landings in Northern Irish ports table 4 below provides a breakdown for the 2015 data.

	Demersal tonnes	Demersal £	Pelagic tonnes	Pelagic £	Shellfish tonnes	Shellfish £
Ardglass	200	100,000	1,700	600,000	2,400	4,900,000
Kilkeel	900	1,000,000	-	-	4,400	7,700,000
Portavogie	400	300,000	-	-	3,100	6,200,000
Total	1,500	1,400,000	1,700	600,000	9,900	18,800,000

Table 2: Breakdown and value of fish landings in Northern Ireland's three major fishing ports in 2015[11]

[2] Northern Ireland Agri-Food Sector, Key Statistics, June 2016, table 17 page 14
[3] UK Sea Fisheries Statistics 2012 , Marine Management Organisation, table 1.1, page 6
[4] ibid
[5] UK Sea Fisheries Statistics 2013 , Marine Management Organisation, table 1.1, page 6
[6] ibid
[7] UK Sea Fisheries Statistics 2014 , Marine Management Organisation, table 1.1, page 6
[8] ibid
[9] UK Sea Fisheries Statistics 2015 , Marine Management Organisation, table 1.1, page 6
[10] ibid
[11] ibid

The total value of fish landed in Northern Ireland's three primary fishing ports in 2015 amounted to £20.8 million.

The EU's Common Fisheries Policy is the main policy mechanism impacting upon the sea fishing industry within Northern Ireland, past, present and future.

In terms of how the Common Fisheries Policy actually impacts on the sea fishing industry the most obvious and well known example is the creation and maintenance of the quota system for catches. Under this system, EU Member States are allocated a quota for the amount and type of fish they can catch based upon their existing fisheries. In an effort to ensure that there is no overfishing the CFP operates a mechanism to calculate the maximum amount of fish that can be removed from any fishery called the Total Allowable Catch (TAC). These TACs are traditionally agreed by EU Fisheries Ministers every December.

It should also be stated that TACs are allocated to areas as defined by the International Council for the Exploration of the Sea (ICES). Figure 1 below highlights the North East Atlantic region and the divisions within it.

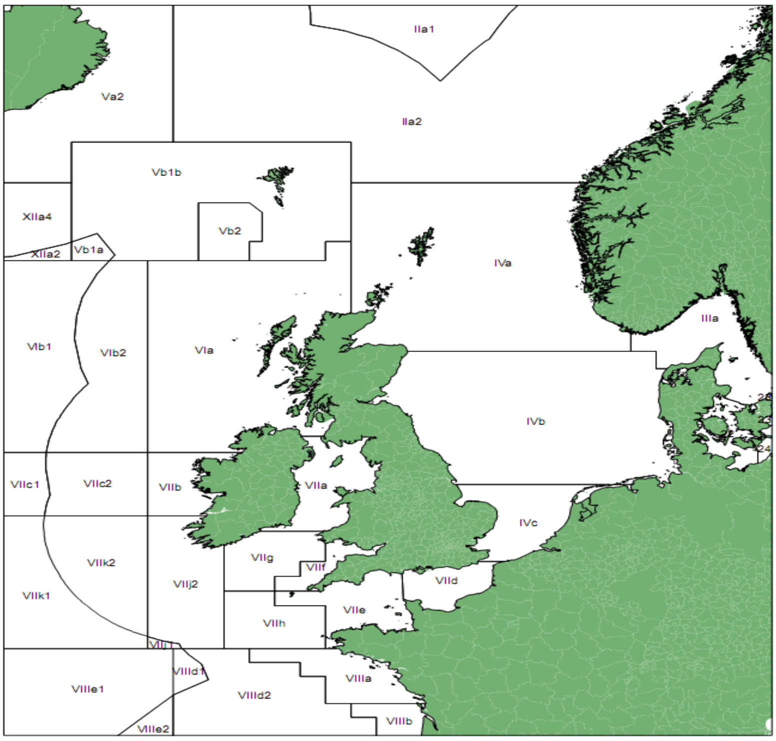

Figure 1: ICES area map North East Atlantic[12]

Whilst boats from Northern Ireland can, and do fish throughout these areas and further afield, providing they have quota to do so, the greatest concentration of current effort is

[12] UK Sea Fisheries Statistics 2014,UK Marine Management Organisation, Appendix 3

on fisheries within ICES Area VIIa which covers the Irish Sea, with a particular focus on the catching of nephrops/prawns.

With specific regards to prawns, which are the main catch of the Northern Irish fleet, ICES Area VII is further split into 8 so called Functional Units, as set out in figure 2, and a number of these are fished for prawns by local boats on a rotational basis.

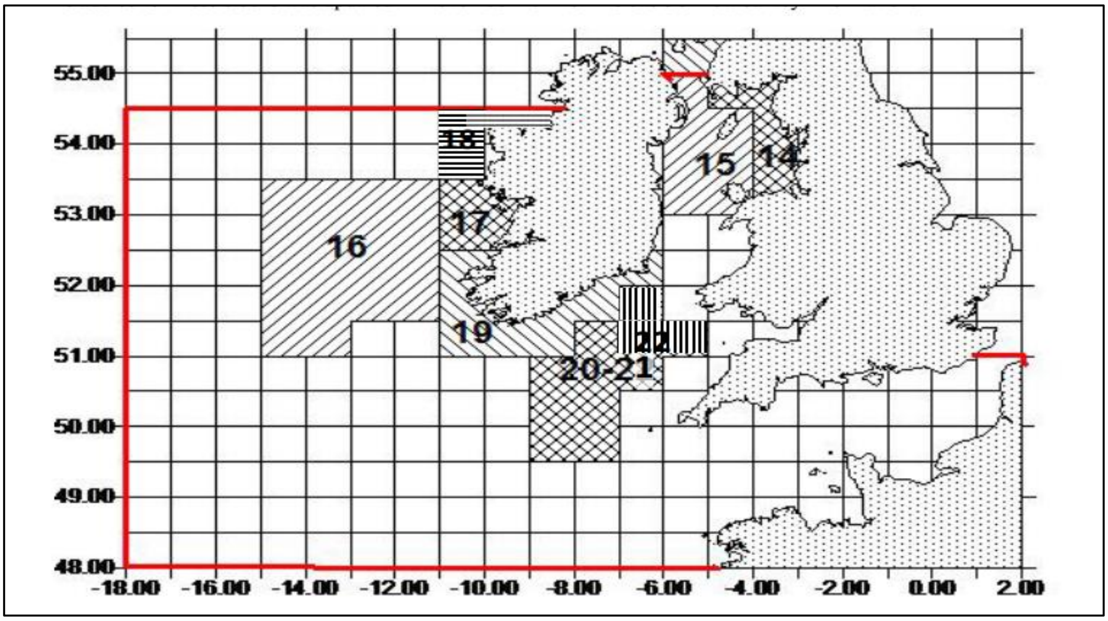

Figure 2: Functional Units within ICES Area VII[13]

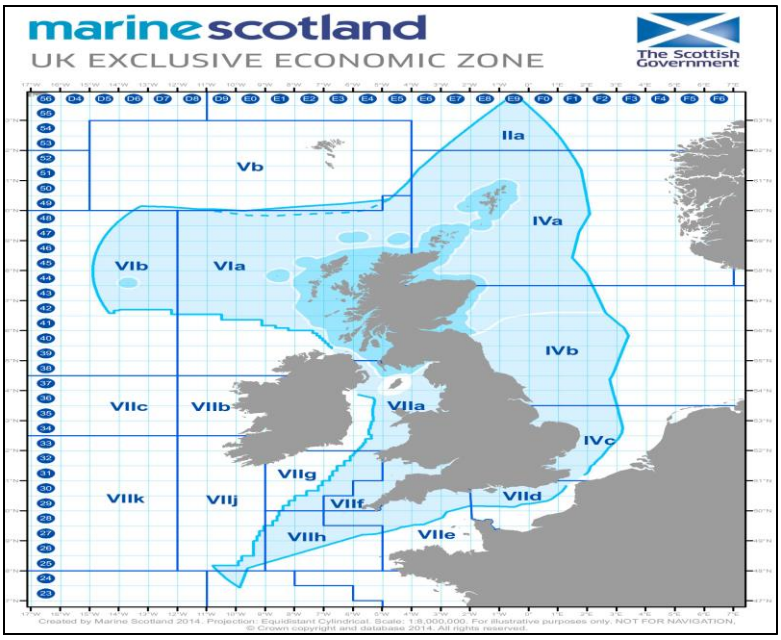

Figure 3: UK Exclusive Economic Zone[14] (all sea shaded blue) and how it relates to ICES areas

For the purpose of information, figure 3 highlights the limits (all of the blue shaded areas) of the UK's Exclusive Economic Zone (EEZ) and how these relate to the

[13] http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2012/2012/Nep-VII.pdf
[14] http://naturalhistory.museumwales.ac.uk/britishbivalves/Studyarea.php

aforementioned ICES areas. At a basic level it is clear from the data in figures 3 that the UK EEZ only covers parts of ICES Area VII.

The biological status of key fish stocks within ICES Area VIIa in 2015 is set out in table 3 below in data derived from the European Commission. The assessment of the state of the stocks utilises a traffic light approach with green indicating a healthy long term stock, amber representing overfishing but inside safe biological limits, and red indicating that stock is outside safe biological limits.

Species	2015 scientific assessment
Herring	Stocks are exploited at a rate that is consistent with producing the highest catch from the stock in the long term.
Cod	The stock is outside safe biological limits while not under a long-term plan, or is subject to a scientific advice that there should be no fishing.
Haddock	The state of the stock is unknown with respect to either or both safe biological limits or to producing the highest catch in the long term.
Whiting	The stock is outside safe biological limits while not under a long-term plan, or is subject to a scientific advice that there should be no fishing.
Nephrops (all of Area VII)	The stock is overfished compared to producing the highest yield in the long term, but is inside safe biological limits or is being managed under a long-term plan which has been approved by scientific advice.
Plaice	The state of the stock is unknown with respect to either or both safe biological limits or to producing the highest catch in the long term.
Common Sole	The stock is outside safe biological limits while not under a long-term plan, or is subject to a scientific advice that there should be no fishing.
Pollack (all of Area VII)	The state of the stock is unknown with respect to either or both safe biological limits or to producing the highest catch in the long term.
Mackerel(all do Area VII)	The stock is overfished compared to producing the highest yield in the long term, but is inside safe biological limits or is being managed under a long-term plan which has been approved by scientific advice.

Table 3: EU scientific assessment of particular fish stocks within ICES Area VII/VIIa 2015[15]

The data in table 3 reveals that of the nine species highlighted, only one (Herring) was being fished sustainably, two were being overfished but within safe biological limits (Nephrops and Mackerel), whilst four species were being exploited at an unsustainable level (Cod, Whiting, Common Sole, and Mackerel). The state of three other stocks was unknown (Haddock, Plaice and Pollack).

Within Area VIIa, the 2015 TACs agreed for key species for the Northern Ireland fleet by the Fisheries Council Ministers on 15th-16th December 2014 are set out in table 2, below. Whilst the 2015 TAC for nephrops saw an increase in 2015 the TACs for all species listed in table 2 either saw reductions or stayed the same as the 2014 level.

[15] http://ec.europa.eu/fisheries/documentation/publications/poster_tac2015_en.pdf

Species	Final TAC 2014 (tonnes)[16]	Final TAC 2015 (tonnes)[17]	Percentage change 2014/15
Herring	5,251	4,854	-8%
Cod	228	182	-20%
Haddock	1,181	1,181	-
Whiting	80	80	-
Nephrops (all of Area VII)	20,989	21,619	3%
Plaice	1,220	1,089	-
Common Sole	95	90	-5%
Pollack (all of Area VII)	13,495	13,495	-

Table 4: ICES Area VIIa (Irish Sea) agreed TACs for selected species in 2014-15 and percentage change

These TACs are then further allocated to the countries that fish these waters. Within the UK this allocation is made to the Fish Producers Organisations (FPOs) whose members have a record of fishing the waters and who manage the actual allocation and uptake of quota to individual vessels within their membership.

Species	UK	Ireland	France	Spain	Belgium	Netherlands
Nephrops (all of Area VII)	7,092	7,973	5,257	1,297	-	-
Haddock	566	511	85	-	19	-
Plaice	281	768	12	-	28	9
Pollack (all of Area VII)	2,353	1,030	9,667	25	420	-
Herring	3,590	1,264	-	-	-	-
Cod	52	120	7	-	2	1
Sole	23	38	-	-	22	7

Table 5: National quota allocations in tonnes based on ICES Area VIIa TAC for 2015 – selected species and nations

Analysis

Looking at the data in table 3 it is clear that there are concerns around the biological status of a number of fish stocks utilised by local fishermen based on EU scientific assessment. In particular, the assessment that the nephrops stock, which is key to the survival of the local industry, whilst within safe biological limits is being overfished should be a cause for concern.

In relation to TACs, looking at the data in table 4 it is obvious why the local fishing industry is largely focussed on the catching of nephrops, due to the size of the TAC

[16] http://ec.europa.eu/fisheries/documentation/publications/poster_tac2014_en.pdf
[17] http://ec.europa.eu/fisheries/documentation/publications/poster_tac2015_en.pdf

compared to other species, although as noted in table 3 there could be potential risks from an over-reliance on this species in the long term.

It is clear from the figures presented in tables 1 and 2 that shellfish make up the most significant part of the overall catch landed at Northern Ireland's three ports (average value of £1,899 per tonne) in 2015. Pelagic fish (which incorporate species such as mackerel and herring) (average value of £353 per tonne in 2015) make up the next largest tonnage landed at Northern Ireland ports followed by the lower tonnage but more expensive Demersal fish (which incorporate species including cod and plaice) (average value of £933 per tonne in 2015).

Taking stock of all this information relating to the sea fishing sector in Northern Ireland and within the context of the EU referendum vote a number of broad conclusions could be made as follows:

- In Northern Ireland terms the sea fishing sector is relatively small but is significant for the economy of the three County Down villages where the local fleet is based;
- As a result of EU rules under the CFP and the associated Cod Recovery Plan the local fishing fleet is predominantly focussed on the catching of prawns;
- The waters within the Irish Sea, which make up ICES Area VIIa, are fished by a number of nations other than the UK and Republic of Ireland; and
- The available scientific evidence suggests that many fish species within the ICES VII and VIIa areas, which are the main focus of the local fleet, are not being fished sustainably at present.

2.2 Inland fisheries sector in Northern Ireland

Salmon and angling

The inland and inshore fishing sectors consist of three related groups: course and game leisure anglers, commercial inshore salmon fishermen, and an eel fishing industry operating from Lough Neagh.

There is little reliable information to indicate the scale of the leisure fishing, or angling, sector in Northern Ireland. However, a report commissioned by the Department of Culture, Arts and Leisure (DCAL), the Loughs Agency and the Northern Ireland Tourist Board estimated in 2005 that that there were 24,890 resident and 4,463 tourist or visiting coarse and game anglers in Northern Ireland[18]. In a previous study, the Fisheries Conservancy Board (now abolished) carried out an analysis of licence sales to visitors to Northern Ireland by examining the address of licence applicants. This

[18] PriceWaterhouseCoopers. 2007. *The Social and Economic Impact to Northern Ireland, and areas within the Loughs Agency, of Recreational Fisheries, Angling and Angling Resources* : pvi.

study suggests that licence sales to non-domestic visitors were 3,253 in 2007 and 2,884 in 2008.[19]

The Ulster Angling Federation has previously stated that it has a membership of around 60 clubs and 7,000 members[20]. Statistics from the Continuous Household Survey indicate that the angling sector is characterised as follows[21]:

- One in twenty (5%) of the population have fished in Northern Ireland waters;
- Around 1% of the population have fished in Northern Ireland waters at least once a week;
- Around 2% have fished once or twice a year.

Some indication of the scale of participation in angling can be gained by looking at the total number of rod licences issued by DCAL.

	2010	2011	2012	2013	2014
Licences	26,493	25,211	27,511	26,980	25,667

Table 6: Number of angling licences sol, 2010–2014

For 2014, almost three quarters of these licences (73%) were for game only (ie salmon and trout), as opposed to course fishing. It can be seen from these figures that participation in angling has remained fairly stable over recent years.

A DCAL-commissioned study from 2007 estimated that the overall net economic impact arising from the presence of recreational angling in Northern Ireland (carried out by both domestic and visitor participants) was £20.5 million in 2005[22]. This report also estimated that the net contribution of angling to the Northern Ireland economy *could* rise to as much as £43.2 million by 2015.

In terms of commercial salmon fishing, Part V of the Fisheries Act (Northern Ireland) 1966[23] and the Fisheries Byelaws (Northern Ireland) 2003[24] provide for the issue of licences to commercial operators of draft and drift nets for the catching of salmon within the inshore zone (that is, up to six miles out to sea). Up until 2011, there were seven licence holders. In 2012, the Minister of Culture, Arts and Leisure informed the Assembly that:

19 Fisheries Conservancy Board. *Annual Reports* 2008 & 2009.
20 Ulster Angling Federation. Submission to the agriculture and rural development committee on the Northern Ireland Assembly Forestry Bill. 6.11.09.
21 Department of Culture, Arts and Leisure. 2014. *Angling and usage of inland waterways by adults in Northern Ireland 2013/14*: https://www.daera-ni.gov.uk/publications/angling-and-usage-inland-waterways-by-adults-northern-ireland-201314
22 PriceWaterhouseCoopers. 2007. *The Social and Economic Impact to Northern Ireland, and areas within the Loughs Agency, of Recreational Fisheries, Angling and Angling Resources* : pvii.
23 Fisheries Act (Northern Ireland) 1966: http://www.legislation.gov.uk/apni/1966/17
24 Fisheries Byelaws (Northern Ireland) 2003: http://www.legislation.gov.uk/nisr/2003/525/contents/made

Departmental officials had written to all of the licensed commercial fishermen operating coastal fishing engines, asking that they do not apply for renewal of their licences in 2012[25].

Since that year, there have been no further licences issued. This ceasing of commercial net licensing was in part due to concerns that such activity contravened the Habitats Directive, as Atlantic Salmon (*Salmo salar*) is listed in Annex 2 of that directive. Up until that point, figures for the quantities of salmon catch returns were as follows (overleaf):

[25] Response to written question to the Minister of Culture, Arts and Leisure: AQW 6226/11–15.

Net name	2005	2006	2007	2008	2009	2010	2011	2012
North Coast	1068	673	680	427	482	437	192	nil
North Coast	24	32	176	nil	64	26	35	nil
Ballyteerim	1167 (10)	891 (3)	881	740 (1)	420	636 (36)	345	nil
Torr Head	871	788	888 (4)	748 (28)	550 (7)	783	494 (1)	nil
South Eastern coast	24	35	22	20	21	23	44	nil
South Eastern coast	nil	nil	nil	nil	nil	nil	nil	nil
Carrick-a-rede	nil	nil	nil	nil	nil	nil	nil	nil
Total	3154 (10)	2419 (3)	2647 (4)	1935 (29)	1537 (7)	1905 (36)	1110 (1)	nil

Table 7: Commercial salmon catch returns from fishing engines licensed by DCAL since 2005[26] (catch figures in brackets are for sea trout)

It can be seen from these figures that salmon catch returns were, in most cases, declining until the point where licences were ceased. In 2014, three regulations[27] were passed in order to 'implement mandatory catch and release for salmon and sea trout angling and to prohibit commercial salmon and sea trout netting'[28].

The latest official figures on salmon stocks indicate that the overall trend continues to fall, though with a degree of year-to-year variation within this. In order to monitor the status of salmon stocks, countries which are a party to the North Atlantic Salmon Conservation Organisation (NASCO) define conservation limits (CL) for a number of rivers. A compliance level below 100% indicates that the conservation limit was not met. The percentage compliance for a number of rivers within the DCAL administered area is as follows[29]:

River	2007	2008	2009	2010	2011	2012	2013	2014
Blackwater	-	-	-	-	64	83	45	40
Bush	170	103	62	56	46	79	137	83
Clady	-	-	-	-	163	120	159	108
Glendun	77	96	33	64	76	88	178	55
Maine	96	170	68	61	77	129	53	102
Shimna	-	-	-	99	53	-	-	46

Table 3: Percentage compliance with conservation limits for rivers in the DCAL area

26 Response to written question to the Minister of Culture, Arts and Leisure: AQW 6224/11–15.

27 Fisheries Regulations (Northern Ireland) 2014: http://www.legislation.gov.uk/nisr/2014/17/contents/made; Salmon Drift Net Regulations (Northern Ireland) 2014: http://www.legislation.gov.uk/nisr/2014/16/contents/made ; Salmon Netting Regulations (Northern Ireland) 2014: http://www.legislation.gov.uk/nisr/2014/15/contents/made

28 Department of Culture, Arts and Leisure. https://www.dcalni.gov.uk/articles/salmon-conservation Page accessed 21.12.15.

29 Department of Culture, Arts and Leisure & Northern Ireland Statistics & Research Agency. 2015. *Digest of Statistics for Salmon and Inland Fisheries in the DCAL Jurisdiction*: DCAL Findings 16/2014-15: http://nia1.me/2w1: p16–17.

It can be seen from this table that, while there can be a degree of variation year-to-year, the conservation limits were met for just two of the six index rivers in 2014.

A further issue in monitoring the numbers of the salmon population is the proportion of salmon returning to rivers to spawn each winter. The results of long term monitoring of the survival of salmon during the marine phase of their lifecycle at the Bushmills Salmon Station can be seen below[30].

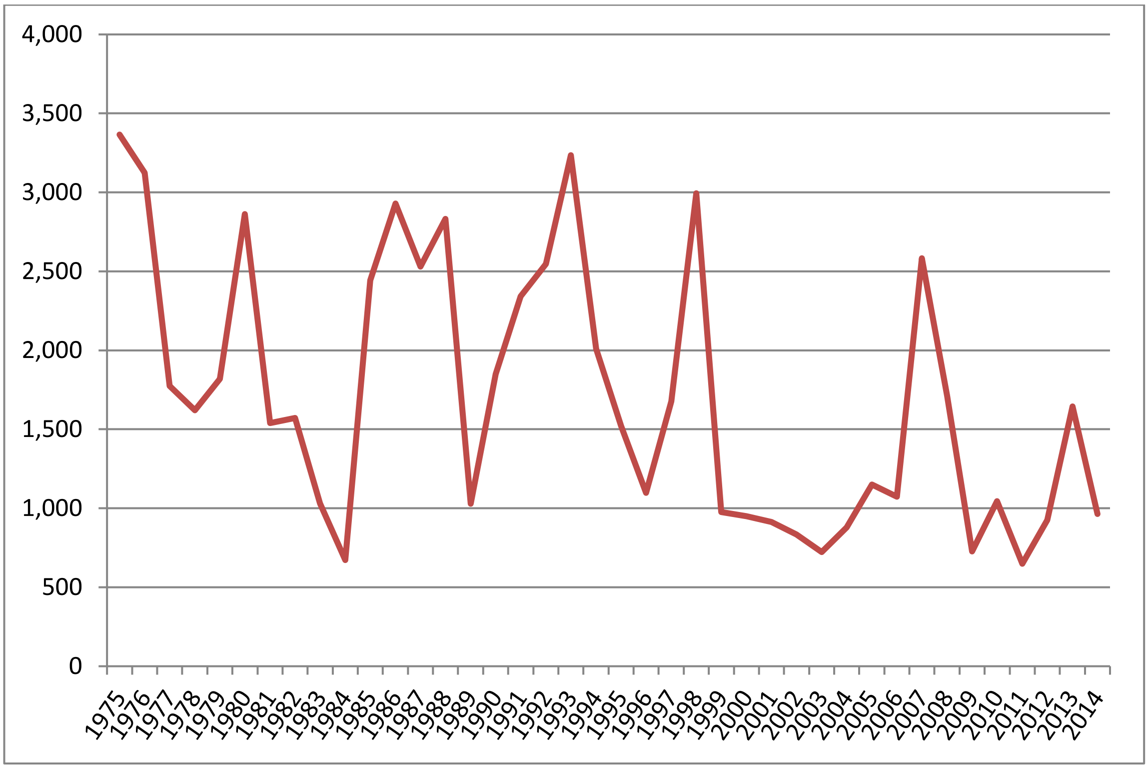

Figure 4: Wild adult salmon numbers returning to the River Bush each year 1975–2014

While year-on-year fluctuation can be caused by a wide variety of factors, the overall trend from the 1970s until the 2010s can be seen from this data to have been one of decline[31]. Data on the abundance of fry (baby salmon up to the age of six weeks) in the River Bush also indicates a continuation of the overall decreasing trend[32]:

30 Department of Culture, Arts and Leisure & Northern Ireland Statistics & Research Agency. 2015. *Digest of Statistics for Salmon and Inland Fisheries in the DCAL Jurisdiction*: DCAL Findings 16/2014-15: http://nia1.me/2w1: p13.

31 Department of Culture, Arts and Leisure & Northern Ireland Statistics & Research Agency. 2016. *Digest of Statistics for Salmon and Inland Fisheries in the DCAL Jurisdiction*: DCAL Findings 12/2015-16: http://nia1.me/3cp: p13.

32 Department of Culture, Arts and Leisure & Northern Ireland Statistics & Research Agency. 2016. *Digest of Statistics for Salmon and Inland Fisheries in the DCAL Jurisdiction*: DCAL Findings 12/2015-16: http://nia1.me/3cp: p7; the fry index is a relative index formed from electrofishing data and does not equate to the number of fish in a river.

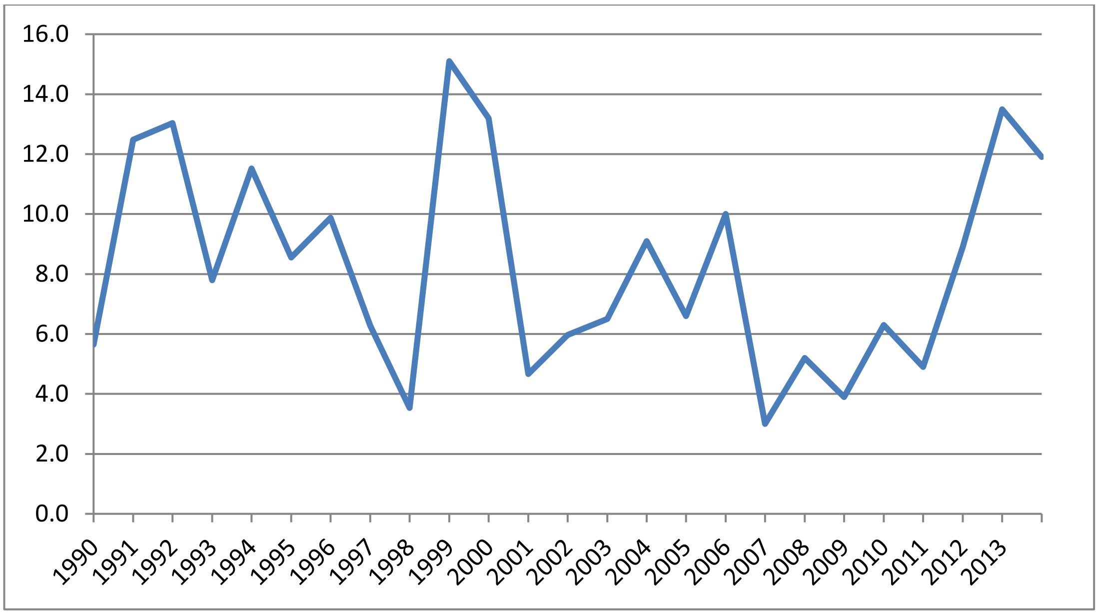

Figure 5: Salmon fry index for the River Bush each year 1990–2013

Eels

Northern Ireland also has a commercial eel fishing industry, currently operating only in Lough Neagh but previously also in Lough Erne. The Northern Ireland eel industry is the largest producer of wild caught eels in Europe, catching around 400 tonnes of eels per year[33].

In terms of the overall health of these stocks, one measure which can be looked at is the number of eels naturally recruited by the capture and upstream transport of glass eel in the estuary of the River Bann using hoop and drag nets[34]. The following line graph shows the number of eels naturally recruited to Lough Neagh from 1965 to 2014.

[33] Information reported by the Lough Neagh Fishermen's Cooperative. http://www.loughneagheels.com Website accessed 11.8.16.

[34] Evans, DW. 2004. *Northern Ireland Glass Eel Survey*. DARD Science and Queens University Belfast, Internal report to DCAL NI; Evans, D. 2005. *Report on Glass Eel surveys*. Unpublished report to the Department of Culture, Arts and Leisure for Northern Ireland, Inland Fisheries Branch: both cited in Department of Culture, Arts and Leisure & Northern Ireland Statistics & Research Agency. 2015. *Digest of Statistics for Salmon and Inland Fisheries in the DCAL Jurisdiction*: DCAL Findings 16/2014-15: http://nia1.me/2w1

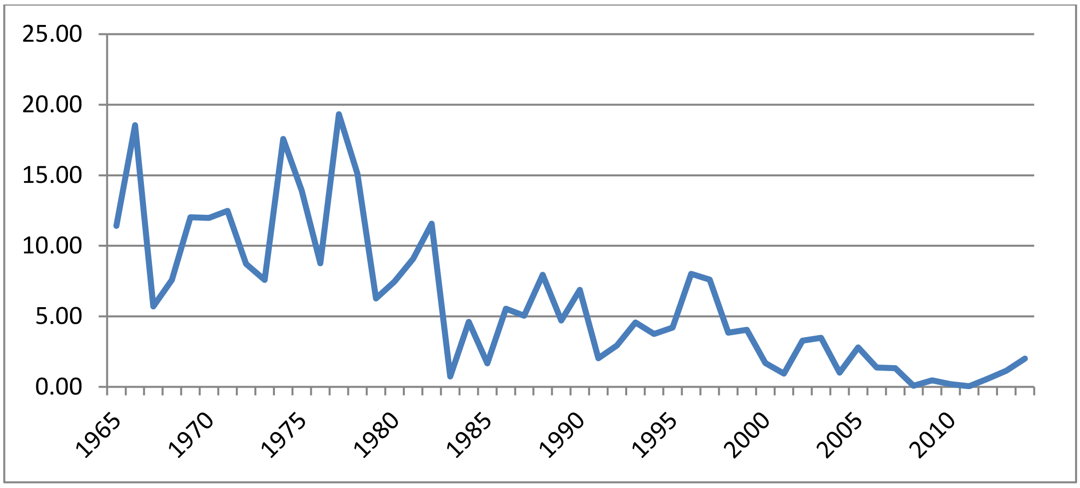

Figure 6: Natural recruitment of eels to Lough Neagh each year 1965–2014 (figures in millions)[35]

It can be seen from this figure that in the decade from 1965 (1965–1974), the average annual natural recruitment of eels was 11.36 million. In the following decades, the average annual natural recruitment of eels declined from 9.68 million (1975–1984), to 4.51 million (1985–1994) and then 3.81 million (1995–2004). The average annual natural recruitment of eels in the most recent decade (2004–2014) was 1.0 million.

From 1984, additional glass eels (eels which have just arrived in riverine waters from the sea) were purchased from elsewhere and introduced to Lough Neagh. In 2014, 2.01 million eels arrived in Lough Neagh naturally, compared with 0.57 million in 2012, 0.05 million in 2011 and 0.20 million in 2010.

Analysis

Salmon and angling

Various pieces of European legislation have an influence over inland fisheries policy in Northern Ireland. For example, the Water Framework Directive[36] places an obligation on the Department of Agriculture, Environment and Rural Affairs to ensure the free passage of fish in order to contribute to good ecological status. The Habitats Directive[37] lists the Atlantic salmon (*Salmo salar*) in Annex 2, thereby specifying it as a 'species of community interest whose conservation requires the designation of special areas of conservation'.

[35] Department of Culture, Arts and Leisure & Northern Ireland Statistics & Research Agency. 2016. *Digest of Statistics for Salmon and Inland Fisheries in the DCAL Jurisdiction*: DCAL Findings 12/2015-16: http://nia1.me/2w1: p23.

[36] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy [online] available from: http://nia1.me/vv; see also Statutory Rule 2003 No. 544: The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2003. Office of Public Sector Information: http://www.opsi.gov.uk/sr/sr2003/20030544.htm

[37] European Commission: Environment. Habitats Directive: http://nia1.me/qu

There are currently 57 special areas of conservation in Northern Ireland, with five featuring populations of Atlantic salmon. Furthermore, the Atlantic salmon is listed in Annex 5 of the Habitats Directive as a species 'whose taking in the wild and exploitation may be subject to management measures'. The three regulations passed in 2014, referred to above, are examples of such 'management measures'.

In 2015, the Department for Agriculture and Rural Development, with the Department for Culture, Arts and Leisure, introduced a Fisheries Bill to the Assembly. In terms of inland fisheries, this bill contained a number of provisions which sought to address outstanding obligations imposed by European Union legislation.

This context may raise a number of questions about inland fisheries; for example:

- The inland fisheries elements were withdrawn from the bill in January 2016 and have not yet been re-introduced; will the obligations imposed by the Habitats Directive, Water Framework Directive and the Services Directive which the previous Fisheries Bill sought to address remain outstanding?
- The Habitats Directive places an obligation on Member States not to restrict the natural passage of species from one state to another. If Northern Ireland will no longer be a member of the EU, how will the movement of species such as salmon be managed, given that there are bodies of water which span the border?

Eels

In 2007, a regulation was approved by the European Council[38] (the 'eel regulation') as a result of which DCAL introduced an Eel Management Plan in 2010, along with a Statutory Rule[39] to amend the current Northern Ireland legislation. These measures place a number of obligations on the Northern Ireland eel fishing industry. For example, under the Eel Management Plan the Lough Erne fishery has been judged to be unsustainable, meaning that commercial fishing in the area cannot currently take place.

For the remaining portion of the eel fishing industry, in Lough Neagh, a number of further stipulations are in place; for example, an escapement of at least 40% of the potential spawner biomass must be achieved; 60% of eels less than 12 cm in length caught annually must be reserved for restocking; special measures must be taken for the transfer of eel less than 20 cm in length for the purpose of restocking; and measures must be implemented 'to reduce the eel mortality caused by factors outside the fishery, including hydroelectric turbines, pumps or predators'.

[38] Council Regulation (EC) No 1100/2007 of 18 September 2007, 'establishing measures for the recovery of the stock of European eel', *Official Journal of the European Union*: http://bit.ly/bYotHH

[39] Statutory Rule 2010 No. 166: Fisheries – Eel Fishing Regulations (Northern Ireland) 2010. Office of Public Sector Information: http://www.opsi.gov.uk/sr/sr2010/nisr_20100166_en_1 Accessed 1.10.10.

Given that the Lough Neagh eel industry produces around 16% of the total EU wild eel catch[40], the UK's withdrawal from the EU may have an impact on Europe-wide re-stocking mechanisms, as well as the control and monitoring system currently operated under EU law. Furthermore, as it is not yet clear how UK access to the European single market may evolve, it is equally unclear to what extent the export of eels, around 80% of which currently are traded via the Netherlands, may be affected. Since 1984, the Lough Neagh eel stock has been supplemented with glass eels from other fisheries. From 2010, some of this restocking has been done using eels from Spain and France[41]; it is not clear how the purchase of these eels for restocking will be affected by the UK's withdrawal from the EU.

It is unclear at this stage to what extent the Northern Ireland Executive would seek to retain current obligations under the eel regulation. For example, without the constraints imposed by the 2007 eel regulation, would DAERA seek to reopen the Lough Erne eel fishery?

[40] Figure cited in a presentation given by the Lough Neagh Fishermen's Cooperative to the Northern Ireland Assembly Culture, Arts and Leisure Committee 13.5.14: http://www.niassembly.gov.uk/assembly-business/committees/archive/committee-for-culture-arts-and-leisure/listen-again/13-may-2014/ (starts at 1:01:00).

[41] ICES Advisory Committee. 2014. *Report of the Joint EIFAAC/ICES/GFCM Working Group on Eel*. Denmark: International Council for the Exploration of the Sea: p44.

3 Possible 'Brexit' considerations for the seafish and inland fisheries sectors

Sections 3.1 and 3.2 summarise some, but by no means all, of the possible 'Brexit' considerations for the sea and inland fishing sectors within Northern Ireland.

3.1 Sea Fishing

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
Market access- tariffs	The EU single market is based upon the so called four freedoms as follows: • Goods; • People, • Services; and • Capital This effectively means that goods can move freely within the EU without being subject to tariffs, quotas, duties or customs delays. Fisheries in Northern Ireland benefit from this arrangement in terms of exports.	The UK as a whole is a net importer of fish (805,000 tonnes of fish and fish products imported in 2014 compared to 543,000 tonnes exported[42]) but there is still a significant EU export dimension to sales, and within this context any changes to current market access arrangements could present challenges to the industry. Based on 2014 data NI processed fish product export sales to the EU were worth £27.7m[43]. Whilst it is impossible to predict the nature of any trade deal with the EU, there is available data on the types of tariffs that various products would be subject to if the UK ended up without an EU deal and had to fall back on World Trade Organisation terms for trade with the EU. In such circumstances fish and fish product exports from Northern Ireland to EU countries would face an average tariff of 12% based on 2015 WTO data[44] based on the UK qualifying for the WTO's Most Favoured Nation (MFN) status. It should, however, be recognised that within these broad categories there is considerable variation in tariff levels, as evidenced by the fact that the entire WTO tariff data set shows 6,526 tariff lines, as illustrated by the following examples: • *Nephrops Norvegicus* (prawns) – 16%; • Frozen cod – 12%; and	• How highly will access to the EU market for UK fish and fish products feature in the forthcoming 'Brexit' negotiations? What will be the UK Government stance on this issue – is the sea fish sector a government priority? • What is the UK Government's preferred relationship with the EU – EEA membership, EFTA membership, a free trade agreement or the default WTO relationship? • If the UK Government fails to secure a trade deal with the EU and defaults to the WTO rules, what steps will the government take to help the local fishing sector deal with the fact that their produce will potentially be more expensive in key EU markets due to tariffs?

[42] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/462753/UK_Sea_Fisheries_Statistics_2014_-_online_version.pdf
[43] Derived from Size and Performance of the Northern Ireland Food and Drinks Processing Sector, Subsector Statistics 2014, with provisional estimates for 2015, DARD, July 2016, table 10b page15
[44] https://www.wto.org/english/res_e/booksp_e/tariff_profiles15_e.pdf

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
		• Frozen cod fillets – 7.5%. As a further complication certain products may qualify for differing rates of trade which is duty free. Given the complexity and variation in the tariffs it is impossible to assess the full impacts on the local fishing sector, but it is fair to say that certain products could potentially become more expensive within the EU, which might affect how attractive they are within these markets.	
Exclusive access to, and control of, UK fish stocks	The Common Fisheries Policy operates on a Total Allowable Catch (TAC) basis whereby limits are placed on the amount of fish that can be caught within a particular fishery. The TAC is further broken down into a national quota allocation. The TAC for ICES Area VII and VIIa (Irish Sea) which are the main areas fished by local fishermen has greatly limited TACs for many commercial species, with the exception of Nephrops (prawns) which is why this is the main species targeted by the local fleet.	The UK's decision to leave the EU could theoretically mean that the UK would regain exclusive access to the fishing grounds and associated stocks within the 200 miles from the coast that constitutes the Exclusive Economic Zone (EEZ) see figure 3. In such circumstances the UK could potentially be free to set its own TACs and quotas for all species within the 200 mile EEZ limit. This might raise the prospect of the UK and Northern Ireland fleets being able to fish both a wider range of species and a greater overall volume of fish. This assessment, however, could be flawed as the UK is currently bound by a number of pieces of international law that stipulate the requirement for co-operation on the management and conservation of fish stocks that straddle national jurisdictions as follows: • The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks[45]; • UN Convention on the Law of the Sea[46]. These obligations could mean the UK would have to continue to work with the EU on the management of many stocks. A key issue here could well be the status of the UK's signature on these international laws, ie did the UK	• Which fish stocks of interest to the UK and NI fleets could be identified as 'shared' or 'straddling national jurisdictions'? Which other countries would potentially then have a stake in the management of the stock? • Is there any likelihood for the UK to be able to develop bi-lateral fishing rights/quota arrangements with an individual EU Member State? Could such a deal be struck for the management of prawns within the Irish Sea, more specifically, Functional Unit areas 14 and 15? • Is the possibility of the local fleet being able to fish for a wider range of fish species and in greater volumes a realistic one? • Does the UK Government want to limit fishing access to the UK EEZ? How will this work in practical terms? Will access to these fishing

[45] http://www.un.org/depts/los/convention_agreements/convention_overview_fish_stocks.htm
[46] http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
		sign up as a standalone nation before it joined the EU, or is it a signatory under the auspices of the EU? On the specific issue of prawns within the Irish Sea, whilst not migratory, the prawn fishing beds within ICES Area VII, and most particularly within area VIIa, appear to fall within the EEZ of both the UK and Republic of Ireland, and as such there could be grounds for required co-operation on stocks management. Even if the UK successfully asserts exclusive access and control to fish species within the UK EEZ, there could potentially be no discernible increase, even a decrease, in the TACs for certain species. This could be the case particularly if the government follows scientific evidence that identifies issues or concerns with certain stocks and makes subsequent recommendations on catch restrictions. It should also be noted that non EU countries such as Norway, Iceland and the Faroe Islands utilise scientific advice from ICES and other independent advisory marine research bodies when deciding their national TACs and quotas[47].	grounds be a key negotiating 'chip' for the UK in the forthcoming 'Brexit' negotiations? • How does the UK Government plan to manage its fishery resources? What scientific assessment will it rely on? How or will this be different to that utilised by the EU? Will the UK Government be required to follow any scientific evidence, particularly if it relates to a stock shared with an EU country? • What international conventions will the UK be subject to in relation to the management of fish stocks post 'Brexit'? Will there be a need for revised or new UK or local legislation in order to ensure compliance, particularly where the EU is the signatory of the convention?
Funding	Under the CFP the European Maritime and Fisheries Fund (EMFF) provides financial support to fishermen and coastal communities in a number of ways: • helps fishermen in the transition to sustainable fishing;	EMFF funding builds upon the previous European Fisheries Fund monies which benefitted a wide range of programmes, communities and individual fishermen. 2007-13 European Fisheries Fund (EFF) programme funded projects within Northern Ireland included[50]: • processing sector: assistance was awarded for the construction of new storage facilities and the modernisation and/or extension of existing premises - mainly in order to increase the efficiency of	• Will the UK Government decide to continue to support funding similar to the EMFF beyond 2020? • Will decisions around whether and how to provide such support be devolved to NI? Will additional resources follow to enable this? • What is the UK and NI vision for the development of coastal and fishing

47

50 https://www.daera-ni.gov.uk/sites/default/files/publications/dard/DARD%20-%20EMFF%20Investment%20Proposals%20PDF.PDF

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
	• supports coastal communities in diversifying their economies; • finances projects that create new jobs and improve quality of life along European coasts; and • makes it easier for applicants to access financing. The current Programme period runs from 2014-20 and Northern Ireland has an approximate budget of €13.78m (including national contribution of €4.58m) which equates to approximately £15.5m[48]. The new programme opened for application 13th September 2016[49].	operations through improved production and product quality that would support stronger economic performance; • catching sector: investment in the three Northern Ireland fishing ports, to provide the fishing industry with the infrastructure required for a modern fishing fleet, provision of more selective fishing gear and safety equipment on board Northern Ireland's fishing vessels. There had been a lack of clarity on how committed the UK Government was to EMFF spending commitments, and more specifically with regard to projects which have yet to be 'signed off''. On 16th August Chancellor Hammond issued a statement which revealed the following: • all structural and investment fund projects, including agri-environment schemes, signed before the Autumn Statement will be fully funded, even when these projects continue beyond the UK's departure from the EU; • the Treasury will also put in place arrangements for assessing whether to guarantee funding for specific structural and investment fund projects that might be signed after the Autumn Statement, but while we remain a member of the EU. Further details will be provided ahead of the Autumn Statement. This statement had raised concerns around the EMFF and other EU funding within Northern Ireland, particularly in relation to funding applications that had not been approved prior to the Chancellor's Autumn Statement scheduled for 23rd November 2016. A subsequent statement issued by the Treasury on 3rd October has, however, addressed this concern, with the Chancellor confirming that '… *the government will guarantee EU funding for structural and investment*	communities in the aftermath of 'Brexit'? • What is DAERA's understanding of how EMFF applications will be assessed in terms of being good value for money and being in line with domestic strategic priorities? Are these requirements any different or additional to how DAERA had planned to administer the EMFF?

[48] https://www.northernireland.gov.uk/news/minister-mcilveen-shares-desire-confident-fishing-industry
[49] http://www.farminglife.com/news/farming-news/mcilveen-opens-15-million-fisheries-grants-programme-for-applications-1-7575220

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
		fund projects, including agri-environment schemes, signed after the Autumn Statement and which continue after we have left the EU[51].' Whilst the Chancellor's clarification has built confidence that the EMFF funds are secure it should be noted that the most recent statement also includes the following caveat: Funding for projects will be honoured by the government, if they meet the following conditions: •they are good value for money; •they are in line with domestic strategic priorities. Any potential reduction to this funding stream could have negative impacts on local sea fishing as the previous investment has been critical to making the sector efficient, competitive and sustainable e.g. funding for the adoption of selective fishing gear.	
EU regulation	The EU's legislative and regulatory impact on sea fishing is extensive. According to the EU's Acquis communautaire (the cumulative body of European Union legislation consisting of primary (treaties and protocols) and secondary legislation (regulations, directives and decisions)), there are currently 1,436[52] pieces of legislation in force for fisheries covering areas such as:	The scale of EU legislation and regulation makes it hard to fully assess the potential impacts of 'Brexit'. In theoretical terms the UK's decision to leave the EU could see a potential reduction in the types and level of regulation that local fishermen face, but whether this actually happens will depend on the relationship that the UK negotiates with the EU. Possible options for this relationship and how these relate to EU legislation and regulation are broadly as follows: • **European Economic Area (EEA)** membership, which includes Norway – all EEA members must implement all EU legislation and regulation as it relates to the single market; • **European Free Trade Agreement (EFTA)** membership, which includes Switzerland – must adapt their domestic legislation to	• Has the UK Government identified areas of EU legislation or regulation that it actively wants to abolish in relation to sea fishing? Has DAERA any views on this issue and have they been passed to DEFRA? • Conversely has the UK Government identified areas of EU legislation or regulation that it actively wants to retain in relation to the operation of sea fishing? Has DAERA any views on this issue and have they been passed to DEFRA? • What specific EU legislation and regulation relating to sea fishing

[51] Further certainty on EU funding for hundreds of British projects, HM Treasury Statement, 3 October 2016
[52] http://eur-lex.europa.eu/browse/directories/legislation.html?root_default=CC_1_CODED%3D04&displayProfile=allRelAllConsDocProfile&classification=in-force#arrow_04

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
	•The CFP and its operation; •Traceability and food safety requirements.	reflect EU laws and regulations related to the parts of the single market in which the EFTA member participates; • **Free Trade Agreement**, various countries have deals either in place or being negotiated including Canada – exports to the EU must comply with EU rules and regulations to enter the single market. Based on this information it seems likely that if local fishermen want to sell their produce within the EU they will continue to have to adhere to a certain degree of EU rules. This would most likely mean adherence to single market rules related regulation, but local fishermen might not be required to comply with EU environmental legislation such as the Birds and Habitats Directive, Water Framework Directive and Marine Strategy Directive. Conversely, the UK, or Northern Ireland potentially if the power was devolved, could theoretically decide to actually implement more stringent environmental regulations once 'Brexit' is completed. The UK is also currently bound by a number of pieces of international law that stipulate the requirement for co-operation on the management and conservation of fish stocks that straddle national jurisdictions as follows: • The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; • UN Convention on the Law of the Sea. These obligations could mean the UK would have to continue to work with the EU on the management of many stocks. A key issue here could well be the status of the UK's signature on these international laws, ie did the UK sign up as a standalone nation before it joined the EU, or is it a signatory under the auspices of the EU.	and marine conservation would need to be retained in order to gain access to the single market under either the EFTA or EEA models of EU engagement? • What is the UK Government's preferred relationship with the EU – EEA membership, EFTA membership, a free trade agreement or the default WTO relationship? • What is the UK and NI view on the current level of regulation relating to marine environment legislation? Is there an appetite for more regulation either here or at UK level? Would powers that could enable a potential increase be devolved to Northern Ireland? • What international conventions will the UK be subject to in relation to the management of the marine environment post 'Brexit'? Will there be a need for revised or new UK or local legislation in order to ensure compliance, particularly where the EU is the signatory of the convention?

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
Access to labour	The free movement of people is a key foundation of the EU since the 1992 Maastricht Treaty and enables all EU citizens to live and work in any of the Member States.	The ability of other EU citizens to come to Northern Ireland and work here could be restricted as a result of the UK's decision to leave the EU, and this could have a potential impact on sea fishing. The particular impacts here might be greatest on those sectors (predominantly catching and processing) which rely on migrant labour. Whilst anecdotal evidence might suggest that there has been a reliance on migrant labour to meet some of this demand, it should be noted that data is limited. A study commissioned by Seafish, whilst limited in scope, titled *Analysis of the Training Needs of the Northern Ireland Seafood Industry*, published in 2015[53], does include the following information: **Catching sector** – '*…over time the industry had become increasingly dependent on migrant (non-UK national) labour. Until recently the majority of these crewmen were Filipino in origin but changes to legislation and increasing immigration from Eastern Europe (expanded EU membership) had resulted in a significant proportion of the crew being Eastern European or African in origin (e.g. Polish, Latvian, Lithuanian, Romanians and Ghanaians etc)*' *'Precise details of the breakdown of crews by nationality was hard to establish, but best estimates of the level of non-UK national crewing of vessels was thought to be between 60- 70%, although largely confined to over 12m vessels.'* **Processing sector – '***In common with many parts of the UK processing sector many of the employees were of Eastern European origin although it was reported that many workers and their families had settled in the area.'*	• What will be the UK's approach be in relation to any deal with the EU when it comes to the movement of labour? Will recent media coverage[56], implying that EU migrants already living and working in the UK will be allowed stay, be proven true, as this labour source is currently a key part of the local fishing sector? • How great is the reliance on migrant labour within the Northern Ireland fishing sector? Are certain sub-sectors more reliant than others? How many people are we talking about and how many businesses are reliant? • In the event of any restriction of free movement for EU citizens in the UK what options will be open to fisheries sectors reliant on this labour source? Will the UK Government or NI Executive provide support to businesses facing challenges as a result? More particularly, what support could be given to attract/support new migrant labourers to maintain or enable potential expansion of the local fishing industry?

[53] http://www.seafish.org/media/1449048/analysis_of_training_needs_of_the_ni_seafood_industry.pdf
[56] All 3.6 million EU nationals 'can stay in the UK after Brexit', Independent newspaper, 9 October 2016

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
		Looking at this evidence in context, of the 349 fishing vessels active and administered in Northern Ireland in 2015, 148 (42%) are over 10 metres in length[54]. In terms of the fish processing sector in NI, it currently employs 502 people (FTEs)[55].	

3.2 Inland fisheries impacts

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
Stock levels for inland fishing, particularly for key species such as salmon and trout	Various pieces of European legislation, including the Habitats Directive and the Water Framework Directive	Current European legislation places a duty on the Department of Agriculture, Environment and Rural Affairs to ensure the free passage of fish in order to contribute to good ecological status, and to put in place certain management measures to conserve Atlantic salmon. Three regulations passed in 2014 ceased the issue of licences to commercial, inshore net fishing, and restricted anglers to a catch and release approach. In 2015, a Fisheries Bill was introduced to the Assembly. In terms of inland fisheries, this bill contained a number of provisions which sought to address outstanding obligations imposed by European Union legislation.	• Will the obligations imposed by the Habitats Directive, Water Framework Directive and the Services Directive – which the previous Fisheries Bill sought to address – remain outstanding? • The Habitats Directive places an obligation on Member States not to restrict the natural passage of species from one state to another. If Northern Ireland will no longer be a member of the EU, how will the movement of species such as salmon be managed, given that there are bodies of water which span the border?
Eel fishing industry	Council Regulation (EC) No 1100/2007 (the 'eel regulation')	The Northern Ireland Eel Management Plan, implemented since 2010, could be revised or removed if the eel regulation no longer has to be conformed with, and the relevant Statutory Rule repealed. This could mean, for example, that the current closed status of the Lough Erne commercial eel fishery could be changed. Further stipulations exist at present; for example, an escapement of at least 40% of the potential	• To what extent would the Northern Ireland Executive seek to vary current rules on eel catching and restocking? • For example, without the constraints imposed by the 2007 eel regulation, would DAERA seek

[54] UK Sea Fisheries Statistics 2015 , Marine Management Organisation, table 2.3, page 15
[55] Derived from Northern Ireland Agri-Food Sector, Key Statistics, June 2016, table 6 page 6

Policy area/theme/issue	EU relevance	Possible 'Brexit' considerations	Key questions
		spawner biomass from Lough Neagh must be achieved; and 60% of eels less than 12 cm in length caught annually must be reserved for restocking. While eel stocks in Lough Neagh are currently judged to be sustainable, the overall trend of eel stocks since the late 1970s has been one of decline. It would therefore be for the Northern Ireland Executive to decide whether the evidence for eel stocks suggests that sufficient numbers exist for a change to the current rules.	to reopen the Lough Erne eel fishery? • Would the purchase of eels for restocking from, for example, France and Spain, be affected? • Would the sale of eels via the Netherlands continue to be viable, or would additional support to the eel industry be required for it to be sustainable?

4 General questions relating to ‘Brexit’

Whilst section 3 of this paper dealt with specific issues relating to the potential local impacts of ‘Brexit’, there may also be value in considering more general questions relating to Northern Ireland’s (and more specifically DAERA’s) role and participation in the forthcoming formal negotiations between the UK and EU, such as the following:

- What are DAERA’s key priorities in relation to the local sea and inland fisheries sectors and the EU relationship? What does it consider to be the key issues for Northern Ireland?
- How are these priorities and key issues being conveyed to DEFRA? Is this process formalised?
- What steps are DAERA and the NI Executive taking to ensure that the priorities and key issues for the local sea and inland fisheries sectors are taken account of within the ‘Brexit’ negotiations? Are there any formalised protections to address any perceptions/concerns that the UK negotiating position is simply the English position?
- Building upon the previous questions, what work are DAERA and the NI Executive doing to identify areas of common interest with the UK’s other devolved administrations as they relate to sea and inland fisheries? How will this work be utilised and promoted?
- Whilst DAERA and the NI Executive may be feeding information to DEFRA and the UK Government to inform the development of a UK negotiating position will any finalised position be subject to formal sign off by the devolved administrations?
- Will DAERA and the NI Executive have physical representation on the formal negotiation teams engaging with the EU? If not how will they be kept informed and ensure that what is being negotiated is not detrimental to Northern Ireland?