

Brexit and Consequences for Quota Sharing in the Barents Sea Cod Fishery

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Abstract

The fishery for Northeast Atlantic cod (*Gadus morhua*) in the Barents Sea is the largest cod fishery in the world. For historical reasons, the EU has quotas in this fishery that are allocated among the member states according to an allocation key that has remained constant for decades. Of the EU countries, the UK has the largest quota share, followed by Spain. In this paper we analyse whether Brexit may lead to changes in quota sharing between the UK and the EU as well as between Norway and the UK.

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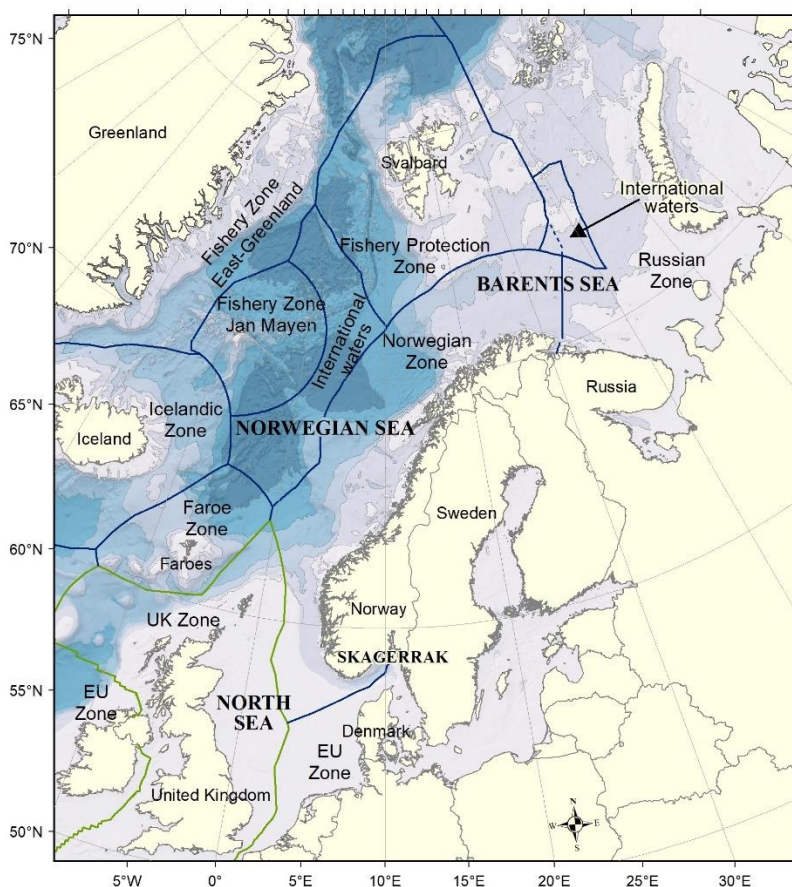
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0. INTRODUCTION

The fishery for Northeast Atlantic cod (*Gadus morhua*), a.k.a. Arcto-Norwegian cod, in the Barents Sea is the largest cod fishery in the world with an average annual total catch of 670,000 tonnes since 1946 (NFD, 2020). It is also the most valuable fishery in the North Atlantic. For historical reasons, the EU has quotas in this fishery that are allocated among the member states according to an allocation key that has remained constant for decades. The UK has the largest quota share, followed by Spain. In this paper we will analyse whether Brexit may lead to changes in quota sharing between the UK and the EU as well as between Norway and the UK.

The Barents Sea is a very productive fishing area of great importance to fishermen from several countries. As figure 1 illustrates, the Barents Sea consists of four main ocean areas: the Norwegian Exclusive Economic Zone (NEZ), the Russian Economic Zone (REZ), a high seas area commonly referred to as the Loop Hole, and the Svalbard Protection Zone (SPZ), the significance of which will be explained below. There is one total allowable catch quota (TAC) for the entire area; however, as we shall explain later, there are also area allocations, and fishing rights vary by area. The EU has quotas in both the NEZ and the SPZ, but not in the REZ.



Source: Gullestad, Sundby and Kjesbu (2020)

Figure 1. The North East Atlantic

The cod has its main spawning grounds on the coastal banks of Norway between 62° and 70° N, returning to the Barents Sea after spawning. The Northeast Arctic cod stock is shared between Norway and Russia (earlier the Soviet Union) and has been jointly managed since 1977 when the 200-mile Exclusive Economic Zone regime was established. The primary management instrument is an upper limit on the total catch each year, the Total Allowable Catch (TAC), but other regulations such as a minimum mesh size and measures which aim at increasing the yield of the stock are also in place. The total catch quota is shared evenly by Russia and Norway, after setting aside about 15% of the total for third countries that have traditionally fished this stock. The third countries in this context are the EU, with cod quotas both in the NEZ and the SPZ, as well as Greenland, Iceland and the Faroe Islands. It must be noted that the EU must come up with quota exchanges for some of the Barents Sea cod quota, as we shall discuss in detail later. The TAC for 2020 is set at 745,000 tonnes (NFD, 2020), increasing to 885,000 tonnes in 2021.

In terms of the overall management of cod in the Barents Sea, there is no reason to expect any changes: Norway and Russia will continue to set the annual TAC and other management measures, and the quota for third countries is also likely to remain unchanged.

The United Kingdom has now withdrawn from the EU with a transition agreement that expires at the end of 2020. Negotiations between the UK and the EU for a new, comprehensive agreement for their future relationship are ongoing. This includes fisheries. In the North Sea, Norway and the EU (including the UK) have cooperated in the management of shared stocks based on the 1980 Agreement on Fisheries between the EEC and the Kingdom of Norway¹ (hereinafter the 1980 Agreement). With the UK now leaving the EU, this agreement must be adapted to reflect the departure of the UK. A new bilateral framework agreement between Norway and the UK has already been negotiated (Government of Norway, 2020). Quota sharing between Norway and the EU in the NEZ is also part of the 1980 Agreement. However, this is not the case for the SPZ, where the parties have “agreed to disagree” on legal issues. In this area, the EU unilaterally limits its fishery to historical levels, while Norway abstains from claiming compensation in EU waters.

In this paper we will analyse potential consequences of Brexit for quota sharing in the cod fishery in the Barents Sea. Brexit will give the UK the option of using its cod quota in negotiations with both the EU and Norway, and we will investigate various options in this regard. To maintain the cod quota in the NEZ, the UK will need to come up with an equal exchange elsewhere. Thus, it may be asked whether the UK will wish to trade quota shares with the EU in exchange for quotas elsewhere or for other kinds of exchange. This also depends on the result of the Brexit fisheries negotiations. For reasons that we shall return to, the UK may also consider trading quota shares with Norway.

¹ Official Journal of the European Union 1980 L226/48.

In addressing these issues, the theory of strategic interaction, more popularly referred to as game theory, will be drawn upon to provide a broad overarching framework, because the strategic interaction between and among the coastal states involved lies at the heart of the resource management issues to be examined. Broadly speaking, there are two types of games, cooperative and non-cooperative (competitive) (Grønbak *et al.*, 2020; Bjørndal & Munro, 2012). Bjørndal & Munro (2020) give an overview over game theory as it relates to fisheries in general and North Sea fisheries management in particular, which is highly relevant also for this study.

With reference to this study, non-cooperative games are of interest only in demonstrating the consequences of a breakdown in negotiations over sharing of fish quotas, where the outcome may be severe overexploitation of the relevant fish stocks. The primary interest here lies in the theory of cooperative games.

The theory of cooperative games rests upon the assumption that those involved in the strategic interaction, the “players”, will cooperate, if and only if, it is in their selfish interests so to do. No cooperative game will be stable unless every player, at every moment in time, is convinced that the return from cooperation, the “payoff”, is at least as great as it would be under non-cooperation.

Thus, the theory of cooperative games can be seen as essentially a theory of bargaining. In any bargaining situation, one obvious objective must be to ensure that the scope for bargaining is as broad as possible. This leads to the game theorists’ concept of “side payments”. In a fisheries context, this means that in a cooperative fisheries management regime for a particular stock, with so called side payments, the payoff to a given player will not be dependent solely upon their share of the harvest from that stock. The payoff may be affected by other forms of return. One prominent example in cooperative fisheries management is that of other forms of return taking the form of quota swaps. As stated earlier, the Barents Sea may grant the post Brexit UK enhanced bargaining power in its fisheries negotiations by increasing its ability to swap fish quotas. A second example would be the granting of access rights for foreign fishermen in the economic zone of a country. Another pertinent example would be market access and trade concessions of various kinds².

This paper is organised as follows. The following section will give an overview over quota sharing and management in the Barents Sea. Then we will look at EU and, in particular, UK cod fisheries in the Barents Sea from 2015 to the present (section 2), which will be followed by an analysis of post-Brexit management (section 3). The paper is summarised in the final section.

² Negotiators will sometimes try to limit the scope of “side-payments”. One prominent example is the traditional position of Norway and Iceland formulated in the axiom: “*Access to market shall never be paid for by access to resources.*” The EU holds the opposite view, and so did the UK as an EU member. In the negotiations with the EU for a comprehensive post-Brexit deal, the UK appears to have adopted the Nordic view when it comes to fisheries.

1. QUOTA SHARING AND MANAGEMENT IN THE BARENTS SEA

Through centuries Distant Water Fishing States (DWFSs) such as Germany, Spain, France, Poland, Portugal and the UK have exploited the rich cod banks of the North Atlantic, in particular of Newfoundland, at Greenland, Iceland and in the eastern part of the Atlantic, including the Barents Sea and around Svalbard. In addition, cod has been harvested by coastal states: Norway, Canada, Iceland and Russia. Catch levels varied considerably over time due to excess fishing, stock fluctuations and, more recently from a historical perspective, the successive expansion of economic zones. This started with the Icelandic 12 nm zone in 1958, which was extended to 50 nm in 1972. The Icelandic measures forced UK vessels to change their area of operation, and by 1970 UK catches of cod from the Barents Sea had risen considerably. Furthermore, the UK obtained increased catch opportunities in EU waters as the Common Fisheries Policy, established in 1983, compensated the UK for the loss of catch opportunities in the North Atlantic.

On 1st January 1977 most coastal states in the North Atlantic, including Norway and Russia, established exclusive economic zones of 200 nm. Moreover, from 15th June 1977 Norway introduced a non-discriminatory Fisheries Protection Zone around Svalbard (SPZ). With this step Norway assumed the responsibility of regulating fishing operations in the Svalbard area. Traditionally, the Barents Sea was home to a more or less unregulated open access cod fishery. What was previously a “free for all” for fishermen from surrounding coastal states and distant water fishing countries, had thus become enclosed, except for a small area known as the Loop Hole³ (figure 1).

The Svalbard Protection Zone (SPZ)

The use of natural resources on and around Svalbard is regulated by the Svalbard Treaty, signed in Paris in 1920⁴. The treaty gives Norway “full and absolute sovereignty“, leaving it to Norway to “decree suitable measures to ensure the preservation of the fauna and flora equally to the nationals of all the contracting parties”. The contracting parties are admitted to “equality to the exercise and practice of all maritime, industrial, mining or commercial enterprises both on land and in the territorial waters”.

The Svalbard Treaty does not extend beyond the 3 nm territorial limit, which was considered the limit of the territorial waters of a coastal state according to the Law of the Sea at the time of the signing of the Treaty in 1920. Since then, the Law of the Sea has changed, including the right of coastal states to exploit natural resources up to 200 nm. As noted, the Svalbard Treaty gives Norway

³ Fishing by Icelandic vessels in the Loop Hole became an issue in the period 1993-99. This culminated in an agreement between Iceland, Norway and Russia in 1999 (Lovdata, 1999).

⁴ http://library.arcticportal.org/1909/1/The_Svalbard_Treaty_9ssFy.pdf

“full and absolute sovereignty”. Norway’s view is that on this basis Norway may extend the economic zone to 200 nm without being obliged by the secondary provisions of the Treaty, that is, the right of free access for citizens of all signatory states to exploit on an equal basis the natural resources, in this case fish. Norway holds the view that this interpretation of the Treaty is in line with international law and practice.

Although the Norwegian position is that Norway may establish a 200 nm Norwegian economic exclusive zone where the Treaty does not apply, no other contracting party to the Svalbard Treaty supports this position. Rather, Norway has chosen to establish what is known as the Svalbard Protection Zone (SPZ). Vessels are allowed to fish in the SPZ according to their historical catches, and quantities fished are not compensated by quotas for Norwegian fishermen in their EEZs. Norway has chosen not to take formal actions to establish the SPZ. Instead Norway has engaged in diplomatic activities and legal steps of less consequence to contain fishing operations in the area.

In August 1982 Danish fishing vessels started fishing for capelin in the SPZ. Norway strongly protested with the argument that the 1980 Agreement was based on the condition that the EU should not change existing fishing patterns in the SPZ. As part of the Common Fisheries Policy package in 1983, Denmark accepted the European Commission’s proposal for a zero EU quota for capelin at Svalbard. The European Commission notified Norway of this “unilateral step”.

Prior to the Spanish accession to the EU in 1986, Spain fished 10 – 15,000 tonnes of cod at Svalbard despite Norwegian requests to reduce catches. After the Spanish and Portuguese accession to the EU, Norway engaged in informal diplomatic discussions with the European Commission and an understanding was established. In June 1986 the Commission proposed a “unilateral” EU quota limitation for cod at Svalbard. However, the proposal was rejected by Member States in the Council of Ministers. In July 1986 Norway stopped cod fishing around Svalbard on the ground that the Norwegian set TAC was exhausted. This caused conflicts between the Norwegian Coast Guard and trawlers from several countries, including Spain. The Norwegian action was challenged by the European Commission while the Commission at the same time confirmed the interest in finding a solution. A *note verbale* from Norway to the Spanish government underlined the Norwegian position as Norway feared Spanish fishing vessels would continue fishing in the area. In the end EU vessels refrained from entering the area as they feared they might be arrested by the Norwegian Coast Guard.

For the rest of 1986 the Norwegian government put a great deal of pressure on the European Commission. Norway expressed the view that the Commission had failed to deliver on the informal agreement, while the Commission stated that it had no competence to make agreements without the approval of the Council. The Commission and Norway then agreed that the Commission should maximise the pressure on Member States to accept a quota regulation.

In 1987, the EU Council of ministers, as part of a broad TAC/quota package, agreed to a “unilateral” quota regulation for EU vessels at Svalbard. The regulation allocated cod quotas to Germany, Portugal, Spain, and UK and an amount of 100 tonnes for “other Member states” to take account of their right according to the Treaty to access fishing in the SPZ. Since then the EU has regulated EU vessels’ access and catch opportunities for cod in the SPZ with the following footnote: “The allocation of fishing opportunities available to the Union in the zone of Svalbard is without prejudice to the rights and obligations deriving from the Treaty of Paris of 1920.” For Russian perspectives on fishing in the SPZ, see Jørgensen & Østhagen (2020) and Todorov (2020).

The UK is a signatory to the Paris Treaty. At the end of the transition period on 31st December, 2020, the UK will not be bound by EU regulations and therefore not by any obligation other than the Svalbard Treaty with regard to fishing in the SPZ. In principle the UK may therefore act unilaterally and increase fishing in the SPZ.

The Barents Sea

As noted, due to the introduction of EEZs, the Northeast Atlantic cod became a shared stock between Norway and Russia, subject to joint management. As a consequence, fishing by several EU countries had to be phased out. This became an issue when Norway and the EU negotiated the 1980 Agreement on the management of shared stocks in the North Sea. Among other things, there was disagreement about the time period for the EU to reduce harvesting in the Norwegian EEZ in the Barents Sea. At the same time, Norway was concerned about maintaining traditional quota rights in EU waters, primarily for ling and tusk. Norway and the EU wanted to maintain mutual fishing rights but aimed at a better balance exchange over time. Eventually Norway agreed to a transition period in the Barents Sea until the end of 1982 (Foss, 1991). The issue of catch quotas in the Barents Sea was contentious also in later negotiations between Norway and the EU, regarding the European Economic Area (EEA) Agreement in 1989-91 and EU-membership, starting in November 1992 (Melchior, 2020).

According to the 1980 Agreement, Norway and the EU shall cooperate on the management of shared stocks and shall grant access to the other party to fish within their EEZ in accordance with a balanced quota exchange including in the Barents Sea (Foss, 1981). Moreover, there will also be negotiations about annual quota exchanges, including in areas other than the North Sea. It is the intention that there should be a “mutually satisfactory balance in their reciprocal fisheries regulations⁵ where the balance is to be achieved in terms of value, not catch (Churchill and Owen, 2010).

⁵ Agreement on Fisheries between the EEC and the Kingdom of Norway, Art 2(1)(b) and Annex, as cited in Churchill and Owen (2010).

Portugal and Spain's membership to the EU in 1986, necessitated new negotiations between Norway and the EU (Melchior, 2020). Portugal and Spain are both coastal states with substantial fisheries interests. As a consequence of the Common Fisheries Policy, the total EU quotas in the North Sea were shared before Portugal and Spain joined the Union. Moreover, Spain had lost access to distant water fishery resources worldwide as a consequence of the new EEZs. This caused bitterness on the Spanish side that was evident not just within the EU but in negotiations with Norway, not only in 1986, but for a long time afterwards.

In parallel with negotiations for the European Economic Area (EEA) Agreement, there were separate discussions about fisheries cooperation between Norway and the EU. These led to the further development of the bilateral cooperation based on the 1980 Agreement, which resulted in a new agreement, based on the exchange of letters, dated 2nd May, 1992. Formally, this is not part of the EEA Agreement (Foss, 1991).

Catch quotas in the Barents Sea were an important matter in the EEA negotiations – an issue that is politically sensitive in Norway and controversial in the EU: Spain was ready to block an agreement if there was no solution to the question of catch quotas (Melchior, 2020). Norway gave a declaration to consider additional EU access to groundfish north of 62°N and agreed to make permanently available a quota of 1,500 tonnes of redfish that it introduced for EU vessels on the accession of Portugal and Spain to the EU in 1986. This is outside of the balanced exchange of the 1980 Agreement (Churchill and Owen, 2010).

Furthermore, the EU cod quota north of 62°N, where the EU had a quota since the introduction of EEZs, was finalised at 2.9%, to be balanced with quota exchanges in the North Sea. In addition, there was an additional quota to increase over time to 11,000 tonnes per year; from 1997 onwards, this was set at 1.24% of the TAC, which represents the actual average EU quota for 1993-97 (Foss, 1991). Norway is to be compensated with quota exchanges for the additional quota, as far as possible, but in areas other than the North Sea. Formally, these exchanges are made under the 1980 Agreement.

On top of this, the EU has a cod quota of 3.77% of the TAC in the SPZ. After the introduction of EEZs, Norway gradually reduced the cod quota for third countries in this area. To ease the political pressure, Norway offered an autonomous quota to the EU, not subject to any compensation. The size of the quota is supposed to represent average harvest in the area by third countries in the 10-year period up to 1977. Thus, in total, the EU has 7.91% of the cod quota in the Barents Sea⁶. In reality, Norway accepted that the vastly increased access to the EU seafood market justified a modestly

⁶ A few other third countries also have cod quotas in the Barents Sea. Moreover, the EU has (small) quotas also for some other species, but cod is by far most important (see NFD, 2020).

increased EU fishery in the NEZ. A fishery which should be compensated to Norway only if EU resources are available for exchange.

In the Barents Sea, the UK has the largest share of the EU quota with 46.9%, followed by Spain and Portugal each with 13.5%, Germany (12.1%) and France (11.1%). In the Svalbard Protection Zone, Spain has the largest share with 42.8%, followed by Germany (18.5%), the UK (12%), Portugal (8.9%), France (8.3%) and Poland (8.2%). A small amount (1.3%) is reserved for the remainder EU Member States. When we combine the two areas, the UK has a 2.39% share of the TAC. In comparison, Spain has 2.17%.

As noted, the TAC for 2020 is 745,000 tonnes. The annual TAC is adjusted for coastal cod (Norway and Russia), and a quota for research purposes. After these adjustments, the 2020 quota amounts to 703,000 tonnes of which Norway receives 306,277 tonnes, Russia 294,277 tonnes and third countries 102,446 tonnes. The third country quota consists of 28,960 tonnes for the SPZ, 42,747 tonnes for Norway and 30,739 tonnes for Russia, which may be used in agreements with third countries.

Of the Norwegian third country quota, 21,518 tonnes are allocated to the EU⁷, 4,945 tonnes to the Faroe Islands, 4,000 tonnes to Greenland and 3,184 tonnes to Iceland⁸. If a third country does not fully utilise its quota, the remainder will be transferred to Norwegian fishermen. Russia also has third country agreements with the Faroe Islands, Greenland and Iceland, but not with the EU. EU vessels are not permitted to harvest in the Russian economic zone.

According to Norwegian legislation a quota in the NEZ can be harvested in the SPZ, but not the other way around. The EU has two separate legal bases for its fishery of cod in the SPZ and in the NEZ. (CR 2020/123). A quota in SPZ cannot automatically be fished in the NEZ - or vice versa. However, the EU allocation system has an inbuilt flexibility through the "swapping" practice. A quantity of cod in the SPZ can for example be exchanged for a quantity of cod in the NEZ. The member state flag of the EU vessel is less relevant. As long as the total quota of cod is not exceeded, Norwegian enforcement authorities do not intervene.

2. UK AND EU COD FISHERIES IN THE BARENTS SEA

We now turn to EU cod fisheries in the Barents Sea, with an emphasis on the UK. This will be based on data from different sources.

⁷ The discerning reader will note that although the relative quota in the NEZ is larger than in the SPZ, the absolute quota is smaller. This is because the EU cannot offer full quota exchanges for 4.14% so that the quota is reduced with the surplus available for Norwegian fishermen. As noted, there is no exchange for the SPZ quota.

⁸ The remainder, 9,000 tonnes, is allocated to Norwegian fishermen.

Since 2015, the EU quota in the NEZ has varied between 17,547 tonnes and 23,008 tonnes (Table 1). The UK quota in the last four years was just over 10,000 tonnes. Harvest is less than quota for all years.

Table 1. EU and UK Cod Quotas, UK Harvests and Vessel Participation in the Norwegian Economic Zone in the Barents Sea 2015-20. Tonnes

	2015	2016	2017	2018	2019	2020
EU quota (tonnes)	20,524	17,547	23,002	23,008	21,518	21,518
-Of which UK (tonnes)	9,622	8,225	10,784	10,784	10,087	10,087
UK harvest (tonnes)	6,095	4,883	6,806	6,817	5,965	
UK vessels	4	3	4	3	2	

Sources:

-EU for quotas.

-Directorate of Fisheries, Norway for UK harvest and vessel numbers.

Quotas and harvests in the SPZ are presented in Table 2. As noted above, Spain and Germany have the largest quota of EU countries, so their quotas are given in addition to the UK. It is interesting to note that for all years, the UK harvest exceeds its quota. When looking at harvesting it is important to bear in mind that quota in the NEZ can be harvested in the SPZ, but not vice versa, as explained above. This – in addition to the swapping-practice between EU member states – is likely to be one of the reasons why the NEZ quota is not fully harvested.

Table 2. Cod Quotas and Harvests in the Svalbard Protection Zone Areas I and IIb 2015-20. Tonnes

	2015	2016	2017	2018	2019	2020
EU quota	33,176	33,176	33,025	29,218	26,805	27,295
-Of which Spain	13,283	13,082	13,152	12,182	11,562	11,688
-Of which Germany	6,656	6,450	6,554	5,549	4,907	5,038
-Of which UK	4,446	4,298	4,374	3,653	3,193	3,286
UK harvest	6,713	8,614	9,488	4,054	5,051	
UK vessels	2	2	3	2	2	

-EU for quotas.

-Directorate of Fisheries, Norway for harvest and vessel numbers.

The information from Tables 1 and 2 is combined in Table 3, which gives the total UK cod quota and total harvest in the Barents Sea. When considering catches by country, it must be noted

that there are exchanges of quota between EU countries although we do not have information about the extent of such exchanges. There may also be overharvesting in some years.⁹

In 2016 and 2017, the UK harvest exceeded the combined NEZ and SPZ quota, which implies that the UK must have exchanged its quota with other countries although there might have been some overharvesting as well. Quota utilisation was lower in the last two years of the data period. This suggests that for these years a share of the UK quota was given up for exchange.

Table 3. UK Total Quota, Total Harvest and UK Vessels in the Barents Sea (NEZ plus SPZ) 2015-20. Tonnes. Quota and Harvest in Tonnes, Vessels in Numbers

	2015	2016	2017	2018	2019	2020
Total UK quota	14,068	12,523	15,158	14,437	13,280	13,373
Total UK harvest	12,808	13,497	16,294	10,871	11,016	
UK vessels	4	3	4	3	2	

We also have quota and harvest data from the Fish Producers' Organisation Ltd (FPO), a UK producer organisation. Fishing companies operating in the Barents Sea cod fishery are members of the FOP. Their data are presented in Table 4. The FPO uses the term "initial allocation", which must be interpreted to mean the same as quota.

Table 4. UK Initial Allocations and Harvests in the NEZ, SPZ and Total 2016-19. Tonnes.

	2016	2017	2018	2019
NEZ				
Initial allocation	8,224	9,326	11,086	9,544
Harvest	4,989	6,949	6,805	5,909
SPZ				
Initial allocation	4,402	4,373	3,551	3,193
Harvest	8,759	9,638	4,923	5,164
Totals				
Total initial allocation	12,626	13,699	14,637	12,737
Total harvest	13,748	16,587	11,728	11,073

Source: The Fish Producers' Organisation Ltd.

Overall, there is good correspondence between the two data sets, although two differences can be noted. For 2017 in the NEZ, initial allocation was 9,326 tonnes (Table 4), while according to

⁹ The EU catch in the NEZ exceeded that quota for both 2018 and 2019. In 2018, while the EU quota was 23,008 tonnes, the catch was 25,572 tonnes; in 2019, the EU catch was 24,985 tonnes while the quota was 21,518 tonnes. Due to uncertainty about the quality of electronic reporting the fishery has not been stopped even if registered catches exceeded the quota. From 2020 Norway will stop the fishery despite such uncertainty. Source: NFD (2020), Table 5.9.

the EU Commission, the UK quota was 10,784 tonnes (Table 1). According to the FPO, an amount of quota had to be used as compensation for historical quota swaps. It is also noticeable that according to the FPO, the 2018 SPZ harvest was 4,923 tonnes, while it was 3,653 tonnes according to Norwegian figures. We do not know the reason for this discrepancy.

The same vessels operate in both the SPZ and the NEZ. The number of UK vessels in the fishery has declined from four in 2017, to three in 2018 and only two in 2019. According to industry sources, in 2020 three trawlers are active in the cod fishery, although one is a fresh fish trawler that is only active for a short period of time. Based on the tables above, overall the quota was exceeded in both 2016-17, while quotas were not fully utilised in 2018-19. As a new trawler became part of the UK fleet in 2019, it is believed that quota utilisation will increase in 2020.

The vessels in question are registered in Hull/Grimsby, where landings are delivered and subject to further processing (UKfisheries, 2020). The trawlers are operated by a company owned by Dutch and Icelandic interests (Undercurrentnews, 2020). The issue of foreign owned quotas is considered a contentious issue by some in the UK (Barnes & Morris, 2020). As part of the Brexit process, the UK is preparing to strengthen the fisheries economic link of license conditions in England and Scotland (Defra, 2020). A recent proposal from DEFRA aims at increasing the economic link to the UK of UK quotas by lifting the landing obligation to 70 % of the catch¹⁰. Its aim is to “*ensure that UK registered vessels including foreign owned vessels, fishing for UK quota produce genuine economic benefits for UK coastal communities dependent on fisheries and fisheries related industries.*” DEFRA does not in this proposal distinguish between British-owned and foreign owned vessels.¹¹

In the case of the Barents Sea cod fishery, as noted, the vessels in question are operated out of Hull/Grimsby and the landings are of great importance for the fish processing industry in the area. Moreover, according to industry sources, a majority of the crew members comes from the local area where much of the supplies for the vessels is also sourced. Thus, it appears that the fishery gives both direct and indirect economic effects to the area so that the “fisheries economic link” to the UK economy of the quotas is quite important.

¹⁰ This pertains to England rather than the whole of the UK. Scotland has already taken measures to strengthen economic links in their fisheries.

¹¹ This is part of a larger legal and political question, namely if two of the four freedoms in EU law, the unlimited Right of establishment and the Right of Transfer of capital, post Brexit, shall be limited to companies where the beneficial owners are British. It will not be in line with British imperial history after the repeal of the Navigation Act of 1851, but it cannot be excluded that the UK in the future will follow the example of, e.g., Norway and Iceland concerning exploitation of natural resources. This will be unwelcome news for foreign owned fishing vessel companies, but also for foreign owned fish farmers.

3. ANALYSIS OF POST-BREXIT EU QUOTA SHARING IN THE BARENTS SEA

When considering the post-Brexit situation, one must bear in mind that in the Barents Sea, the EU quota of 2.9% in the NEZ is subject to quota exchange in the North Sea while the 1.24% quota is subject to quota exchange in areas other than the North Sea. As noted above, the quota in the SPZ is autonomous and does not involve any quota exchange.

An implication of this is that, if the UK is to keep her quota in the NEZ, the UK must offer Norway a suitable exchange. As the quota in the SPZ is autonomous, no exchange is required. The question thus becomes whether the UK will be willing to give up quotas elsewhere or offer other side-payments in order to maintain her quota in the NEZ.

As pointed out above, the UK may in principle act unilaterally in the SPZ. Svalbard is not mentioned in the newly signed framework agreement between Norway and the UK. However, in article two of the agreement, “*Area of application*”, this is described as “...waters ... of which they are entitled to exercise sovereign rights and jurisdiction” (Government of Norway, 2020). It is to be expected that the SPZ was in the mindsets of the negotiators, even if not reflected in the text. To the best of our knowledge, the legal difference between Norway and the UK on the interpretation of the Paris Treaty concerns the *right* of Norway to exploit the resources to its own benefit, not the fact that the SPZ is under Norwegian jurisdiction and that Norway has a management responsibility.

A continued UK presence in the SPZ in accordance with “historical rights” is probably expected by Norwegian authorities. The EU, on its side, will have to forgo the historical quotas of the UK from its own quota for 2021. It cannot, and will presumably not attempt to, claim to be a “successor state” to the UK in the SPZ. For the UK, the cod quota in the SPZ may be included in the fisheries agreement presently under discussion between the EU and UK, or the UK may enter into a bilateral arrangement with Norway.

There is, however, also the question whether it is profitable to keep a quota in the SPZ without a quota in the NEZ. The SPZ quota would probably allow only one trawler to operate profitably, although this also depends on several other variables. It would probably not be an option for the UK to offer its SPZ quota to other countries in exchange for quotas or other payments. According to Norway’s view the historic rights are created by the past performance of each country’s fishermen and we do not know of any mechanism making them transferable.

As the UK quota in the NEZ is part of the EU quota, it might seem natural that the EU would have “first right of refusal” in case of any permanent exchange of quota. However, in principle there should be no reason why the UK could not exchange quota shares with Norway as well, because in the future the UK will have to provide exchanges for the cod quota in the NEZ.

We can envisage at least three alternative scenarios for the UK cod quotas post-Brexit:

- I. Status quo: The UK keeps its current share of cod quotas in the SPZ and the NEZ in the Barents Sea. This implies that the UK will compensate Norway for the quota in the NEZ.
- II. The UK transfers quota shares with Norway, i.e., UK quota shares in the SPZ and NEZ are partly or fully transferred to Norway, obviously against Norwegian quota reduction in UK waters or other type of compensation.
- III. The UK transfers quota shares for cod to the EU, again for some compensation.

Alternative I, the status quo, would imply the UK keeping its catch shares in the NEZ and SPZ, giving a 2.39% share of the total cod TAC. Cod are important products in the UK fish market so it would be in the interest of the UK to ensure the supply of this product. The cod stock in the North Sea is depleted and catches have declined, a situation that is expected to continue for the foreseeable future (ICES, 2019). This implies that the Barents Sea is the most reliable source for “domestic” supply of cod to the UK market.

Maintaining these quotas would imply that the UK would need to provide a balanced quota exchange with Norway for the quota in the NEZ. In recent years, the UK cod quota in the NEZ has been a bit more than 10,000 tonnes per year. In principle, this would be perfectly feasible when considering the fisheries relationship between the UK and Norway, in particular quota exchanges in the North Sea and access to the UK EEZ by Norwegian fishermen (Bjørndal & Munro, 2020).

There are, however, reasons why there might be changes in quota shares. Other EU countries as well as Norway may be interested in taking over parts of or all the UK quotas. There may also be reasons why the UK may be willing, or at least consider, giving up quotas in the Barents Sea. First, in recent years the UK has not fully utilised the Barents Sea quotas but used parts of it for “swaps”. Second, while the vessels in question operate out of Hull, are predominantly manned by UK fishermen and the fish is landed in the Grimsby/Hull area, they are foreign owned so that some of the value-added may accrue to third countries. Third, quotas in the Barents Sea could be given up in exchange, for example, for larger quotas in the North Sea.

Let us consider alternative II. It would be advantageous for Norway to increase its quota share for cod in the Barents Sea. Also, as this would manifest as a marginal increase in vessel quotas, it would be very profitable for the vessels in question. Moreover, it would mean the UK could reduce compensation to Norway for the NEZ quota which is the largest share of the UK quota.

On the other hand, the UK already has a strong negotiating position vis-à-vis Norway in the North Sea and may claim that Norway is already being over-compensated. Even if the UK keeps the 10,000 tonnes of cod in the Barents Sea, Norway will have a challenge in finding “means of payment” to justify the large Norwegian fishery in the UK EEZ. Overall, we do not think it is very likely that the UK will transfer quota shares to Norway.

Importantly, it may also be argued that this matter may be determined outside of the fisheries arena, namely when it comes to trade. In terms of UK-Norway relations, Norway may be willing to prolong the present access for UK vessels in the NEZ and to cod quotas in the Barents Sea under the condition that the UK prolongs the present access to the UK market for Norwegian codfish, irrespective of degree of processing.

As for alternative III, some of the EU27 countries – in particular Spain - may be more than happy to assume UK quota shares in the Barents Sea. As is well known, there is conflict about post-Brexit fisheries management in the North Sea, where the UK demands larger quotas for many species and “control” of access by EU fleets to the British EEZ (Bjørndal, & Munro, 2020). Although the UK would claim that they are entitled to this based on zonal attachment and the Law of the Sea, it would strengthen the UK negotiation position if additional cod quotas were offered to the EU. In a sense, this also implies that the agreement was made based on trade issues rather than fisheries. On the other hand, we must also bear in mind that the EU has had problems coming up with quota exchange for cod in the Barents Sea and that, if anything, this will become even more challenging after Brexit. Quite likely, in this case the EU would consider the internal quota balance between relevant Member States.

4. SUMMARY

As we have seen, the issue of UK cod quotas in the NEZ and the SPZ post-Brexit raises a number of challenging issues. This makes it very difficult to “predict” the eventual outcome. Having said that, it may be the case that the UK will at least consider giving up quota shares in the Barents Sea. First, the quotas have not been fully fished for the past couple of years by UK vessels, but were partly utilised by means of swaps with other countries or across year. However, quota utilisation may be higher in 2020 than in 2018-19. Moreover, even if the vessels are foreign owned, the operations appear to be strongly integrated in the British economy; the catches are mainly landed and sold in the UK, the vessels are crewed by British fishermen, and the vessels are managed and equipped from the UK. Nevertheless, it may be questioned whether the UK should give up quotas elsewhere for the benefit of third countries. Although in principle the UK could keep her quota in the SPZ and give up the NEZ quota, we believe this is an unlikely scenario. Thus, it seems natural that the UK will either keep all quotas or give them up in an exchange agreement.

If the UK is to keep the quotas, an equal exchange must be provided for the NEZ quota. In principle, Norway could be compensated through exchange in the UK EEZ in the North Sea, including access. When considering the current situation in the North Sea, the UK can easily provide the required exchange to Norway (Bjørndal & Munro, 2020).

However, it is also possible that the compensation could be in the form of duty-free access for Norwegian fish products to the UK which is very valuable to Norway. This will require that both Norway and the UK accept the principle of exchanging fish for trade. In fact, UK Fisheries Ltd, representing the UK's long-distance fleet, has suggested that the UK should leverage the use of its market access to gain access to quotas (Undercurrentnews, 2020).

It is obvious that several EU countries would be interested in the UK cod quotas. In view of the UK-EU fisheries positions, it is not a likely proposition that the UK could be compensated by larger quotas in EU waters. Therefore, compensation to the UK for giving up the cod quotas to the EU would be in other areas, such as trade. Moreover, it may be questioned whether the EU is able to come up with an equal exchange for a larger quota in the NEZ, although this is not an issue for the SPZ.

In conclusion, we may in fact be witnessing a trade-negotiation game where cod quotas enter as side payments, however, camouflaged as a strengthening of the fisheries relationship.

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The fishery for Northeast Atlantic cod (*Gadus morhua*) in the Barents Sea is the largest cod fishery in the world. For historical reasons, the EU has quotas in this fishery that are allocated among the member states according to an allocation key that has remained constant for decades. Of the EU countries, the UK has the largest quota share, followed by Spain. In this paper we analyse whether Brexit may lead to changes in quota sharing between the UK and the EU as well as between Norway and the UK.

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