OPTIONS PAPER – DRAFT

OCTOBER 2021

NORTH ATLANTIC PELAGIC ADVOCACY GROUP

The collective voice of the market is calling for change: will Coastal States listen?

Summary

Since 1997, there have only been 4 years (2006-2009) where North East Atlantic coastal states have been in agreement on allocation of stock total allowable catch (TAC) for three commercially important Northeast Atlantic pelagic fisheries. Since this time, the combined unilateral TACs that have subsequently been set have significantly exceeded the scientific advice.

Currently, due to lack of political agreement, the TACs for Northeast Atlantic mackerel, Atlanto-Scandian herring and blue whiting are 130-140% of the scientific advice.

The most recent ICES advice reveals that the advised 2022 catch for Northeast Atlantic mackerel is no more than 794,920 tonnes; a 6.7% reduction from the 2021 catch advice. This reflects a decrease in the estimated spawning-stock size in 2021 of 3,510,849 tonnes from 3,938,555 tonnes in 2020 (10.9% decrease). The advised 2022 catch for Atlanto-Scandian herring is no more than 598,588 tonnes; an 8% reduction from the 2021 catch advice, while the advised 2022 catch for blue whiting is no more than 752,736 tonnes; a 19% reduction from the 2021 catch advice. For both species biomass is showing positive signs, but importantly, current fishing pressure is above a level that will ensure long term sustainability of the stocks.

As a consequence of this overfishing, and the absence of a long-term management strategy, the Marine Stewardship Council (MSC) certificates in this region for these fisheries were suspended. This greatly impacted supply chain companies who had made public commitments to sourcing sustainable seafood.

The issue is political, rather than biomass-based. The coastal States are meeting in late October and, if willing, can do something they haven't done since 2012 - agree on catch shares that follow the ICES advice. The supply chain will be watching with interest.

Summary of Recommendations

- An allocation mechanism is urgently needed to be agreed and utilised by the Coastal States/NEAFC.
- Unilateral quotas should not be an option. It has been suggested that if coastal states do not come to an agreement on the sharing of the TAC, the TAC should be set to zero. Alternatively, interim or default allocation keys could be applied to a reduced TAC for years when coastal states fail to reach agreement.
- The NEAFC Guidelines for Coastal State Consultations in the North East Atlantic provides for a variety of dispute settlement avenues, but the weakness is the non-binding nature and apparent reluctance by the Coastal States to employ.
- It is recommended that the Coastal States adopt NEAFC Guidelines for Coastal State Consultations in the North East Atlantic in their discussions, and both the Coastal States and NEAFC employ a secondary, compulsory binding dispute settlement system if agreement is not reached.
- A cap on catching in international waters would not compensate for the current overfishing, but could act to constrain further expansions.

Background to NAPA

The North Atlantic Pelagic Advocacy Group (NAPA) was formed in 2019 in response to the ongoing dispute over mackerel quota allocation in the North East Atlantic which resulted in annual catches well in excess of the scientific advice and the eventual suspension of all mackerel MSC certificates in this region. In late 2020, blue whiting and Atlanto-Scandian herring followed mackerel in losing their MSC certifications – as with mackerel, due entirely to the emergent trend for unilateral quota-setting above the scientific advice.

NAPA was created to advocate for long-term, sustainable management of Northeast Atlantic pelagic fisheries, and is sector-wide, multi-stakeholder, global and non-competitive. Since its inception, NAPA has attracted nearly 50 members - covering food service businesses, processors, buyers and retailers from Europe, Africa and Japan. As a collective of businesses with a major share of North East Atlantic pelagic purchasing, NAPA is directly invested in the responsible, science-driven management of these fisheries.

To achieve this, NAPA is seeking an agreement on total allowable catches for Northeast Atlantic mackerel, Atlanto-Scandian herring, and Northeast Atlantic blue whiting in line with scientific advice, and the implementation of a long-term science-based management agreement. Specifically, we are calling on the Coastal States involved in North East Atlantic pelagic fisheries to:

- **Follow the ICES advice -** Ensure that the overall catch for each stock does not exceed scientific advice.
- **Implement Management Plans -** Multi-annual management should be the underlying approach by default. That includes stable sharing arrangements and harvest strategies that include precautionary harvest control rules for setting catch limits, a periodic review process, and any necessary mechanisms to transition from previous arrangements to a new system.
- **Resolving the allocation issues around these stocks -** Prioritise and re-establish the NEAFC WG on Allocation as a first step. In addition, a dispute resolution mechanism should be employed at both the coastal States meeting and NEAFC.

Aims of this Paper

As the barriers are political, the aim of this paper is to support coastal States in achieving our goals by demonstrating some of the options available to them.

We do this by exploring the options available around:

1. Agreeing an appropriate allocation mechanism;
2. Employing a dispute resolution mechanism; and
3. Considering a cap on international catches.

1. Agreeing an appropriate allocation mechanism

Background

Whilst the Coastal States have not been able to agree on TAC allocation, there is evidence that the Coastal States have sought to respond to the ICES advice within their own unilaterally-set TACs. Although established decision-making processes exist, it is apparent that they are not functioning in an effective, precautionary manner when it comes to TACs.

We are calling on the coastal States to prioritise resolving the allocation issues around these stocks and re-establish the NEAFC Working Group (WG) on Allocation as a first step. If successful, we hope to see decision-making processes that are responsive to serious issues, as demonstrated by coastal states setting TACs that are not unilateral and that do not exceed ICES advice.

What is Allocation?

The term "allocation" refers to the distribution of the opportunity to participate in a fishery among user groups or individuals. Allocation of fishery resources is challenging due to the perceptions of fairness that arise with allocation decisions.

Initial allocations are commonly done on the basis of catch history, but because fisheries management, participation and the conditions surrounding fisheries are not static, allocation decisions ideally need to be considered in the context of adaptive management[1].

A 'good' allocation mechanism will ensure that no participant (or coastal State in this case) is worse off in acting cooperatively than in acting inconsistently within an international cooperation framework. In the case of international fisheries, agreements must be self-enforcing to be stable as there is no third party to ensure enforcement of the agreement.

Allocation Mechanisms in RFMOs

The UN Fish Stocks Agreement defines the functions of an effective RFMO; one of which is to "agree, as appropriate, on participatory rights such as allocations of allowable catch or levels of fishing effort" (Article 10(b)).

Most RFMOs tend to base allocation schemes on historical catch records, zonal attachment, or a combination of these.

For example, the Common Fisheries Policy (CFP) uses historic track record as one of the key factors in determining the distribution of the EU's quota among Member States. Fishing opportunities are allocated among the Member States in such a way as to ensure the relative stability of the fishing activities of each Member State for each stock concerned. This principle of relative stability, which is based in particular on historical catch levels, requires the maintenance of a fixed percentage of authorised fishing effort for the main commercial species for each Member State.

Historical criteria are the easiest to use as a basis for allocation because it is the simplest measure to objectively quantify. However, such mechanisms can be problematic for vessels that were inactive for any reason during the agreed reference period. It also favours those fleets that may have contributed to over-exploitation of stocks in the past, and penalises those countries that may have a legitimate interest in the fishery and have not over-exploited it in the past. Furthermore, it reflects

[1] https://media.fisheries.noaa.gov/dam-migration/01-119-02.pdf

past fishing patterns (relating to stock distribution and fleet specialisation) and may not reflect contemporary stock abundance and distribution.

Zonal attachment of a stock is the share of the stock residing within a particular country's economic zone, if necessary weighted by the time it spends in a country's zone over a year. This, then, determines the share that each country gets of the total catch quota for that stock.

Zonal attachment may not be an appropriate way of allocating the TAC where a country has only a minor interest in all the stocks under consideration, as it would give the coastal state with a minor interest a worse outcome than if it were to pursue its own interest in the absence of cooperation. This is arguably the case for Iceland and the Faroe Islands for mackerel, herring and blue whiting. In such cases, cooperation can still be achieved, but probably through providing more generous shares of quotas than zonal attachment would prescribe.

Changes in fish migration patterns can be caused by changes in environmental conditions and increases or decreases in spawning stock biomass (among other factors). These types of changes can cause problems for agreements based on zonal attachment, which are based on the distribution of the stock at a particular point in time. The disputes over mackerel, herring and blue whiting in the North-East Atlantic are examples of this.

NEAFC Allocations

Mackerel

The main fishery for mackerel before the general extension of fishery EEZs to 200 miles in 1977 was in the North Sea. The zonal attachment of the mackerel in the North Sea was used as the basis for agreement between the EU and Norway on the sharing of mackerel. Norway and the EU dealt with other parties under bilateral agreements from 1977 to 1999. In practice Norway and the EU laid down a "reference TAC" which in addition to quotas for Norway and the EU, also includes a fixed quantity for the Faroe Islands.

An expansion of the unregulated mackerel fishery in international waters in the NE Atlantic in the 1990s raised concern in the three affected coastal states, the EU, Faroe Islands and Norway. At an extraordinary annual meeting in NEAFC in February 1999, they therefore put forward a joint proposal for regulating the mackerel fishery in international waters. The proposal was adopted against the votes of the Russian Federation and Iceland.

The submission of the joint coastal proposal marked the beginning of a new trilateral management regime for mackerel in the North East Atlantic from 2000. In this regime annual quota distributions were agreed based on a fixed allocation key up to and including 2009. From 2008 to 2013 no agreement was reached on the total TAC and the TAC-sharing among the mackerel fishing countries. From 2014 to 2020, the EU, Norway, and the Faroe Islands agreed on a share between them and set aside 15.6 percent for Iceland, Russia, and Greenland to share. But in recent years, Iceland alone has fished enough mackerel to account for about 16.5 percent of the limit set by ICES.

In 2021, the Norwegian government to set a unilateral quota for Northeast Atlantic mackerel. They increased the Norwegian national catch of mackerel by 55% from 106,456 tonnes up to 298,299 tonnes. This increase was matched by the Faroe Islands (table 1).

Table 1: 2021 Mackerel TACs

		TAC								ICES Advice
		UK	EU	Norway	Faroes	Iceland	Greenland	Russia	TOTAL	
NE Atlantic Mackerel	tonnes	222,288	200,179	298,299	167,048	140,627	60,000	120,423	1,208,864	852,284
	% of Advice	26.1	23.5	35.0	19.6	16.5	7.0	14.1	**141.8**	

Atlanto-Scandian herring

Discussions around the allocation of the Atlanto-Scandian herring TAC started when the stock in the early nineties started to migrate out of Norwegian and Russian waters, following the recruitment of the large 1983 year class and good recruitment in the early 1990s. It was agreed between the Coastal States in 1995 to have an analysis undertaken by a group composed of scientists and a mandate from Iceland, Norway, Faroe Islands and the Soviet Union on the zonal attachment of the Atlanto-Scandian herring. This was the basis for an agreement between the 4 coastal states for 1996.

The EU set its own quota for 1996 (about 14% of the TAC). This led to new negotiations, which included the EU. An agreement was reached for 1997, which gave the EU the status of coastal state and a substantial allocation (8.4%).

In 2002 Norway opted out of the agreement because of dissatisfaction with the allocation key and there was no allocation agreement in the year 2003–2006. A new agreement was reached in 2007, giving Norway some compensation. There have been no quota sharing agreements in place since 2012[2], and the combined intended catch from the involved nations has exceeded scientific advice every year since.

Blue Whiting

The fishery of blue whiting started in the 1970s. Russia and Norway primarily fished this species. Russia did not fish in its own waters, but mainly in the Faroe Islands and the Norwegian zone. The Faroe Islands, the EU and Iceland have since then also caught large quantities of blue whiting. Blue whiting in the North East Atlantic was unregulated for many years, though NEAFC discussed the problem in the 1980s and 1990s but there was no interest in discussing allocations until the late 1990s. A NEAFC Working Group analysed the zonal attachment in 1999 and the report was discussed in the following years. In 2006 an allocation agreement was reached for 2007 and onwards. Coastal states requested a further study on the zonal attachment of the stock in 2009. As a result of the study the EU indicated its intention to request a re-evaluation of the allocation of the TAC, and in 2015 the allocation arrangement broke down, with coastal states setting unilateral quotas.

Current NEAFC Situation regarding Allocations

Fish stocks in the NEAFC area fall into three different categories (primarily within NEAFC regulatory area; in regulatory area and single coastal State EEZ; or in the regulatory area and the EEZs of several coastal states) which affects the management arrangements for each.

NE Atlantic mackerel, Atlanto-Scandian herring and blue whiting fall into the last category. NEAFC takes management measures for the part of the stock that occurs within the Regulatory Area, but only after the relevant coastal states have agreed on TACs and allocations outside of NEAFC.

[2] In 2012, the Faroe Islands opted out and set its own quota. This led to sanctions from the EU and Norway against the Faroe Islands. The Faroe Islands set a quota for herring at a lower level than in 2013 and, in consequence, sanctions against the Faroe Islands were revoked.

The result is that NEAFC's current role is relatively limited. The coastal states take the main decisions with NEAFC fisheries conservation and management measures only applying to the portion of the stock within the NEAFC Regulatory Area (unless parties agree that NEAFC measures should also apply to areas within national jurisdiction).

However, this process is not effective and the repeated and frequent failures of coastal States to agree on allocations were highlighted by the First (2006) and Second (2014) NEAFC Performance Reviews.

The second review recommended that NEAFC agrees on and applies objective criteria for determining allocations. At an extraordinary NEAFC meeting in October 2015, the Commission agreed to establish Working groups on a framework for negotiations and on allocation criteria, which aimed to help to address the contentious issue of how to share these pelagic fish stocks.

The Allocation Working group agreed that a major criterion in allocation exercises should be zonal attachment[3], based on the biomass in each zone, integrated over the whole year. Other criteria were discussed but there was no consensus on the definition or description of criteria, nor on explicit weighting of the different criteria.

At the 2017 NEAFC meeting several parties acknowledged that the task of finding a predetermined solution on allocation was a very ambitious one, and noted the policy and political dimension added to the difficulty. While acknowledging useful outputs in terms of development of thinking, it was agreed that there did not seem to be value in continuing with formal meetings in 2018. At the 2019 Annual Meeting it was agreed to discontinue the Working Group on Allocation Criteria until an opportunity or need arose to establish a new group.

Recommendations
An allocation mechanism is urgently needed to be agreed and utilised by the Coastal States/NEAFC.

Success will be founded on cooperation, with agreed processes and procedures for TAC-setting and quota allocation that can respond to shifts in stock distribution and biomass, coupled with quota trading and exchange mechanisms to balance quota availability with need (with built-in review periods), strong implementation and enforcement of regulations, an effective and responsive dispute resolution procedure, and supported by a strong science–policy interface.

NEAFC should also consider a specific procedure for allowing an independent review of allocation decisions. NEAFC and the Coastal States are lacking dispute settlement procedures.

Ultimately, all relevant parties must be involved and must come to an agreement on allocations - unilateral quotas should not be an option. One suggestion[4] is that if coastal states do not come to an agreement on the sharing of the TAC, the TAC should be set to zero. Alternatively, interim or default allocation keys could be applied to a reduced TAC for years when coastal states fail to reach agreement. Such arrangements should ensure that the benefits of being part of a cooperative arrangement are greater than the potential benefits of withdrawing from the arrangement.

[3] Zonal attachment is a way of defining how the amount of fish to be caught from a shared stock should be divided amongst the coastal states in whose waters the stock occurs. The zonal attachment of a stock is the share of the stock residing within a particular country's EEZ, weighted by the time it spends there over a year.
[4] https://www.diva-portal.org/smash/get/diva2:815984/FULLTEXT01.pdf

2. Employing a dispute resolution mechanism

Background
Fisheries negotiations by their very nature are complex and can, like the case in the Northeast Atlantic pelagic complex, involve multilateral concerns. Achieving satisfactory resolutions is a daunting task.

Dispute resolution mechanisms are widely used in fisheries negotiations, and have been incorporated into a number of fisheries agreements[5]. However, nearly all dispute resolution mechanisms are used as tools in the context of voluntary settlements, and thus, often serve as the foundation from which subsequent decisions are made.

Such negotiations that lack binding dispute resolution mechanisms are almost guaranteed to fail as a stock decreases because the result is a zero-sum game. That is, resolutions to disputes over who gets what piece of an ever-decreasing pie worsen the situation rather than actually settle it because, by "winning," parties likely hasten the stock decline.

Operation in NEAFC
In 2004, the EU proposed an amendment to the NEAFC Convention:

ARTICLE 18bis
The Commission shall make recommendations establishing procedures for the settlement of disputes arising under this Convention.

The EU also submitted a set of procedures for the settlement of disputes which incorporated a *fast-track dispute settlement procedure* which made it mandatory to explain the reasons for any objections and established procedures for setting up arbitration panels to settle disputes.

This was adopted at the Annual Meeting of the Commission in November 2004[6]. However, no arbitration panel has been used to date. The question of using the NEAFC dispute settlement procedures for disagreements on allocations has been mooted, but despite Contracting Parties of NEAFC agreeing on the procedures they did not want to use the NEAFC rules as coastal states.

As noted above (in the Allocation section) the Second (2014) NEAFC Performance Review recommended that NEAFC agrees on and applies objective criteria for determining allocations. At an extraordinary NEAFC meeting in October 2015, the Commission agreed to establish Working groups on a framework for negotiations and on allocation criteria, which aimed to help to address the contentious issue of how to share these pelagic fish stocks.

The former concluded its work in 2017, followed by the adoption by the Commission of Guidelines for Coastal State Consultations in the North East Atlantic and a Model Framework Arrangement.

While these documents are a step forward in finding more long-term stability for coastal State agreements, they are non-binding and have yet to be applied to allocation discussions. They remain untested and have not as yet resulted in an agreement that ensures adherence to the harvest strategy by the parties prosecuting the fishery.

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[5] For example, the Fisheries Framework Agreement Between the United Kingdom of Great Britain and Northern Ireland and The European Union
[6] See chapter 8 of the NEAFC Rules of Procedure

Operation in Coastal States Discussions

Coastal State arrangements for the management of the fisheries on Northeast Atlantic mackerel, Atlanto – Scandian herring and blue whiting are informal in the sense that they are formulated as annual recommendations and not as official agreements. Independent of the formal setup the arrangements play a central role in the management of the pelagic fisheries in the northeast Atlantic by being the forum for setting the TACs for the stocks concerned and the sharing of the TACs between the parties. These coastal States arrangements constitute the basis for NEAFC recommendations for fisheries in the NEAFC regulatory area and for bilateral arrangements and unilateral measures on the management of the stocks. This means that if the coastal States fail to reach an agreement on a management arrangement there will be no joint management of the fisheries concerned.

Despite the significance of these discussions, there is no dispute resolution mechanism nor even any non-binding guidelines.

Recommendation

The NEAFC Guidelines for Coastal State Consultations in the North East Atlantic provides for a variety of dispute settlement avenues, but the weakness is the non-binding nature and apparent reluctance by the Coastal States to employ.

It is recommended that the Coastal States adopt these guidelines in their discussions, and in both fora, if the parties are unable to resolve a dispute, a secondary, compulsory binding dispute settlement system is employed.

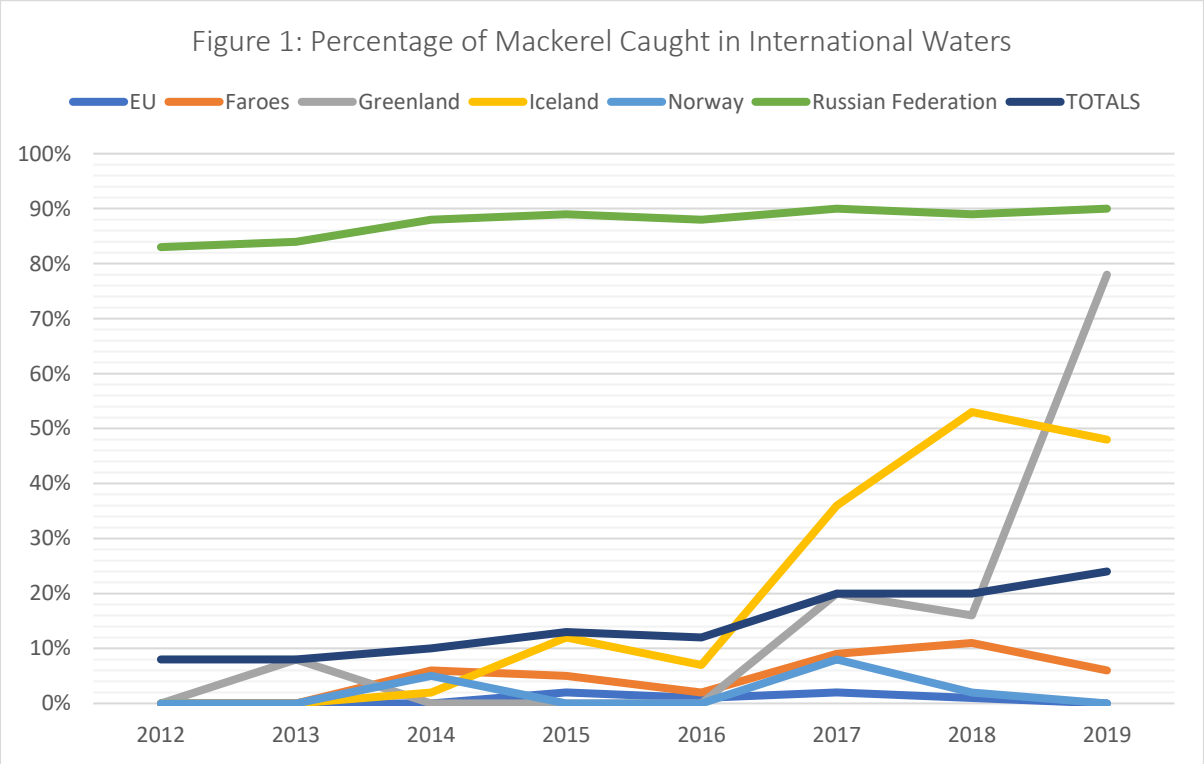
3. Considering a cap on international catches.

Background

There has been an increase in the percentage of mackerel and herring caught from international waters in the last decade (Figures 1 & 2; tables 2 & 3 in Annex 1).

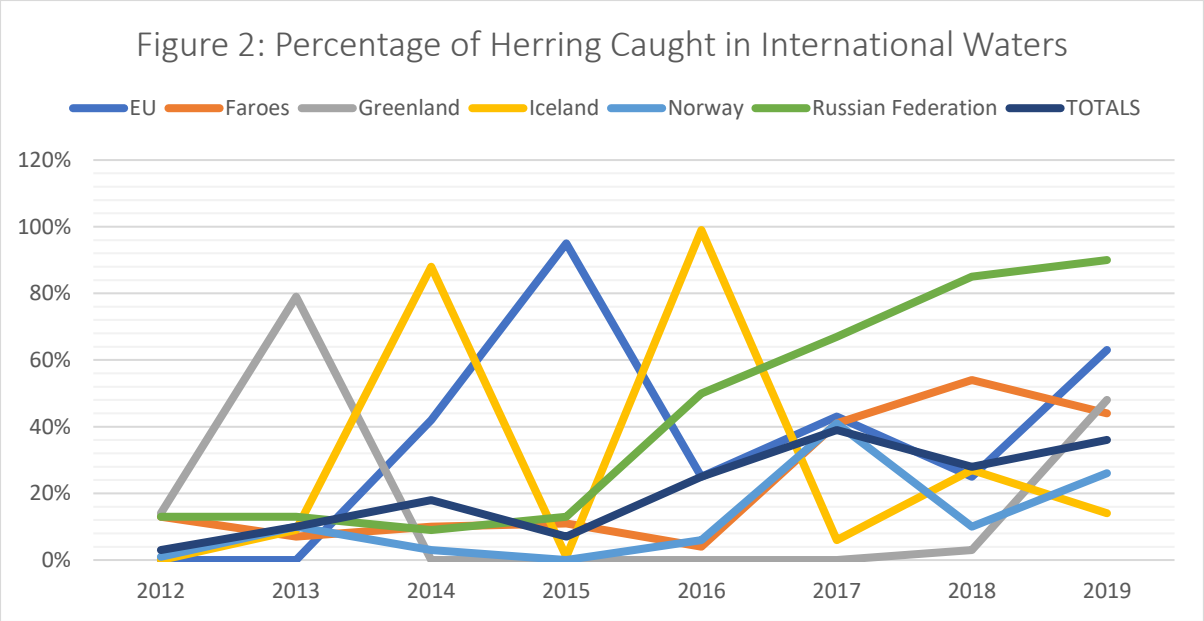
The volume of mackerel caught in international waters has steadily increased from 62,124mt in 2012 to 202,230mt; the percentage of total catch caught in international waters has increased from 8% to 24%.

Russian Federation catch in international waters has remained consistently high - between 80-90%, while EU, Faroes and Norway have remained consistently low – generally below 10%. Both Greenland and Iceland have seen the greatest variation – from 0% to 78% and 0% to 53% respectively.



The volume of herring caught in international waters has increased from 24,726mt in 2012 to 278,260mt; the percentage of total catch caught in international waters has increased from 3% to 36%.

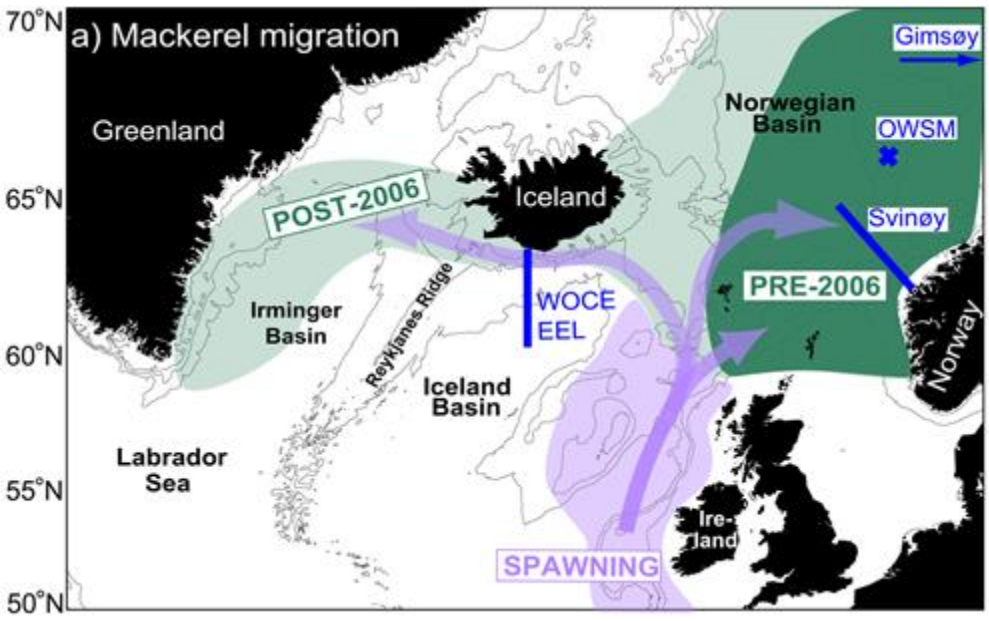
There was significant variation in the percentage of herring caught in international waters by coastal States; Iceland had the most extreme variation from 0% in 2012 to 99% in 2016.



Why the Increase?

A 2016 paper[7] found that the Northeast Atlantic mackerel stock had increased and expanded its summer feeding migration west- and northwards since 2006 (figure 3).

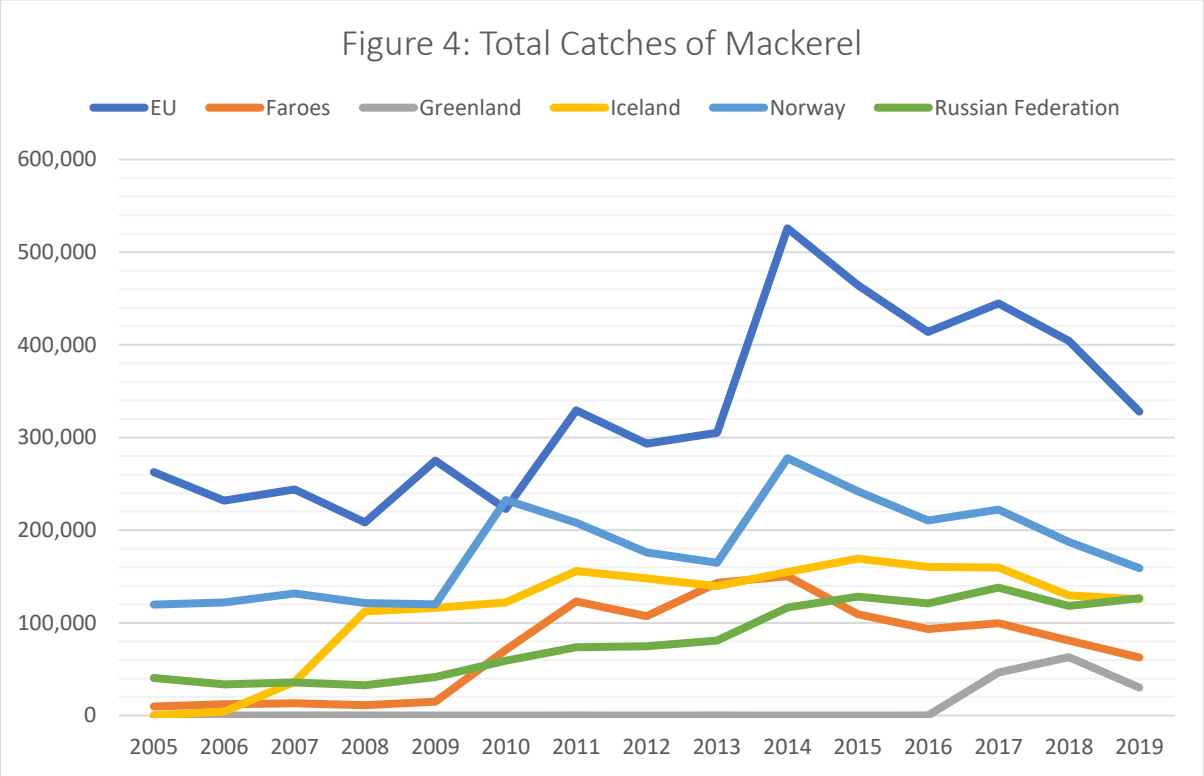
Figure 3: Mackerel spawning areas (purple shading) along the European shelf and the post-spawning and summer feeding migrations (purple arrows). The pre-2006 mackerel summer feeding areas are shown as dark green with the post-2006 expansion in light green.



It has been proposed that the increasing availability of mackerel in the waters of Iceland and the Faroe Islands, drove these coastal States to increase their catches. Iceland increased their national

[7] https://online.ucpress.edu/elementa/article/doi/10.12952/journal.elementa.000105/112913/Nutrient-driven-poleward-expansion-of-the

annual quota from 363 tonnes in 2005 to 112,353 tonnes in 2008, and the Faroe Islands increased theirs from 9,770 in 2005 to 122,985 tonnes in 2011 (Figure 4).

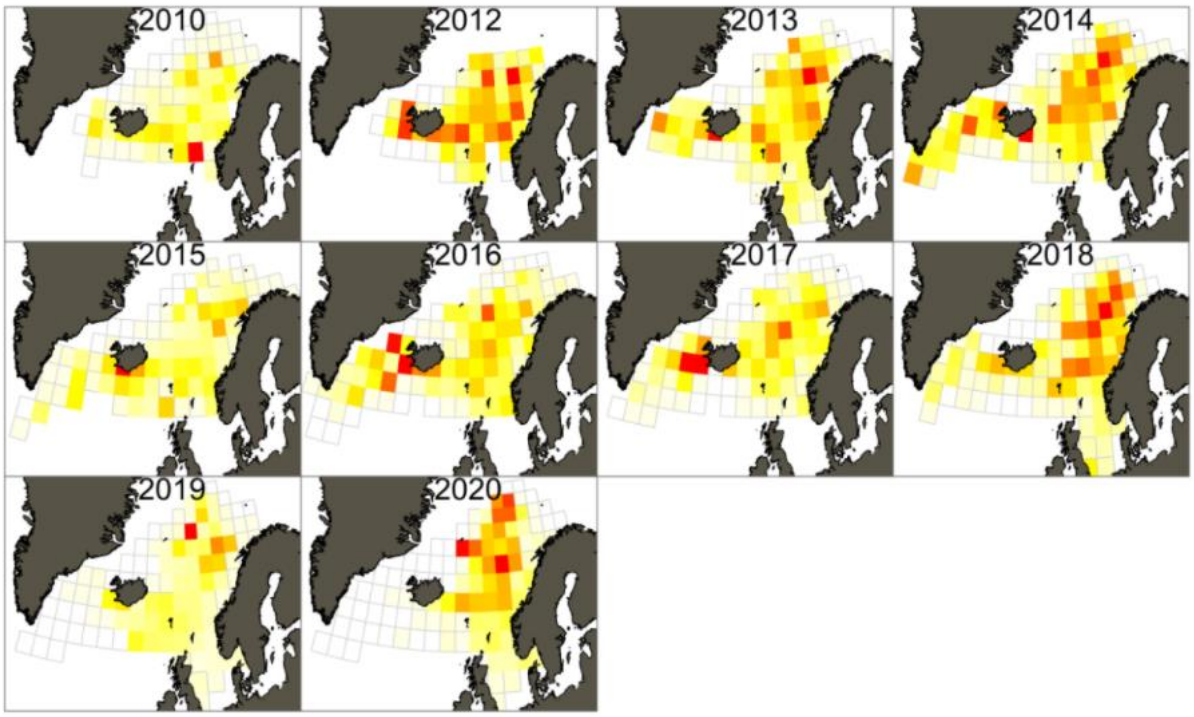


It has also been proposed that the increase in international catches, primarily by the 'new' countries Iceland and Greenland, has been driven by a retreat of mackerel eastwards from 2017 (figure 5); with the fisheries followed into international waters.

The percentage of mackerel caught in international waters by Iceland and Greenland certainly supports the migration hypothesis (figure 1); percentage caught in international waters increased significantly from 2016/17.

Figure 5: Annual distribution of mackerel. Colour scale goes from white (= 0) to red (= maximum value for the highest year).[8]

[8] Taken from the cruise report from the International Ecosystem Summer Survey in the Nordic Seas (IESSNS) 1stJuly – 4th August 2020



The easterly retreat has, to date, remained stable. In 2020 the cruise report from the International Ecosystem Summer Survey in the Nordic Seas (IESSNS) notes “mackerel had disappeared altogether from Greenland waters according to our survey results”.

The same report postulates two (not mutually exclusive) hypotheses for this ‘reverse migration’:

1) There was less mesozooplankton in Icelandic and Greenland waters in 2020 compared to previous years, which may have reduced mackerel feeding opportunities in the western area.
2) The temperature was 1-2°C lower in parts of Icelandic and Greenland waters in summer 2020 compared to 2019. But the report does note that this temperature should be warm enough for the mackerel to migrate to and feed in these areas.

Furthermore, the report notes that the increase of mackerel in the Norwegian Sea, particularly in the central and northern part of the Norwegian Sea, cannot be explained by improved feeding conditions, as the zooplankton biomasses was at similar levels to previous years. So, there was no obvious ‘pull’ eastwards.

Will the westerly migration occur again? It is difficult to predict, but it does suggest that an effective allocation mechanism needs to be flexible ands adaptive.

Concept

It has been proposed, by the UK Government (NEAFC, 2020) and the Blue Marine Foundation that a cap on catches in international waters could act to ‘contain’ the fishery and limit the ability to overfish.

The Northeast Atlantic Fisheries Commission (NEAFC) has employed this method before: in 2002, NEAFC set a cap on the international catch of many, though not all, deep-water species taken in bottom trawl fisheries in international waters of the NEAFC area. The cap, however, specified that the fishing effort was not to exceed the “highest level put into deep-sea fishing in previous years”.

Ultimately, this language allowed deep sea bottom trawl fisheries in the Northeast Atlantic to expand up to sevenfold and still be within the limit set! Greenpeace criticised this as a 'lowest common denominator' approach[9]. This suggest that any measure would need to be carefully worded to avoid unintended consequences.

The Northwest Atlantic Fisheries Organization (NAFO) also employs caps on international catches to manage the cod fishery; there is a 5% cap of catches in the NAFO regulatory area (i.e. international waters).

Recommendations

As noted in the introduction, the original NAPA Action plan concluded that a cap on catching in international waters be explored to determine whether this should be included as an additional focus in achieving our goals.

Table 5 in the annex, along with figures 6 and 7 demonstrate the projected catches[10] (using 2019 catch data) of various caps (5-20%). Table 4 summarises the overall percentage reduction of mackerel and herring catches in each of these scenarios. In summary, for herring, a larger cap allows for a larger catch in all the Coastal States, but even a 20% cap would provide a 15.9% reduction in total catch. The impact on mackerel catches is more varied: a 5% cap would, in theory, allow EU & Norway to increase their catch as they only catch a very small proportion in international waters. As the cap increases, the Faroes are able to increase their catch also.

Table 4: Overall Reductions of Mackerel and Herring Catches under Cap Scenarios

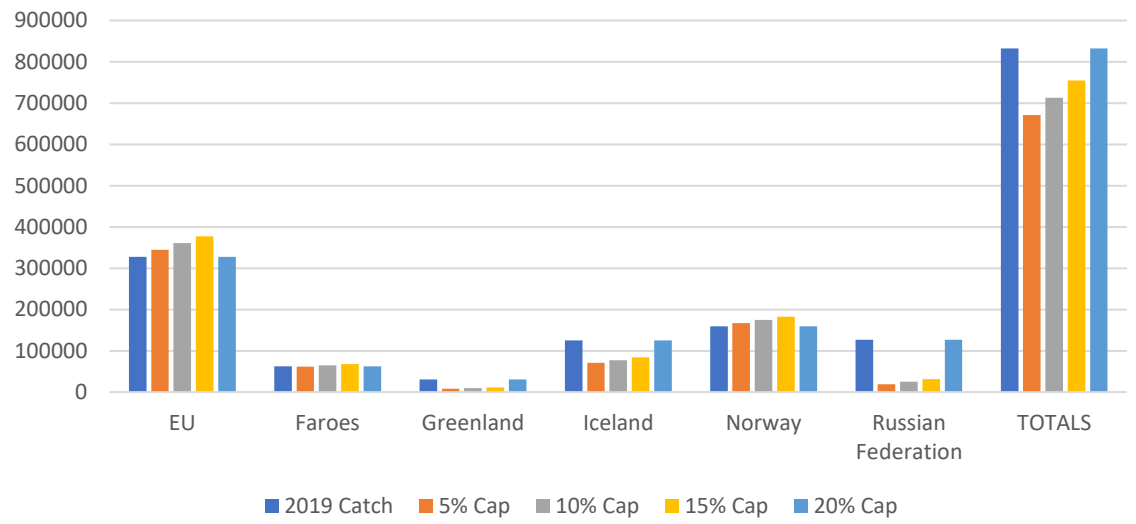
	2019 Catch	5% Cap			10% Cap		
		New Total Catch	Total Change	% Change	New Total Catch	Total Change	% Change
Mackerel	832,028	671,399	-160,629	**-19.3%**	713,001	-119,027	**-14.3%**
Herring	774,150	534,597	-239,553	**-31.0%**	573,305	-200,845	**-25.9%**
	2019 Catch	15% Cap			20% Cap		
		New Total Catch	Total Change	% Change	New Total Catch	Total Change	% Change
Mackerel	832,028	754,602	-77,426	**-9.3%**	796,204	-35,824	**-4.3%**
Herring	774,150	612,012	-162,138	**-20.9%**	650,720	-123,430	**-15.9%**

These reductions do not compensate for the current 130-140% of scientific advice TACs, but could act to constrain further expansions. Even a 1% cap would only get a 23% reduction for mackerel – this is because it would allow those states that have previously caught small volumes in international waters the ability to do so. As noted above, care needs to be taken in any measure to avoid such unintended consequences.

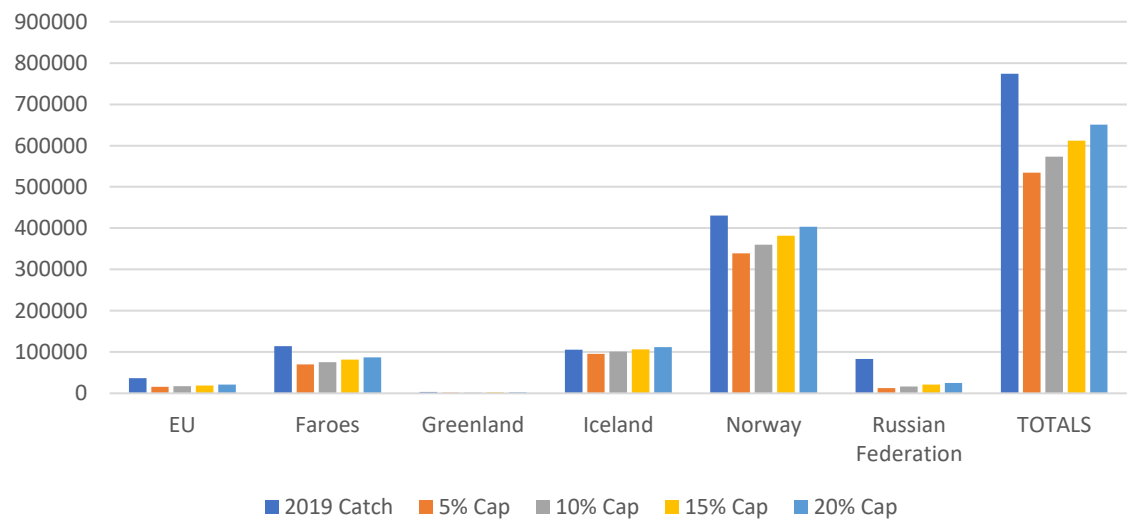
[9] https://www.greenpeace.de/sites/www.greenpeace.de/files/murky_waters_low_res_0.pdf

[10] These projections assume a combined UK/EU fleet. This is unavoidable as we do not have access to UK catch data at the present time.

Figure 6: Projected Mackerel Catches with International Catch Caps



7: Projected Herring Catches with International Catch Caps



Annex 1 Data

Table 2: Catches of North East Atlantic Mackerel and Atlanto-Scandian Herring

	2012		2013		2014		2015		2016		2017		2018		2019	
Coastal State	Total Catch	International Catch	Total Catch	International Catch	Total Catch	International Catch	Total Catch	International Catch	Total Catch	International Catch	Total Catch	International Catch	Total Catch	International Catch	Total Catch	International Catch
Mackerel																
EU	293405	0	305203	0	525793	9	464306	8891	414125	4384	444628	7431	404341	2992	327959	19
Faroes	107204	89	143001	266	150419	9168	109334	5036	93266	2151	99667	8482	81078	9167	62662	3986
Greenland	0	0	50	4	0	0	0	0	145	0	46569	9536	63021	9848	30263	23608
Iceland	147876	0	139532	21	154790	3246	169337	19508	160443	11129	159834	56927	129822	69388	125516	60535
Norway	176109	0	164728	76	277734	13185	241987	0	210345	0	222397	17102	187223	2843	159084	0
Russian Federation	74587	62035	80822	67907	116465	102420	128430	114030	120915	106380	138062	123600	118255	104763	126544	114082
TOTALS	799181	62124	833336	68274	1225201	128028	1113394	147465	999239	124044	1111157	223078	983740	199001	832028	202230
Herring																
EU	51658	0	38546	11	26613	11113	14186	13409	22190	5529	39372	17066	29549	7529	36934	23241
Faroes	36534	4911	105037	7297	26898	2805	25864	2897	44726	1829	98163	40388	81962	44155	113939	49590
Greenland	2352	340	9910	7840	2022	0	2059	0	2350	0	12824	42	2891	92	3298	1569
Iceland	118533	0	90723	8535	56976	50260	42627	419	48998	48451	88594	4884	81858	21908	105895	15273
Norway	491000	4315	360696	36549	263130	7255	176176	0	197422	12341	389383	157794	332027	34849	430506	113309
Russian Federation	118595	15160	78524	10143	60292	5586	45726	5745	50455	24982	91118	61311	64185	54421	83578	75278
TOTALS	818672	24726	683436	70375	435931	77019	306638	22470	366141	93132	719454	281485	592472	162954	774150	278260

Table 3: Percentage of Catch from International Waters

	2012	2013	2014	2015	2016	2017	2018	2019
Mackerel								
EU	0%	0%	0%	2%	1%	2%	1%	0%
Faroes	0%	0%	6%	5%	2%	9%	11%	6%
Greenland	0%	8%	0%	0%	0%	20%	16%	78%
Iceland	0%	0%	2%	12%	7%	36%	53%	48%
Norway	0%	0%	5%	0%	0%	8%	2%	0%
Russian Federation	83%	84%	88%	89%	88%	90%	89%	90%
TOTALS	8%	8%	10%	13%	12%	20%	20%	24%
Herring								
EU	0%	0%	42%	95%	25%	43%	25%	63%
Faroes	13%	7%	10%	11%	4%	41%	54%	44%
Greenland	14%	79%	0%	0%	0%	0%	3%	48%
Iceland	0%	9%	88%	1%	99%	6%	27%	14%
Norway	1%	10%	3%	0%	6%	41%	10%	26%
Russian Federation	13%	13%	9%	13%	50%	67%	85%	90%
TOTALS	3%	10%	18%	7%	25%	39%	28%	36%

NORTH ATLANTIC PELAGIC ADVOCACY GROUP

Table 5: Impacts of International Catch Cap Limit Scenarios

Coastal State	2019 Catch	2019 Catch in International Waters	5% Cap			10% Cap			15% Cap			20% Cap		
			Potential catch in Int. Waters	Total Change	New Catch	Potential catch in Int. Waters	Total Change	New Catch	Potential catch in Int. Waters	Total Change	New Catch	Potential catch in Int. Waters	Total Change	New Catch
Mackerel														
EU	327959	19	16398	16379	344338	32796	32777	360736	49194	49175	377134	65592	65573	327965
Faroes	62662	3986	3133	-853	61809	6266	2280	64942	9399	5413	68075	12532	8546	62668
Greenland	30263	23608	1513	-22095	8168	3026	-20582	9681	4539	-19069	11194	6053	-17555	30269
Iceland	125516	60535	6276	-54259	71257	12552	-47983	77533	18827	-41708	83808	25103	-35432	125522
Norway	159084	0	7954	7954	167038	15908	15908	174992	23863	23863	182947	31817	31817	159090
Russian Federation	126544	114082	6327	-107755	18789	12654	-101428	25116	18982	-95100	31444	25309	-88773	126550
TOTALS	832028	202230	41601	-160629	671399	83203	-119027	713001	124804	-77426	754602	166406	-35824	832034
Herring														
EU	36934	23241	1847	-21394	15540	3693	-19548	17386	5540	-17701	19233	7387	-15854	21080
Faroes	113939	49590	5697	-43893	70046	11394	-38196	75743	17091	-32499	81440	22788	-26802	87137
Greenland	3298	1569	165	-1404	1894	330	-1239	2059	495	-1074	2224	660	-909	2389
Iceland	105895	15273	5295	-9978	95917	10590	-4684	101211	15884	611	106506	21179	5906	111801
Norway	430506	113309	21525	-91784	338722	43051	-70258	360248	64576	-48733	381773	86101	-27208	403298
Russian Federation	83578	75278	4179	-71099	12479	8358	-66920	16658	12537	-62741	20837	16716	-58562	25016
TOTALS	774150	278260	38708	-239553	534597	77415	-200845	573305	116123	-162138	612012	154830	-123430	650720