

Fish, Not Oil, at the Heart of (Future) Arctic Resource Conflicts

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As sea ice diminishes in the Arctic, writings about the region have directed focus to accessing and potentially claiming undiscovered offshore oil and gas resources. However, as has been extensively proven, oil and gas resources in the North have not generated conflict or aggression. Instead, another ocean-based resource is emerging as the primary rationale for disputes in the Arctic: marine living resources. Despite a pro-active moratorium on High Arctic fisheries, issues such as quota distributions for mackerel, snow crab, and access to the maritime zone/shelf around Svalbard have proven particularly conflictual in northern waters. Several Arctic states – or their respective Arctic regions – are heavily dependent on fisheries as a source of economic wealth and food security. States are thus willing to go to great lengths to protect their sovereign rights in their economic zones. This article examines three cases of conflict related to fisheries management impacted by global warming in the Barents Sea and the North Atlantic in order to tease out lessons, dynamics and general relevance to the Arctic region.

Introduction

The Arctic resources that have attracted the most attention and speculation, even leading to claims about imminent land-grabs and conflict, are oil and gas (Borgerson, 2008; Dadwal, 2014). However, the prospect of northern resource wars over hydrocarbons has now been debunked. Oil and gas resources – both onshore and offshore – are located in the exclusive economic zones (EEZ) or continental shelves of the Arctic littoral states, which seek stable operating environments within which to extract costly resources far away from their prospective markets (Claes & Moe, 2018; Dodds & Nuttall, 2016; Konyshov & Sergunin, 2014).

This does not mean, however, that resource disputes in the Arctic do not exist. Beyond strategic concerns in the “East–West axis,” the North faces issues linked to the delineation and utilisation of maritime space and resources, over which states engage in disputes. The actors in such disputes may hold diverging opinions on international law, resource management and distributional principles. From the range of related issues,¹ the one that has caused the most friction between Arctic states has been access and rights to marine living resources.

Global per capita fish consumption increased from an average of 9 kg per year in the 1960s to 14.4 kg in the 1990s and 20.2 kg in 2015, with preliminary estimates indicating further growth beyond 20 kg (FAO, 2018). In countries like Malaysia, Portugal and South Korea, the average person consumes more than 50 kg of fish per year. Wild fisheries are increasingly exploited, decreasing the total available biomass of marine resources. At the same time, stocks are changing their migratory patterns because of changes in the geophysical marine environment (Allison et al., 2009). Those changed conditions are particularly troubling for international management of transboundary fish stocks that move between and across neighbouring EEZs and high seas. Scholars foresee an increase in the failure of global cooperation as the impact of climate change on fish stocks becomes increasingly apparent (Cheung et al., 2017; Pinsky et al., 2018).

In the Arctic, retreating sea ice and climate change are altering the distribution of marine living resources, while demand for these resources has risen. This, in turn, is challenging established management regimes for transboundary resources and demanding new forms of cooperation. Consequently, over the last decade several disputes have emerged over Arctic fisheries, at times even escalating into outright conflict.² What, in essence, are the disputes about, and how do states go about attempting to manage, or resolve, them? And what might this in turn mean for the political dynamics in the Arctic more broadly?

To begin answering these questions, this article examines – rather briefly – three specific disputes between Arctic states (and, in two instances, including the EU) that have emerged or been accentuated over the last decade: the mackerel conflict in the Northeast Atlantic; the snow crab conflict in the Barents Sea; and the dispute over the status of the Svalbard Fisheries Protection Zone (FPZ) in the Barents Sea.³ Although these cases predominantly concern the European and North-Atlantic parts of the Arctic, by comparing the dynamics of each dispute it is possible to tease out lessons of wider relevance for Arctic resource and conflict management – as it is reasonable to expect similar trends emerging as other parts of the Arctic experience changes in the distribution of marine living resources.

The central proposition in this article is therefore that if we want to understand how Arctic resource disputes might evolve in the future, we must examine how the Arctic states have managed contemporary disputes over marine *living* resources in specific parts of the Arctic. Not only are these highly profitable, they are also heavily impacted by the changes underway in the North. This article further starts from the assumption that international regimes have the potential to diffuse tension, hamper conflict and prevent states from only focusing on self-interests (Hasenclever et al., 2000; Young, 1999: 249). Levy and his colleagues developed “three Cs” to understand what regimes do: enhance governmental *concern* over an issue to the extent they are willing to act on it; improve the *contractual* milieu to the extent that mutually profitable agreements are made possible; and enable national *capacities* in implementing and adhering to international regimes (Levy et al., 1995).

Based on this, some elements are central here: the state and use of scientific/external advice when agreeing on quotas for marine living resources (e.g. Polacheck, 2012); the depth of institutionalisation between the states in question (e.g. Young, 1989); and the (un)willingness by states to forgo access to fisheries seen in conjunction with domestic interests and symbolism (e.g. Ásgeirsdóttir, 2008; Vaquer i Fanés, 2003). These issues are further examined in the three following sections covering the three mentioned disputes, before the final part of this article turns to drawing

key lessons from the cases as well as considerations of how Arctic marine living resource disputes might evolve in the near future.

The Mackerel conflict

On its own, mackerel constitutes one of most profitable fish stocks in the North Atlantic, worth around £500 million annually (Findlay, 2014). The coastal states convene annually to agree on quotas for the various fish stocks in the Northeast Atlantic, based on recommendations from the International Council for the Exploration of the Sea (ICES). Since reaching an agreement on quotas in 1999, the Northeast Atlantic mackerel stock has predominantly been divided between the EU, Norway and the Faroe Islands.⁴

In 2006, the mackerel shifted northwards, in tandem with a rise in the sea temperature in the North Sea and North Atlantic. Mackerel is found in waters between 6 and 15 degrees Celsius, and as the waters around Iceland increased in temperature, Iceland found itself with a new fishery (Spijkers & Boonstra, 2017). More northern areas, including the area around Iceland, have become the mackerel's summer feeding ground during the last decade; during the autumn and early winter, they aggregate along the continental shelf edge (for more on this, see Østhagen et al., 2020).

Previously, the stock had barely entered Icelandic waters during summer, but it is currently present throughout the year. The Icelandic government argues that while in Icelandic waters, the mackerel increased by between 43 and 55 percent in weight (Icelandic Ministry of Industries and Innovation, 2012). The country grasped this economic opportunity and started expansive mackerel fisheries in 2007, unilaterally setting its quota on the claim that mackerel fisheries have historically been important for the country (Fontaine, 2015). From virtually no catches prior to the stock's arrival in 2006, Icelandic fishermen caught more than 100,000 tonnes in 2008–2009 (ICES, 2017), constituting approximately 20–25 percent of the total catch of mackerel in the Northeast Atlantic.

Once Iceland was finally recognised by the EU and Norway as a coastal state with rights to mackerel quotas, the annual negotiations granted Iceland a quota of less than 2,000 tons, about 0.31 percent of the total allowable catch (TAC), and the negotiations broke down as the countries disagreed on appropriate quota allocations. The Norwegians especially refused to accept the historic claim, arguing that Iceland's "history-based claim" was "one of the most unfounded claims" ever seen (Hotvedt, 2010: 47). The dispute continued in subsequent years due to a wide discrepancy between expectations and concessions.

In parallel, the Faroe Islands also set unilateral quotas, which were met with indignation from the EU and Norway (Østhagen et al., 2020: 159). That dispute reached its climax when the EU prohibited the import of both Atlanto-Scandian herring and mackerel caught under the control of the Faroe Islands in 2013. In March 2014, the EU, Norway and the Faroe Islands did manage to agree on a long-term management strategy for the stock (European Commission, 2016). The Faroe Islands' demand for a bigger share of the stock was initially rejected by the EU and Norway, but they were included as part of the new long-term management plan as their catch increase was regarded as somewhat legitimate due to their long-time cooperation within the coastal state management regime.

To date, however, Iceland remains outside of the total quota-setting scheme. Over time, the coastal states' combined increase in fishing pressure resulted in ever-growing overfishing of the stock. From 1998 to 2013, the total mackerel quota recommendations issued by ICES have ranged

between 300,000 to 700,000 tons. The coastal states, on the other hand, have on average exceeded the quota by at least 100,000 tons annually, prompting questions about the health and longevity of the stock itself (Cendrowicz, 2010; Henley, 2019; Norwegian Ministry of Trade Industry and Fisheries, 2014a). No management agreement involving all coastal states has been reached at the time of writing, and by 2019 the fish stock had lost its “sustainable” certification through the Marine Stewardship Council (MSC, 2019). In late 2019, Icelandic officials stated they would not back down on the issue, while the remaining states criticised its unilateral quota setting for endangering the health of the fish stock (Henley, 2019).

A central point in the dispute is the disagreement over how to interpret the shift of the mackerel stock in and of itself. Two concerns in particular are relevant: What are the drivers behind the change in geographical stock distribution, and how long will it last (Hannesson, 2013: 3)? Norway and the EU consider the fluctuations an irregularity, whereas Iceland has argued that the change is part of a larger ongoing climatic shift (Gänsbauer et al., 2016: 101). Furthermore, there is disagreement over how to calculate zonal attachment, a core concern when setting quotas for a transboundary fish stock (Pinsky & Fogarty, 2012: 890).

Snow crab conflict

Snow crab was first recorded in the eastern Barents Sea in 1996. According to the Norwegian Institute of Marine Research, the current total biomass of snow crab in these waters is considerable: “Rough estimates by Russian scientists indicate that snow crab biomass is approximately ten times higher than that of red king crab, and about half the biomass of shrimp” (McBride et al., 2016). In Canada and the United States, the snow crab fishery ranks among the most valuable fisheries. Thus, expectations in Norway have been high concerning the economic potential of this new species, with some anticipating that it might even surpass cod, the most valuable fishery in the Norwegian EEZ (Fiskeribladet, 2014).

Starting in 2015, however, Norway introduced a ban on the catching of snow crab on the Norwegian continental shelf, which includes the shelf around Svalbard. The regulation was introduced to allow the government to gain control of the activity and acquire greater knowledge and data on the spread of the stock (Norwegian Parliament, 2017). In practice, however, in the regulation implementing the ban the Norwegian government permitted a limited number of licences to be issued to Norwegian fishermen exclusively, through special requests (Østhagen & Raspotnik, 2018a).

Several vessels from EU member states, predominantly Latvia, Poland and Spain, had already engaged in snow crab fisheries on the continental shelf beginning in 2013 (Staalesen, 2017). However, Norway notified the EU that these vessels would be evicted from both the Loophole (the small area of international waters between Norway and Russia) and the waters around Svalbard (Norwegian Parliament, 2017). This irked the EU, or more specifically, some EU fishers. To understand why, we must briefly examine the history of Svalbard’s maritime zones.

The Svalbard archipelago, located between the Norwegian mainland and the North Pole, occupies a special position in international relations. Only in the early 20th century, when promising discoveries of coal were made and mines opened, were specific steps taken to establish an administration: post-war negotiations resulted in a treaty that gave sovereignty over Svalbard to Norway (Svalbard Treaty, 1920). The treaty also aimed to secure the economic interests of nationals

from other countries. This was done by including provisions on equal rights and non-discrimination in the most relevant economic activities: Norway could not treat other nationals less favourably than its own citizens, and taxes levied on Svalbard could be used solely for local purposes.

As coastal state rights expanded with the development of the Law of the Sea in the 1960s and 1970s, Norway – like most other states – declared an EEZ of 200 nm off its coast in 1976 (Lov om Norges økonomiske sone [økonomiske soneloven] [Law on Norway’s economic zone], 1976). According to the Norwegian government, Norway, as the coastal state of Svalbard, was entitled to establish an EEZ around the archipelago, as the non-discriminatory provision in the treaty referred only, and explicitly, to the islands themselves and their territorial waters (Art. 2). Norway also considers the continental shelf under exclusive Norwegian jurisdiction.

However, this view was disputed by other states. To avoid recourse to legal proceedings, Norway established an FPZ in 1977 (Norwegian Ministry of Trade Industry and Fisheries, 2014b). Management of the FPZ would be on a non-discriminatory basis: Fishers from Norway and other nations would be treated equally, although access to the zone would be granted only to vessels from nations traditionally active in the area. The continental shelf, however, has remained closed for economic activity—until the snow crab came walking in from the east.

The EU accepts neither Norway’s claims of unrestricted sovereign rights in the FPZ and on the shelf, nor conservation measures that amount to access restrictions for the European Community. However, as long as these measures are applied in a non-discriminatory manner and are scientifically based, the EU will abide by them (Official Journal of the European Union, 2006; 2011b; 2011a). Thus, the EU neither officially recognises nor rejects the Norwegian position in practice, preferring to keep the peace in lieu of limited potential gains to be had from upsetting the status quo (Østhagen & Raspotnik, 2019; Pedersen & Henriksen, 2009).

However, with the eviction of EU vessels from snow crab fisheries, the dispute has been brought forward. By December 2016, as no agreement had been reached, the Commission proposed to the Council of the European Union (hereafter ‘Council’) to authorise – albeit with no authority to do so – up to 20 vessels to catch snow crab on the continental shelf around Svalbard. In January 2017, the Council adopted this proposal and accorded five EU member states – Estonia, Latvia, Lithuania, Poland and Spain – the right to issue 20 licences (Østhagen & Raspotnik, 2019). Subsequently, the Norwegian Coast Guard arrested the EU-registered vessel *Senator* (from Latvia, with a licence from Latvia) in the waters around Svalbard in January 2017. This arrest irritated EU actors and drew attention to the issue of snow crab fisheries (Millán Mon et al., 2017). In order to uphold its position, in December 2017, the Council again awarded licences for 20 vessels to catch snow crab in waters around Svalbard, divided amongst the same five member states (Council of the European Union, 2017).

Although Norwegian fishers caught little of this resource, Norway’s Minister of Fisheries Per Sandberg vowed never to “give away a single crab?” (Haugan, 2017). In response to this second round of licensing by the EU, the minister announced that Norway would not negotiate the issue further with the Commission, thus ending official talks aimed at finding a solution (Johannesborg, 2017). Around the same time, the snow crab became the subject of debate in the European Parliament plenary session on 18 January 2018, where one MEP characterised the Norwegians as “pirates” in the Arctic (European Parliament, 2018).

Both the EU and Norway define the snow crab as belonging to the continental shelf regime. Therefore, the broader legal ramifications of this dispute concern go beyond the right to catch snow crab on the continental shelf around Svalbard, with potential applications to sedentary resources, such as oil and gas and seabed minerals. Although there has been no oil and gas drilling on the continental shelf around Svalbard, the outcome of the dispute over snow crab might set a precedent for future industrial activity (Tiller & Nyman, 2015; 2017).

Svalbard's Maritime Zone

The arrangement in the FPZ outlined in the previous section satisfied several states that had voiced opposition to Norway's insistence on exclusive resource rights, notably the United Kingdom, the Netherlands and Denmark (Pedersen & Henriksen, 2009: 146). However, other states with extensive fishing rights remained critical, primarily Iceland, Spain and Russia, although their positions have not been identical. Disagreement over how best to allocate and manage marine living resources has the potential to be a source of conflict.

The potential for conflict is especially acute in Norway-Russia relations, given Russian fishing interests in the FPZ and the wider security relations between the two countries. The importance of the FPZ for the Russian fishing fleet must be seen in light of the fact that Russia takes a relatively small share of its catches in the Russian economic zone (REZ), where fish are predominantly young and small, and weather and ice conditions are complicated (Østhagen, Jørgensen, et al., 2020; Zilanov, 2013). Access to both the Norwegian economic zone (NEZ) and the FPZ is vital to the Russian fishing fleet.

Moreover, Russian fishers and commentators are concerned with historical fishing rights in the zone. Reference is made both to fishing history and to the fact that early Russian marine scientists made the greatest contributions to exploration and the mapping of the stocks around Svalbard (Vylegzhanin & Zilanov, 2007; Zilanov, 2016). The fact that Russia, because of its weakened position in 1920, was barred from participating in negotiating the Svalbard Treaty has retrospectively shaped Russian perceptions of Svalbard issues (Jørgensen, 2010; Vylegzhanin & Zilanov, 2007). The Russian position, expressed in diplomatic notes, has been that Norway had no right to unilaterally establish an FPZ and that fisheries in the waters around Svalbard should have been the subject of bilateral negotiations between Norway and Russia.⁵ The waters are international, and regulations – which can be set only by international fisheries organisations – can be enforced by the flag state alone, in this case Russia (Pedersen, 2009: 34).

Nevertheless, Norway and Russia, and earlier the Soviet Union, have a long history of cooperation in Arctic fisheries management. When 200 nm EEZs were introduced, the two countries established the Joint Norwegian-Russian Fisheries Commission for cooperation on the management of fish stocks in the whole Barents Sea, which comprises the Russian EEZ, the Norwegian EEZ *and* the waters around Svalbard. The two countries decided to treat the most important stocks (cod, haddock, capelin) as shared stocks, across the whole Barents Sea maritime domain.⁶

Albeit well managed, incidents have occurred in the Barents Sea, with tensions arising between Norway and Russia in connection with Norwegian arrests of Russian fishing vessels in the FPZ, and the potential exists for escalation from this type of fisheries incident to a state-state incident (Kosmo, 2010). The first arrest that marked a more stringent enforcement regime by the

Norwegian Coast Guard in the FPZ came in 1998, with the attempted arrest of the vessel *Novokuybyshevsk*. As it was towed by the Norwegian Coast Guard towards Tromsø, there were reports of a Russian Navy vessel leaving the Kola Peninsula headed west, and Russian airplanes were seen passing over the Norwegian Coast Guard vessel. The issue was settled “diplomatically,” and the vessel was in the end released before reaching Tromsø (Skram, 2017: 156–157).

Three years later, in 2001, the arrest of the Russian trawler *Chernigov* – the first Russian vessel from the FPZ to be brought all the way to the harbour in Tromsø – led to diplomatic protests from Russia, as well as to the presence of a Russian Navy vessel – *Severomorsk* – in the FPZ the following year, presumably to inspect and safeguard Russian fishing vessels (Østhagen, 2018). As Åtland and Ven Bruusgaard (2009: 335) write, “this rare Russian show of force was apparently meant to send a signal to political decisionmakers in Norway.” And in 2005, *Elektron* attempted to flee the Norwegian Coast Guard – with two inspectors onboard – heading for Russian waters. Again, the situation solved through Norway-Russia diplomacy (Åtland & Ven Bruusgaard, 2009; Fermann & Inderberg, 2015; Skram, 2017).

After a few years without incidents, the arrests of five Russian fishing vessels in 2011 – the first year after the maritime boundary was agreed between Norway and Russia – led to an uproar amongst Russian fishers in the Murmansk region (Hønneland, 2013; Østhagen, Jørgensen, et al., 2020). In the Russian media, there were strong reactions against what was described as aggressive and discriminatory behaviour by the Norwegian Coast Guard toward Russian vessels (Jørgensen & Østhagen, 2020). Russia also delivered a protest to the Norwegian Embassy in Moscow. This in turn influenced the Joint Fisheries Commission in 2011 and 2012, hampering negotiations on quotas and access.

With the strained Norway-Russia relations post-2014, further attention has been paid to the potential for conflict in the FPZ over fisheries (for more on this, see Østhagen, 2016). Both countries deem this to be a region of significance, as highlighted by a report by the Russian Defence Ministry in 2017, which listed Svalbard and its maritime zone as potential areas for confrontation between Russia and the North Atlantic Treaty Organisation (NATO) (Nilsen, 2017). In February 2020, in connection with the centenary of the Svalbard Treaty, Russian Foreign Minister Lavrov sent a letter to his Norwegian counterpart listing Russia’s complaints, including “the unlawfulness of Norway’s fisheries protection zone” (Ministry of Foreign Affairs of the Russian Federation, 2020).

In contrast to the other two cases described above (mackerel and snow crab), the Svalbard FPZ issue does not concern a single stock where allocations and access are the main concern. Instead, it is an example of a maritime dispute where fishing interests (by Russian fishers) at times clash with the Norwegian enforcement regime for marine living resources, with concerns about the potential escalation (Østhagen, 2018: 116). Complicating matters is the fact that the fish stocks in the region are shifting – due to climate change – northwards into the FPZ. With increased fishing by Russian trawlers in the area, the chance of small-scale incidents taking place, and potentially escalating, is a serious concern.

The Future of Arctic Resource Conflicts?

Fisheries disputes are compartmentalised, but increasingly engage the domestic audience

As shown in the cases here, although the potential for conflict over fisheries (access to or distribution of) is relatively high, states have generally preferred to keep disputes – and at times outright conflict – separate from other issues (e.g. Nemeth et al., 2014; Nyman, 2013; Raspotnik & Østhagen, 2020). The mackerel dispute has not hampered quota negotiations on other fish stocks amongst the Northeast Atlantic coastal states (although there have been issues concerning herring), nor has it affected their regional and bilateral foreign relations. Similarly, in the EU-Norway case, politicians and diplomats actively worked to keep the issue separate from larger Arctic-governance questions, preferring to treat it as a fisheries concern instead of linking it to the EU's continuous quest for a role in the Arctic (e.g. Raspotnik, 2018; Raspotnik & Østhagen, 2020).

In the case of Norway and Russia in the FPZ, on the other hand, we see that relatively positive relations in co-management of shared fish stocks play into a larger bilateral security relationship where the two countries are on opposite sides of an “East-West” divide, dynamics which have become more prominent since 2014. Here, bilateral cooperation on fisheries is sometimes a gauge of the larger bilateral relationship, perhaps even with the ability to influence those relations from the bottom-up, as argued by Hønneland and Jørgensen (2015). Still, because of two trends it is unlikely that relations in the FPZ, or fisheries relations more generally, will become less sensitive in the near future. First, an increasing number of fisheries (both Norwegian and Russian) are expected to venture northwards and begin operating in the FPZ around Svalbard, in turn prompting the Norwegian Coast Guard to be progressively present and active. Second, the Barents Sea is playing an increasing role in strategic posturing and military exercises, as NATO countries and Russia showcase their Arctic capabilities.

Although fisheries disputes are, to some extent, compartmentalised, they are also increasingly entangled in domestic politics. This, in turn, changes conflict dynamics at sea. Vasquez and Valeriano (2009: 194) describe a conflict as spiralling when it becomes infused with symbolic qualities. It might be assumed that maritime disputes – whether concerned with fishing rights or boundaries – would be a simple matter of delineating rights and ownership, given the tangible character of such disputes. Huth (1998: 26), for example, has argued that “the political salience of the [maritime] dispute is generally limited, in contrast with the importance and attention often given to land-based disputes.”

However, when a maritime dispute reaches the political agenda, domestic actors sometimes seek to benefit from infusing it with intangible dimensions such as “national pride” or “being cheated out of what is ours” (e.g. Hønneland, 2013; Kleinsteiber, 2013; Roszko, 2015).⁷ These dimensions could be evidenced here by MEPs' statements over the snow crab dispute; by the arguments of Norwegian and Icelandic fisheries organisations when disagreeing on mackerel quotas; and by the protests of the fishing community in Northwest Russia when arrests of Russian trawlers in the FPZ steadily increased from 1998 onwards.

To a greater extent than before, events at sea trigger domestic response and attention. Kleinsteiber (2013: 15) argues that “the fundamental drivers behind the disputes in the East and South China Seas are not potential or claimed natural resources, but rather domestic politics, rising nationalism, and irredentism.” Such outcomes have also been showcased in the Arctic context: When in 2005

the Russian trawler *Elektron* “kidnapped” two Norwegian Coast Guard officers and fled towards Russian waters after fishing with too small mesh nets in waters around Svalbard, the Norwegian media were quick to broadcast the event live on national television. This helped spur politicians into action (Fermann & Inderberg, 2015), although in this instance cooler heads prevailed.

The potential for conflict escalation in maritime disputes stems not only from the economic interests of the actors involved, but also from wider ideas of symbolism and identity. States (and their inhabitants) *do* care about their maritime disputes, even those of limited economic value such as the snow crab, and increasingly so. That might limit the room for manoeuvre of politicians in Arctic coastal states, as they attempt to solve fisheries conflicts that – on the face of it – should be relatively easy to settle, or at least manage.

Climate change causes disruption, but international cooperation can alleviate pressures

When states exploit stocks independently of each other to maximise their own short-term benefits, a so-called “tragedy of the commons” takes place and the stocks become subject to depletion. Therefore, disputes and conflicts between states over fisheries have been commonplace throughout history.⁸ Moreover, climate variation and change, ultimately leading to ocean warming and a more variable environment, is altering the foundations of marine life. For example, a study on marine species on the east coast of the United States found that as the oceans warm, fish are moving to colder areas, with significant effects on fishermen’s catch and revenues (Pinsky et al., 2013). This has consequences for the management of marine areas and resources.

In the Arctic, temperatures have risen more rapidly than expected, and will probably increase by 3–8° C before 2080 (Norwegian Polar Institute, 2020). The circumpolar region includes not only the Arctic Ocean, but also parts of the North Atlantic and the North Pacific, as well as multiple maritime domains, such as the Barents Sea, the Beaufort Sea, the Chukchi Sea, the Kara Sea and the Norwegian Sea. Some of these domains are home to some of the world’s largest fish stocks, which are extremely valuable for Arctic coastal states.

The interests states hold in marine living resources as showcased in the cases highlighted here—the Icelandic and Norwegian interests in mackerel fisheries, Russian fisheries interests in the waters around Svalbard, and the interests of the EU and EU member states in snow crab fisheries—should not be underestimated. Although the monetary value of these fisheries might not dwarf that of other Arctic industrial or economic ventures, neither is it insignificant from a financial viewpoint. Furthermore, as is discussed, the symbolic dimension of local and regional fisheries should not be ignored. Arctic states (driven by their fishers and fisheries) are not likely to forgo access to fish stocks or yield quotas simply because the fish stocks themselves have altered their distributional patterns.

Here, the role of scientific advice in preventing future conflict stands out as a particularly relevant dimension, especially in the mackerel dispute. The use of an assumedly neutral source of reliable information is crucial for trust in the relevant regime, especially when dealing with issues linked to climate change (Sarewitz, 2004: 386). If, however, there is too much uncertainty surrounding reliable information, actors sometimes opt to ignore, select or even hide relevant information (Polasky et al., 2011: 402).

One solution that states in the Arctic and beyond have used to alleviate such pressures is regional issue-specific multilateral cooperation. For example, the Barents Sea management regime –

through the Joint Norwegian-Russian Fisheries Commission – has often been heralded as best practice with regards to marine resource co-management mechanisms (Hønneland, 2014; Stokke, 2000). Similarly, in the Bering Sea, as the pollock stock collapsed in the early 1990s after a decade of overfishing in the so-called “Donut Hole,” a regime came into existence to manage the stock (Bailey, 2011: 1–3). In 1994, an agreement on a temporary moratorium on pollock was reached by the various national stakeholders, including Japan, China, Poland and South Korea, with stringent enforcement measures (Dunlap, 1994: 47).

More recently, in 2018, the five Arctic states with direct access to the Arctic Ocean, together with China, Japan, Iceland, South Korea and the EU, agreed to prevent unregulated commercial fishing in the high seas of the central Arctic Ocean (Agreement to prevent unregulated high seas fisheries in the Central Arctic Ocean, 2018). This was heralded as a “proactive rather than reactive approach, showcasing the Arctic states’ commitment in dealing with climate change” (Sumaila, 2015). There are similar bans on fishing within the EEZ in the Chukchi Sea (where the United States imposes the ban unilaterally) and the Beaufort Sea (with the United States and Canada imposing the ban bilaterally), which are in place pending further research on the potential fish stocks migrating to these areas.

These are examples of how states, either bilaterally or multilaterally, have managed to agree on guidelines or rules for how best to manage shared fish stocks in or close to Arctic waters. If we return to Levy et al. (1995), it is apparent that concern regarding the issues (how to manage shared marine resource) is already present amongst Arctic coastal states. What these governance mechanisms enable is a milieu where a common goal (the sustainable yield of a fish stock) and shared scientific data trump self-interested state action (most of the time).

In other words, although conflict potential exists concerning marine living resources in the Arctic – and not in oil and gas, as the title of this article states – disputes over such issues are not bound to escalate and/or become protracted. However, taking proactive measures or diffusing an ongoing dispute requires both political engagement *and* concern over the long-term effects of a protracted dispute. Here, the mackerel dispute can serve as a staunch lesson, as the stock lost its rather valuable MSC-certification in 2019 (MSC, 2019).

The future is blue

In the Arctic and beyond, we can observe rapid changes in the maritime domain over the last few decades. Changes deriving from resource pressures, international commodity prices and new technologies are external to the ocean. Rising sea levels and other oceanic changes resulting from climate change, as well as changing resource distributions, are happening in the maritime domain, and are to varying degrees the consequences of human behaviour. As these changes occur, attention is increasingly directed towards the question of “who has what rights” at sea.

It is no secret that humanity is experiencing a widespread reduction in the total biomass of marine resources, closely linked to human exploitative activities (FAO, 2018). At the same time, stocks are changing their migratory patterns because of changes in the geophysical marine environment (Brander, 2010). Maritime domains hold great economic potential in terms of marine living resources, and climatic and environmental changes are impacting the distribution and characteristics of these resources, making the situation particularly ripe for conflict. This risk is also acute in the Arctic.

It would be simple to conclude that the conflict potential between states over how best to manage marine living resources in the Arctic is likely to rise, as a consequence of these factors. However, the Arctic states have a history of developing co-management mechanisms to solve problems with overfishing in northern waters. International cooperative mechanisms have grown in all oceans bordering the Arctic, as well as in the Arctic basin itself. They have grown out of a realisation that continued over-exploitation would lead to a lose-lose situation for all states concerned. As the Arctic is particularly prone to environmental changes, states will continue to navigate emerging issues with marine resource management and distribution. Fish, not oil, is indeed at the heart of future Arctic resource conflicts, but that does not mean these conflicts cannot be managed, or even resolved.

Notes

1. Examples include the disputes over the status in international law of the Northwest and Northeast Passages, the processes for determining the limits of continental shelves on the Arctic seabed beyond 200 nautical miles, the status of the continental shelf and/or maritime zone around Svalbard and efforts concerning marine protected areas and access to genetic resources/bioprospecting in northern waters.
2. I distinguish between *dispute* and *conflict*. The former entails tension and/or incompatibility between actors' positions on an issue; with conflict, those positions have hardened and come to a head, and action is undertaken by one or more parties, imposing significant costs on the others (Galtung, 1969). Despite common usage, "conflict" does not necessarily entail military hostilities or war.
3. Each of these case studies builds on previously published articles that have examined them in depth. See (Østhagen, 2016, 2018; Østhagen, Jørgensen, et al., 2020; Østhagen, Spijkers, et al., 2020; Østhagen & Raspotnik, 2018b, 2019; Spijkers & Boonstra, 2017)
4. In the North Atlantic, Denmark (on behalf of Greenland and the Faroe Islands), Norway, Iceland, the Russian Federation and the EU signed the Convention on Future Multilateral Cooperation in North East Atlantic Fisheries in 1982. This led to the creation of a specific regional fisheries management organisation (RFMO) for the region: the North East Atlantic Fisheries Commission (NEAFC), tasked with recommending measures to ensure a sustainable harvest of fish stocks in the Northeast Atlantic. NEAFC only has jurisdiction in waters outside of the 200 nautical mile EEZs, but it also makes recommendations applicable to the national economic zones.
5. Note from Russia to Norway, 18 August 1998, cited in Pedersen and Henriksen (2009), p. 146.
6. The cooperation has been analysed by Geir Hønneland in several publications, see e.g. Hønneland, 1999, 2014.
7. Interestingly, this was a prominent part of the campaign to leave the EU during the United Kingdom's 2016 Brexit referendum, despite fisheries only accounting for 0.05% of the country's GDP (Lichfield, 2018).
8. Relevant historical examples include the UK/Iceland Cod Wars in the 1960s and 1970s, and the Canada/Spain Turbot War in the 1990s (Børresen, 2011; Kristensen, 2005; Missios & Plourde, 1996).

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