



# Managing the Barents: a review of the environmental, civil security, and economic policies of the Barents Sea region

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Turvallisuusjohtaminen

Opinnäytetyö

Joulukuu, 2022

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Vuosi

2022

Sivumäärä

32

Tämä opinnäytetyö on kirjoitettu osana Laurean AI-ARC -projektia, jonka tarkoituksena on luoda virtuaalinen hallinnointityökalu Arktisen merenkulun tietojen hallinnointiin. Tämän pohjaksi työssä tutkittiin alueen nykytilannetta, keskittyen Euroopan Arktiseen alueeseen ja Barentsinmereen. Aiheina olivat ympäristöasiat, pelastustoiminta, ja lyhyesti talous.

Barentsinmeri on Norjan ja Venäjän aluevesiä, joten näiden maiden kansallinen politiikka oli myös tutkimuksen kohteena. Jokaista aihetta käsiteltiin kansainvälisellä, kahdenvälisellä, ja kansallisella tasolla. Sekä Norja että Venäjä ovat aktiivisesti osana kansainvälisiä Arktisia hallintorakennelmia, mutta niillä on paljon myös kahdenvälisiä yhteistyötä. Kansallisessa politiikassa niiden välillä on eroja, vaikka yritystä onkin yhtenäistää erityisesti Barentsinmereen liittyvää lainsäädäntöä.

Arktisella alueella on yleinen epäsuhta ympäristö- ja talouskysymysten välillä. Alueella on paljon luonnonvaroja, kuten kalaa, öljyä ja kaasua, sekä kaivannaisia. Lämpenevä merivesi puskee jääräjaa pohjoisemmaksi, ja kalakannat seuraavat perässä. Tämän odotetaan lisäävän liikennettä alueella, joka puolestaan lisää ympäristöriskejä. Suurimmat huolenaiheet ovat mahdolliset öljyvuodot joko laivoilta tai merellä sijaitsevilta öljykentiltä.

Turismi on myös nouseva ala pohjoisessa, erityisesti Norjalle, kun risteilyturismi Huippuvuorille lisääntyy. Tämä huolestuttaa myös koska pelastusinfrastruktuuri alueella on heikkoa. Arktisella alueella on yleinen pelastussopimus, ja kahdenvälisiä yhteistyötä on myös paljon.

Työntekoa haastoi Venäjän hyökkäys Ukrainaan kirjoitusprosessin aikana. Aiemmin muualla tapahtuneiden konfliktien ei ole annettu vaikuttaa Arktisen alueen yhteistyöhön, mutta helmi- ja maaliskuun aikana kaikki Arktisen ja Barentsin neuvoston yhteistyö Venäjän kanssa lakkasi toistaiseksi. Tämä ei varsinaisesti kuulu työn aihealueeseen, mutta näihin seurauksiin myös viitataan.

Asiasanat: Arktinen alue, Barentsin alue, arktinen yhteistyö



## Sisällys

1	Introduction .....	7
2	Arctic context .....	9
2.1	Arctic Council .....	10
2.1.1	Structures .....	11
2.2	Barents Euro-Arctic Council .....	12
2.2.1	Structures .....	14
2.3	European Union involvement .....	14
2.3.1	Northern Dimension .....	15
2.3.2	Kolartic .....	15
3	Environmental treaties and strategies .....	16
3.1	International structures and agreements .....	16
3.2	Bilateral treaties and agreements .....	19
3.3	Norway .....	20
3.4	Russia .....	20
4	Search and Rescue .....	23
4.1	Arctic Search and Rescue .....	24
4.2	Barents Rescue .....	26
4.3	Bilateral Agreements .....	27
4.4	Norway .....	28
4.5	Russia .....	29
5	Economic Developments in the Barents Sea region .....	31
5.1	Transport systems .....	31
5.1.1	Northern Sea Route .....	34
5.2	Fisheries .....	35
5.3	Tourism .....	36
6	Discussion .....	39
7	Sources .....	41
8	Images .....	47

## 1 Introduction

The Arctic has long been of interest for adventurers from explorers to wanderers, a foolhardy opportunity to overcome devastating odds and a chance to display man's dominance over nature. The challenging weather conditions make Arctic a suitably challenging environment to explore: not many can stand the cold and dark, certainly not without suitable preparations. The Arctic has always been a region for the few, the smartest and strongest.

Warming climate leads to decreasing ice coverage, which makes the Arctic easier to explore and opens the possibilities to use the region's natural resources. Increasing interest in the Arctic means increasing traffic, which can mean problems for the limited capabilities of the region, opening possibilities for new projects for solving said problems. One of such is the AI-ARC project, headed by Laurea University of Applied Sciences and funded by the European Horizon 2022 fund, which seeks to improve the safety of the Arctic Sea. The aim is to create a platform known as the Virtual Control Room, which aided by Artificial Intelligence, can "provide maritime actors with powerful situation awareness for decision-making and safety, without increasing workload." (AI-ARC 2022).

To ensure that the AI-ARC project is answering the needs of the various actors of the region, the current situation of the region must be examined. The Arctic is largely defined by a patchwork of intergovernmental platforms, international treaties and agreements, as opposed to a single encompassing treaty for the entire region. To slightly limit the geographical scope of the work, focus is set on the Barents Region, on the coasts of Norway, including the Norwegian sea, and western Russia.

At first the international platforms and processes that affect the region most are examined. As previously stated, unlike the Antarctic, the Arctic is surrounded closely by sovereign nations whose interests extend to the polar region. This has been proven a fertile ground for multiple different systems of cooperation, most notably the Arctic Council and the Barents Euro-Arctic Council. The global interest can be seen in the rise of non-Arctic states and shareholders taking part in the work of these platforms as observers.

The environmental context of the region is assessed in chapter 3. The Arctic Council hosts multiple projects aimed at studying and limiting the damage to the Arctic environment, including the Barents Euro-Arctic Council also counts environmental issues as one of its focuses. Biggest issues of international cooperation are the production of scientific data on the Arctic environment, which is the realm of the Arctic Council, and prevention of environmental disasters in the form of oil spills or nuclear accidents. The international treaties are

used as a background to assess the national policies of Norway and Russia in relation to the Barents region environment.

In chapter 4 civil safety and security are assessed. This is a particularly sensitive issue considering the increase in traffic that the Arctic region in general, and the Barents region specifically, see as the sea ice melts more during the summer months. In this, Norway and Russia have had multiple unilateral treaties and a functional cooperation stretching for years. In larger scale, the Barents Rescue treaty and Arctic Council's projects also aim to encourage search and rescue preparedness and cooperation in the region.

Chapter 5 is about the economic projects and plans for the Barents Sea region. Both Norway and Russia have notable hydrocarbon projects going on in the area, and the region's role in overall maritime traffic of the Arctic is notable. A general overview is done on the traffic systems of the region, and the main industries of fisheries and oil and gas production are assessed.

The Arctic has been considered a region untouched by global conflicts for much of the cooperative history of the region. Particularly in the 2000s, a conscious effort has been made to leave global issues aside when working on Arctic issues, e.g. the EU ceased all cooperative projects with Russia following their annexation of Crimea in 2014, except for projects under the Northern Dimension and Kolarctic programmes. The Arctic Council has also continued its work despite the tensions notably between Russia and the United States elsewhere in the world. However, when Russia began its full invasion of Ukraine in February 2022, condemnation was not seen as a strong enough response, rather all cooperative platforms and projects have halted their work, most indefinitely or at least until further notice. This work focuses then on mostly on the situation before February 2022, as very little can be said about what the future of the region might be.



## 2 Arctic context

Global interest in the Arctic region has been steadily increasing for the past decades. Climate change has made the Arctic more accessible due to melting ice, and the natural resources within are becoming more reachable. While majority of the Arctic falls under the national jurisdiction of the nations bordering the Arctic Ocean, some of it can be considered high seas. The Arctic offers also interesting new options for transport in the form of new opening trade routes. Increasing number of non-Arctic countries are creating their own Arctic strategies and becoming involved in the region (Burke D.C. 2018).

Much has been written and speculated about the Arctic. Particularly in the early 2000s, the Arctic was assumed to be a region of future conflict as progressing climate change made the Arctic resources more attainable (Young 2009). The geopolitical tensions between Russia and the transatlantic west were also seen as an inevitable resolution for a conflict-ridden Arctic, as it became less of a remote, unattainable region (Melvin & Bergh 2016). So far nothing of this has been realized. The Arctic has instead become a hub of regional, but still international, cooperation with low tensions (Melvin & Bergh 2016). The Arctic cooperative structures have decidedly and consciously set aside global politics at large and created an interconnected and sometimes overlapping platform of systems focusing only on the Arctic (Young 2009).

Arctic cooperation builds largely on pre-existing international legal frameworks, mainly the United Nations Convention on the Law of the Sea, despite the United States not having ratified it. The United Nations Commission on the Limits of the Continental Shelf has been employed by the Arctic states to settle disputes over territory, lately by Russia in 2016, Norway in 2006 and Canada in 2019.

Another such framework in effect in the Arctic are the International Code for Ships Operating in Polar Waters (Polar Code) that was entered into force in 2017. The Polar Code is governed by the International Maritime Organization and is mandated by both the International Convention for the Safety of Life at Sea (SOLAS) and International Convention for the Prevention of Pollution from Ships (MARPOL). These systems are seen as sufficient by the Arctic states, and no larger scale legally binding treaty, as with Antarctic, is considered necessary. (Melvin & Bergh 2016, 8).

Despite the shifts of global geopolitical tensions, Arctic cooperation has remained unaffected until now. Even when potentially destabilizing acts have happened in the Arctic itself, such as Russia planting its flag on the Arctic Sea floor in 2007, the focus has been on emphasizing cooperation and promoting deeper ties between the Arctic nations in the form of joint exercises in civil security. The main view of analysts and those working with Arctic issues is that the common goal of all Arctic actors is to maintain it as a separate entity from the broader global

politics. The purview of Arctic actors is strictly limited to civil issues. This has changed in February 2022, when all cooperative projects in the Arctic were indefinitely frozen.

## 2.1 Arctic Council



### 1 - Arctic Council nations, administrative areas, and capitals

The inception of the Arctic Council was the Arctic Environmental Protection Strategy, which was adapted in 1991 after the late-1980s discussions by Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States. From the beginning it also included some groups representing the indigenous populations of the region: the Saami council, the Inuit Circumpolar Council and Russian Association of the Indigenous Peoples of the North (Russell 1996) From this group, the Arctic Council was born at the biennial ministerial meeting in Ottawa in 1996.

The language of the Ottawa declaration sets the limits of Arctic Councils work and is considered “rather weak” and general (Kankaanpää & Young 2012). The council focuses on issues such as the environment, economic growth, and social issues, by conscious design. Efforts to broaden the scope of the Council have occasionally been brought up, but the Arctic is seen as an arena separate from the world at large, and what happens elsewhere has thus far had no effect on the proceedings of the Arctic Council.

The Arctic Council was intended to promote “cooperation, coordination and interaction”. In 2012 a questionnaire was circulated to assess the effectiveness of the Arctic Council by Kankaanpää and Young. It found that particularly the scientific work of the Council’s working groups was considered a success. Other notable factors mentioned were the involvement of the Indigenous Peoples Groups and increase in information exchange between different actors in the Arctic (Kankaanpää & Young 2012).

In 2013, to celebrate the first round of eight successive chairmanships of the Arctic Council, it released a document entitled “Vision of the Arctic” which laid some principles for the future work of the Council. It calls attention to the principal points of the Council, e.g. the environment, economic growth and prosperity, the value of traditional knowledge along with new scientific discoveries, and of course, the rights of indigenous groups. Somewhat ironically, the document starts with a header “Peaceful Arctic” and includes the following statement:

*“We are confident that there is no problem that we cannot solve together through our cooperative relationships on the basis of existing international law and good will.” Arctic Council: Vision for the Arctic 2013, p. 3*

As of March 4<sup>th</sup> 2022, all activities of the Arctic Council are suspended until further notice. As 2022-2023 are years for Russia’s chairmanship of the Council, it is still uncertain how cooperation could proceed in the face of the sanctions placed on Russia in response to their attack on Ukraine. However, as Russia’s earlier aggressions, as the war on Georgia and annexation of Crimea, have not resulted in any changes in the work of the Arctic Council, it is likely some form of cooperation will continue as the situation can be considered somewhat settled.

### 2.1.1 Structures

The main decision-making and negotiation in the Arctic Council happens exclusively by the Arctic 8. However as indigenous peoples populate much of the Arctic region, representative groups of various indigenous people have been granted a consultative role as permanent participants in the council. To promote the value of traditional knowledge, Indigenous People’s

Secretariat has been formed inside the Arctic Council, with its own designated budget and work plan.

To promote the Arctic Council as a legitimate forum for all Arctic related issues, the Council has accepted interested non-Arctic states and non-governmental organizations as observers. The tension between maintaining Arctic Council's international standing by accepting outside expertise and not weakening the control that the Arctic 8 have over the council has shaped the role of the observers (Ingimundarson 2014). Observers work mainly through the Working Groups of the Council and are able to "make statements after Arctic states and Permanent Participants, present written statements, submit relevant documents and provide views on the issues under discussion." (Arctic Council 2022)

The Arctic Council's work is focused on its working groups which produce scientific data relating to the Arctic environment, safety, and development. It is particularly the scientific work by the Arctic Monitoring and Assessment Programme which is seen as influential and effective when it comes to the policies of the Arctic Council (Kankaanpää & Young 2012). Relevant working groups and their productions are discussed in more detail in later chapters

## 2.2 Barents Euro-Arctic Council

The Barents Region encompasses the northern parts of Norway, Sweden, Finland, and parts of Russia. While its 5,2 million inhabitants make it sparsely populated in the global scale, it is the most populated region of the Arctic. The population is largely concentrated in the cities of the region, as the infrastructure is limited and climate challenging. The Barents Sea is divided between Russia and Norway as the coastal states, as defined by the United Nations Convention on the Law of the Sea (UNCLOS). (BEAC 2022)



## 2 - Barents Euro-Arctic Council regions and capitals

The Barents Euro-Arctic Council began its work in 1993, in order to promote the region's development through cross-border regional co-operation. Its member states are Denmark, Finland, Iceland, Norway, Russia, Sweden, and the European Commission. The chairmanship of the Council rotates between Finland, Norway, Russia, and Sweden. Currently, Finland holds the chairmanship until 2023. After that, the chairmanship should rotate to Russia, but all co-operation with Russia has been indefinitely suspended as of February 2022. (BEAC 2022)

Indigenous Peoples of the Barents region, the Sámi, the Nenets and the Vespians, have an advisory role both in the BEAC and the Barents Regional Council, as the Working Group of Indigenous Peoples. They are then represented on every level of the Barents co-operation.

The BEAC website notes that its premise has been to “secure political long-term stability and reduce possible tensions” by close co-operation in the region. This has been for the most part true, and the website notes:

*The Barents cooperation has fostered a new sense of unity and closer contact among the people of the region which is an excellent basis for further progress.*

<https://www.barents-council.org/about-us/cooperation-in-the-barents-euro-arctic-region>

### 2.2.1 Structures

The Regional Council works on regional level around the Barents Council member states. From Finland, it includes the regions of Kainuu, Lapland, Oulu and North Karelia. The Norwegian members are the regions of Nordland and Troms og Finnmark. From Sweden, the regions of Norrbotten and Västerbotten are members. From Russia, the Council includes Arkhangels, Karelia, Komi, Murmansk, and Nenets regions.

All of these regions work together to “ensure the wellbeing of the population across the borders” (Cambou & Heninen 2018). The issues affecting the regions unite them across borders and joining forces to face the challenges is seen as largely beneficial. In issues such as logistics, collaborating across borders is very useful, as the regions together can plan bigger projects. One example of such is the Joint Barents Transport plan, which will be assessed in more detail in chapter 5.

Much like in other Arctic co-operative forums, the work of Barents Euro-Arctic Council and Regional Council focuses on issues of sustainability, the environment and economic development. There are 12 working groups in total, one of which is the Working Group of Indigenous Peoples which has an advisory role in both councils. There is also a separate Barents Regional Youth Council, which works with the Working Group on Youth issues to promote youth involvement and participation in the Regional Council’s work. The Youth Council consists of 15 members, representing the 14 regions and Indigenous peoples.

### 2.3 European Union involvement

The European Union sees the Arctic as a strategic issue. Globally, the EU is the closest major industrial region to the Arctic, and thus its impact is comparatively higher. The Arctic features also heavily in EU economy: EU is a large buyer of hydrocarbons, particularly liquid natural gas, produced in the Arctic, and imports notable amounts of critical minerals and other raw materials (Koivurova et al 2021).

In its 2021 communication, the European Commission outlined its objectives for its Arctic engagement, to maintain “peaceful and constructive dialogue and cooperation”, address challenges rising from climate change in every arena, as well as support “the inclusive and

sustainable development” of the region. The communication emphasizes the need for regional cooperative structures and dialogue (European Commission 2021).

Climate change and sustainable development are special interests for the EU in its Arctic regions and the surrounding areas. The EU has multiple programs aimed at promoting research and development, e.g. the Horizon programme which used over 200 million euros on research and innovation. Various cross-border and transnational programs have been financed to the tune of 1 billion euros between 2014-2020 (Koivurova et al 2021).

### 2.3.1 Northern Dimension

Northern Dimension is the European Union’s joint policy program with Norway, Iceland, and Russia. It is considered mainly a practical co-operative system, focusing on stability, wellbeing, and economic development in its region. The specific areas, or sectors, of Northern Dimension are Culture, the Environment, Transport and Logistics, and Public Health and Social Well-being (Ulkoministeriö 2022).

The Northern Dimension programme is seen particularly important tool particularly by Norway for political dialogue and practical cooperation. The political aspect has been diminished since 2014, when the relations between the EU and Russia soured in response to the Crimean annexation. However practical cooperation, particularly in nuclear safety, has continued and yielded tangible results until the halt of all cooperation in 2022 (Regjeringen 2021).

### 2.3.2 Kolartic

Kolarctic is a part of European Neighbourhood Instrument, aimed at financially supporting cross-border cooperation for “internationalization and cross-border cooperation”. It focuses on the North Calotte, consisting of the northernmost regions on Norway, Sweden, and Finland, and Northwest Russia, for “joint cross-border operation projects, operating in line with the strategy and priorities jointly agreed by Finnish, Norwegian, Russian and Swedish partners.” (Kolartic 2022)

### 3 Environmental treaties and strategies

The Arctic environment is always noted as particularly fragile. It faces challenges from increased human activity not only in the region itself but also from sources further away, as noted in Norway's National Arctic Policy from 2021. Pollutants express themselves in Arctic food chains and may travel far in the atmosphere or ocean currents. New substances being introduced around the world may also have properties that makes them more hazardous to Arctic ecosystems, allowing them to travel further and linger longer (CAFF 2013).

There are more direct impacts from increased traffic in the region. The fragility of the Arctic ecosystems is a concern shared also by the International Maritime Organization (IMO). In cooperation with the Arctic Council, the IMO created an International Code for Ships Operating in Polar Waters, or Polar Code, annexed to the Convention of the Safety of Life at Sea Convention (SOLAS) that came into force in 2017. The Polar Code specifies requirements for the construction of ships operating in Polar waters, as well as training of the crew, aiming to reduce the risk of accidents both to vessels and their crew as well as the surrounding environment. The Code is enforced also around Antarctica (IMO).

Environment is, as noted, a focus point for vast majority of Arctic cooperative platforms and projects. Almost all of Arctic Council's working groups focus on the Arctic environment, its flora and fauna, and the changes they face. The Barents-Euro Arctic Council also works on environmental issues. Along with the larger cooperative structures, Norway and Russia have bilateral treaties and agreements on issues affecting their shared interests in the Barents Sea: oil spills, environmental issues, and radioactive waste.

As with all other projects involving Russia, all environmental projects are also frozen and cooperation has been limited to the minimum if not completely discontinued. This involved bilateral agreements between Norway and Russia as well as larger international cooperative structures.

#### 3.1 International structures and agreements

When focusing on environmental issues, the notable working groups assessed are the working group for Protection of Arctic Marine Environment (PAME), the Conservation of Arctic Flora and Fauna (CAFF), and the Arctic Monitoring & Assessing Programme (AMAP), all part of the Arctic Council.

The scientific products of Arctic Council's work are considered effective and influential (Kankaanpää & Young 2012). One of the most notable works is the Arctic Climate Impact



Assessment by AMAP which was published in 2005. In it, the effects of climate change are assessed in detail in various fields. Most of Arctic Council's scientific work bases off this report.

One of the framework documents for AC's work is the Arctic Marine Strategic Plan 2015-2025 which was adopted in 2015, formed by the Protection of Marine Environment working group. It guides the actions of all Working Groups and aims to protect Arctic marine ecosystems and promote sustainable development within Arctic communities. It includes 4 strategic goals to improve knowledge via monitoring and assessment, protect ecosystem function, promote the use of marine environment safely and sustainably, and enhance the wellbeing of Arctic inhabitants and promote adaptation to changes in the Arctic (PAME 2015). As with most work, PAME's AMSP calls for increased amount of monitoring and collection of high-quality data regarding the changes happening in the Arctic environment, to ensure decisions made address the proper problems.

Another notable project in Arctic waters is the Regional Action Plan on Marine Litter in the Arctic which is part of the work of PAME working group. The project was funded in Nordic cooperation but specifically mentions the Norwegian Ministry of Climate and Environment as its funder. In the regional plan, it is noted that "vital Arctic economic sectors such as tourism, fisheries, and shipping" are likely to be the sources of marine litter but also suffer from it. Blame is shared, as the report also notes that the litter found in the Arctic "originates both from within the region and outside it". In this project as well, emphasis is placed on the need for "broad monitoring" to better understand the sources and effects of marine litter all around the Arctic region (PAME 2021). It is particularly notable around the Norwegian coastline, as that is one of the most heavily trafficked regions of the Arctic seas.

Biodiversity is also an issue of interest that has brought about publications. The Arctic Biodiversity Assessment was conducted by CAFF and published in 2013. In it, some stressors affecting biodiversity in the Arctic were noted to be changing climate resulting in loss of sea ice and thawing permafrost, increased resource development in the region partially due to changing climate, increased transportation owing to the increased resource development, and contaminants from the region and elsewhere (CAFF 2013). From this report, new projects and action plans to address the negative effects on biodiversity have been enacted.

Among the noted stressors of the biodiversity assessment are increased resource exploitation and traffic. These changes mean that the risk of oil spill is becoming more relevant. The Arctic Council's Emergency Prevention, Preparedness and Response (EPPR) Working Group hosts multiple projects on the issue. Norway and Russia particularly have multiple oil and gas extraction projects going on in their Arctic regions, and as traffic increases, the risks for oil spills rise.

The Arctic Council has signed a legally binding agreement on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA) in 2013 to address the growing concerns of oil spill incidents in the Arctic. As oil and gas extraction is in the interests of Arctic nations to promote their economic development, it is unlikely to decrease. The MOSPA agreement calls for increased cooperation and information-sharing, and for the Arctic nations to continue develop systems for monitoring, detection, and responding to oil spill incidents.

Oil spills are also an interest to the Barents Euro-Arctic Council. Though Norway and Russia host bilateral exercises both in search & rescue (SAR) and oil spill protection preparation (OSP) contexts, they are often done in the context of BEAC. The BEAC countries have signed an Agreement on Cooperation within the Field of Emergency Prevention, Preparedness and Response in 2008, and conduct joint exercises regularly. The agreement and exercises cover a multitude of emergencies. Norway and Russia also hold annual exercises for SAR and OSP together. The exercise for 2022 was cancelled, but the cooperation has been exempted from the sanctions against Russia (Edvardsen 2022).

European Union's involvement in environmental issues comes mostly in the form of the Northern Dimension Environmental Partnership. The core issues for NDEP are the protection of Baltic and Barents seas, waste management, energy efficiency and nuclear safety (NDEP). Of these, particularly the nuclear safety is relevant to Barents context, and specifically noted in the Norwegian government's Arctic policy paper from 2021. NDEP's Nuclear Window programme is funded by donations, and 165 million euros have been donated to date according to the European Bank for Reconstruction and Development.

Nuclear safety is an issue in the Barents region mostly in terms of radioactive waste processing and storage and clean-up of spent nuclear fuel. A notable number of radioactive objects have been dumped into the Arctic Ocean; the Norwegian government's Arctic policy paper estimates the number to be 17 000. One of the main bases of Soviet-era nuclear vessels is in Andreeva Bay, close to the Norwegian border and thus an issue of interest.

NDEP's Nuclear Window has seen notable success. In 2019, a spent fuel store was successfully cleared of spent fuel assemblies, leading to the radiation levels to drop "by over 40 percent" (Usov 2019). In 2020, a former nuclear refuelling ship was finally cleared in a process started in 2012 (Reiserer 2020).

There is still radioactive waste around the Arctic Sea to be cleared, and new nuclear-fuelled vessels are being produced. While they are generally only for military use, Russia employs nuclear-powered vessels as icebreakers along the Northern Sea Route. By 2035, Russia aims to have added eight new nuclear-powered icebreakers to its fleet, bringing the total number to 13 ships in operation (Digges 2019).

### 3.2 Bilateral treaties and agreements

Norway and Russia share a long history of working together on issues relating to the Barents Sea, dating back from the Soviet era. In 1994, Russia and Norway signed an agreement on oil spill prevention (OSP), which was later expanded to include search and rescue (SAR) efforts as well. These agreements create a framework of co-operation and information sharing, based on a shared understanding of the necessity of cooperation to protect the region (Sydnes & Sydnes 2013)

Norway and Russia have a Joint Contingency Plan regarding oil spill disasters which is updated annually. The agreement also provides for annual practical exercises, which are considered valuable - especially as no actual emergencies have thus far emerged in the Barents region (Sydnes & Sydnes 2013).

While the bilateral cooperation in this field is important, it also ties with the interests of Arctic Council and Barents Euro-Arctic Council, and collaboration is frequently done with both. AC's working groups offer a platform for creating international policies, the BEAC facilitates cooperation on the operative level in the form of Barents Rescue which is held every three years. In years when the Barents Rescue exercises include oil spill scenarios, it can be combined with Norway and Russia's own oil spill exercises (Sydnes & Sydnes 2013).

The bilateral cooperation between Norway and Russia is not only focused on oil spill prevention. Norwegian-Russian Commission on Environmental Protection has been active since 1992, and focuses on marine environment, pollution, radioactivity, natural diversity and border co-operation. The commission has produced systems for information presentation and sharing, namely the Barentsportal which creates annual reports on the state of Barents environment (Polar Institute).

The commission also works on creating environmentally valuable areas and systems by which those areas can be more effectively protected from commercial activities. Norway has a management plan for its side of the Barents Sea, but Russia has no similar system yet in effect. Plans to map out commercial activities in the Barents sea and their effect on marine ecosystems have been made in the commission until 2021, but their future is as of yet unknown (Polar institute), though Norway's Arctic Policy from 2021 notes that active cooperation on marine litter has been established.

Russia's invasion of Ukraine plays a part here as well. As Barentsportal's website banner notes, "bilateral environmental cooperation has been put on hold until further notice". This is true also for other projects: the Russian-Norwegian nuclear safety commission has been defunded,

and following Norway's freezing of the funds, Russia has officially withdrawn from the commission. To the Norwegian broadcasting company, NRK, Rosatom's official stated that the projects will continue, only without foreign support (Digges 2022).

### 3.3 Norway

In its Arctic Policy from 2021, the Norwegian government notes that the development of its northern parts is a matter of "national interest". Northern Norway accounts for 35% of mainland Norwegian territory, and 9% of Norway's population live north of the Arctic circle. The area is also, more crucially, rich in natural resources, that are a notable part of economic growth of the entire nation. Norway has set itself a goal of becoming a low-emission society, reducing emissions by 90-95% in comparison to 1990 levels, by 2050 (Norway's Arctic Policy).

Though extractive industries and oil and gas production are important to the Norwegian economy, environmental precautions and concerns can be seen as determining the pace of production and development (Bouffard 2017, 15).

Typically all the commercial activities taking place in the region, like fisheries, shipping, and hydrocarbons, are assessed in their relevant ministries and no comprehensive picture of their effects on the environment is made. In 2006 the Norwegian government created an ecosystem-based management system for the Barents Sea and Lofoten in which this problem is tackled. It offers no specific management details, as these are still the responsibility of the relevant management bodies but creates a general plan and aims for activities in the region. Notable updates for the plan have been carried out about every 4 years (Olsen et al 2007, Polar institute).

The plan aims for "sustainable use of the ecosystem ... while safeguarding biodiversity" (Olsen et al 2007). Fisheries already have a strict management regime, and most of the growth in Barents Sea and Lofoten is expected to come from hydrocarbon exploitation and shipping. In these, the plan aims for zero-emission policy for hydrocarbon projects, preventative measures and preparation for pollution, increased monitoring and assessment for fisheries, and habitat protection. It also calls for closer international cooperation with EU, Russia, and other relevant parties (Olsen et al 2007).

### 3.4 Russia

Historically, environmental issues of the Arctic have been an issue of interest to Russia. The current cooperative structures of the Arctic, including the Arctic Council, saw its beginnings in

the environmental concerns of Soviet-era Russia. Lately, other strategic interests have surpassed the environmental issues when it comes to Russia's Arctic Policy. In its latest policy document, Russian Federation State Policy in the Arctic until 2023, the protection of Arctic environment has dropped to the end of the list of issues, below national security, economic prosperity of the region and Russia as a whole, resource development, and the Northern Sea Route (Klimenko 2020).

Russia is among the top greenhouse gas emitters, and its economy depends heavily on fossil fuel production and exportation (Devyatkin 2022, 91). Renewable energy sources are forecasted to stay below 1-2.5 percent by 2035, as political will focuses on more traditional sources of energy and wealth (Safonov 2021). Despite experiencing negative effects of climate change already, Russia may also actually benefit from warming climate, in that the natural resources of its northern regions will be more accessible (Devyatkin 2022; 91).

The conflict between Russia's economic interests in furthering its hydrocarbon projects and the environmental concerns for the effects of said projects is notable. According to the Russian Security Council, majority of the country's combustible natural gas and 17% of its oil are in the Arctic region. This makes Arctic and its continued economic development a strategic interest to Russia, despite climate change and the dangers it brings (Devyatkin, 2022, 91).

While displaying little ambition in curbing the effects of climate change, Russian leadership has at least acknowledged that the effects are real, as Siberia struggled with massive wildfires and flash floods in 2021. A research program to promote climate change adaptation, emission reduction and black carbon monitoring was funded to the tune of 5.9 billion rubles in 2022 (Devyatkin 2022, 88). Russia sees more negative impacts of climate change in the thawing permafrost: about 65 % of its territory is on permafrost, the thawing of which presents great challenges to existing infrastructure and new projects of railways and highways (Devyatkin 2022, 92).

Russia participated in the IMO's Sub-Committee on Pollution Prevention and Response, which created a ban on the use of heavy fuel oil (HFO) in the Arctic to curb black carbon emissions in the region. This apparent promotion of environmental interests is directly contradicted by the ban including an exemption for ships sailing in the Northern Sea Route under the Russian flag until 2029. This is notable, as in 2019, 85% of the ships sailing on the route operated under the Russian flag, and the usage of heavy fuel oil and consequent pollution will increase, as new ships commissioned before 2029 will carry larger amounts of fuel in comparison to old ships (Devyatkin 2022, Humbert 2020).

Russia has committed to a net-zero greenhouse gas emission by 2060, later than most nations. The lack of ambition can be seen in its legislative progress as well. In March 2020, Russia published a new Energy Strategy - 2035 plan, which sees a notable increase in Russia's

production, exportation, and combustion of fossil fuels in the next 15 years (Safonov 2021). It seems unlikely that these goals will be met in the current international landscape.

All in all, there is a divide between what is said and done regarding environmental issues in Russian politics. While sustainability and responsibility are a part of Russia's public image, its practical interests focus on extraction of fossil fuels and minerals (Wall 2021, Devyatkin 2022). Economic development is seen as the main driving force, and indeed Russia's National Security Strategy from 2021 sees the continued global pressure on climate change mitigation as a western ploy to prevent Russia's development of its Arctic and industry in general (Devyatkin 2022, 89).

#### 4 Search and Rescue

The United Nations Convention on the Law of the Sea of 1982 is accepted as the framework for all Arctic operations. It establishes the safety of seas as the responsibility of the coastal states, and promotes regional cooperation to establish, operate and maintain a system for adequate and effective Search and Rescue (SAR) operations. In this, regional arrangements with neighbouring states are encouraged as required (UN 1982). In 1979 an international SAR convention was established to further specify the requirements of adequate and effective SAR system, notably the establishment of rescue co-ordination centres and subscentres (Sydnes et al. 2017, 37)

The Arctic conditions add to the risks seafarers face. Not only the weather and ice conditions, remoteness, but also the limitations of the SAR equipment and infrastructure in place make travelling the waters around the Arctic, including the Barents Sea, particularly hazardous. The Arctic Council has worked with the International Maritime Organization IMO to create the Polar Code requirements for any vessels travelling the Arctic, and their crew. The requirements include technical requirements for ships, self-rescue capabilities, crew training, and more.



3 - Northern Polar Code area

Arctic Council's Protection of Marine Environment (PAME) working group published a report, Arctic Shipping Status Report in 2021, studying the change of shipping trends in the Arctic waters from 2013 to 2019. According to it, shipping has increased by 25% in the Arctic. The Polar Code area saw 1298 unique vessels travelling in 2013, and in 2019 the number was 1628 (PAME 2021a). The biggest increase is in the amount of fishing vessels, but big cruise ships also saw an increase. Distance travelled has also increased by 75%, from 6.1M nautical miles to 10.7M (PAME 2021a). As sea ice diminishes, the amount of traffic is expected to increase, leading to more attention paid to SAR in the region.

It is widely acknowledged that the SAR capacity in the Arctic is low. Operational procedures between countries can vary, and no pan-Arctic formal procedures have been established. Communication is also a challenge, not least due to the different languages (Sydnes et al 2017, 128). While multiple bilateral agreements between neighbouring countries have existed for a while, an overall framework for cooperative procedures has been lacking.

#### 4.1 Arctic Search and Rescue

The remoteness of the Arctic, along with the vast distances and challenging weather conditions make it a more notably challenging region to traverse. This places additional strain on the nations SAR resources, which are often limited when considering the area they need to cover (PAME 2013).

In 2011, the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic was signed by the Arctic Council nations. It was the first legally binding contract made by the council. It was however not a new idea: pre-existing multilateral and bilateral agreements had existed in the Arctic for a long time already. This agreement attempted to harmonize and unify the SAR cooperative capabilities between nations and clarify the responsibilities in case of a larger emergency (Sydnes et al 2017).





communication and cooperation: it addresses the results of exercises and real-life events, and shares best practices learnt from these (Sydnes et al 2017).

To promote cooperation on the operative level, a series of exercises on the field have been held, including operatives in all the nations. The first one held in 2011 was a tabletop exercise, focusing on strategic and operational aspects. In 2012, a full-scale live exercise was held in Greenland, simulating a cruise ship incident. The exercise showed the numerous challenges of the system: lack of adequate planning, coordination problems, and challenges in communication. While it was considered a success by the organizing parties, Arctic SAR in 2012 still needed a lot of work, but it provides a framework for continuing collaborative efforts (Kudsk H. 2015; Sydnes et al 2017).

While bilateral exercises have been held somewhat regularly between Russia and Norway, and Russia and the USA, exercises combining resources from all Arctic nations are more challenging to organize. Partly in response to this, the Arctic Coast Guard Forum was established in 2015 by the 8 Arctic nations. It aims to function as an informal, operationally driven platform for sharing information and developing best practices in Arctic marine safety in the context of the Arctic SAR agreement (Østhagen 2015).

The ACGF has held two live exercises, Arctic Guardian in 2017 and Polaris in 2019. From the first exercises on, the focus is on cooperation of SAR units and services of various Arctic nations, as well as testing communications between Rescue Coordination Centres (ACGF 2017). In the Polaris exercise, a cruise ship scenario involved an evacuation centre along with more traditional SAR resources and communication tests (ACGF 2019). Following that, an online exercise was held in 2020 in collaboration with AC's EPPR working group (EPPR 2020).

While the final report of the Arctic Guardian 2020 exercise holds hope for a first live exercise with ACGF and EPPR, the Arctic Guardian 2021 exercise was also held online by Icelandic actors (EPPR 2021). All the activities of EPPR are also on hold due to Russian invasion of Ukraine, and the future of the exercises is unclear.

#### 4.2 Barents Rescue

The first Barents Rescue exercise was a disaster relief exercise in Sweden in 2001, under NATO's Partnership for Peace programme. Joint exercises between the Barents nations have been held under the Barents Cooperation umbrella since 2005. In 2016, a shift was made in the nature of the exercises, focusing more on the planning and collaboration between organizers rather than field training (Barents Cooperation).

A formal agreement between Norway, Sweden, Finland, and Russia was signed in December 2008, called the Agreement on Cooperation within the Field of Emergency Prevention, Preparedness and Response. The agreement defines the scope and objectives for Rescue Co-operation Working Group operating under the BEAC. It is focused on improving operational cooperation and aims to make providing assistance more efficient, faster, and cheaper to operate (BEACa).

The Rescue Co-operation WG also organizes the Barents Rescue Exercises, aided by its Planning and Evaluation Subgroup. The exercises have previously been held every two years, but from 2019 onwards, they are to be held every three years (BEAC 2021). The future of Barents Exercises at their current extent is unclear.

### 4.3 Bilateral Agreements

The collaborative work on SAR at sea between Norway and Russia has been ongoing since 1956. New agreements have been periodically made, the latest one in 1995.

The first bilateral Barents Exercise was held in 1989. It has been held annually since then, until 2022, when the Exercise has been cancelled (Edvardsen 2022). Since 2006, the exercise has included scenarios on both SAR and OSR. The current bilateral agreement on OSR was signed in 1994, and an agreement focusing on SAR in 1995 (BEAC 2021).

Exercise Barents aims to address the operative side of the system, focusing on the work on the rescue coordination centres in Bodo and Murmansk (Sydnes et al 2017). It aims to practice the correct notification and aid request procedures, the correct and effective way to clear border crossings, and exchanging liaisons between vessels. The liaisons exchange was not done in the 2020 and 2021 exercises due to the pandemic. The exercises also aim to facilitate better exercise control, information exchange, and scenario coordination (BEAC 2021).

On official level, the exercises are seen as a valuable part of preparedness in case of an emergency in the Barents Sea. Participants also consider the regular collaboration necessary to ensure sufficient readiness, and that annual exercises make cooperation easier. This is necessary both for rescue purposes and combating pollution (BEAC 2021).

When a study was made on the exercises and their effects, it was noted that the agreement and exercises add to the commitment of parties and develops trust between the participants (Sydnes et al 2017, 123). They also facilitate cooperation, and the participants note that day-to-day communication between the parties has increased. The exercises have become increasingly more challenging, and more resources are involved. While they help to maintain

open communication, it was noted that the exercises themselves do not test the actual capacity of resources, and thus do little to identify potential gaps in the procedures (Sydnes et al 2017, 127).

Another challenge for effective cooperation and indeed trust between actors in SAR fields is unclear or insufficient communication. It was also noted that occasionally Norwegian SAR resources would be called upon by Russian SAR coordinators or directly by Russian vessels, as Russian resources “are often not available when needed”, even though the jurisdiction would fall under Russia. While day-to-day communication is easy and efficient, there is an uncertainty of how much help would be provided in an actual emergency (Sydnes et al 2017, 125).

Norwegian actors also note that they are not fully aware of Russia’s resources when it comes to SAR in the Barents region. Some of Russia’s SAR resources are under military command, which makes Russian authorities reluctant to share information on them (Sydnes et al 2017, 124) This challenges effective planning, coordination and mobilization of all available units, as the amount and quality of resources is unclear (Sydnes et al 2017).

It was also noted the Exercise Barents has no official evaluation protocols. Somewhat less formal post-exercise debrief is held between the parties, and that is considered “the main arena” for discussing experiences, particularly now as the exercises have been mostly participated by the same people, and a shared trust has been established. However, this limits the lessons learned to those participating the exercise and does not ensure that they are shared within the wider SAR field. The lack of formal evaluation process is a question of resources and funding but could ease future co-operations (Sydnes et al 2017, 124).

The annual Exercise Barents and the joint meetings in connection of it are still seen as very valuable. They provide an important platform for increased communication and cooperation, informally as well. The annual exercises have provided both parties with a better understanding of each other’s capabilities and procedures, and regular contact between the coordination centres is still maintained (Sydnes et al 2017).

#### 4.4 Norway

In Norway’s Arctic Policy white paper from 2021, the increasing risks of growing traffic are acknowledged. Norway notes that most maritime traffic in the Arctic passes through its own waters, being in its SAR jurisdiction. The biggest issues named in the policy are the lack of capacity, e.g., helicopters, and communication capabilities in the far north (Regjeringen 2021).

Norway's SAR authorities are their two Joint Rescue Coordination Centres (JRCC) located in Sola near Stavanger for Southern Norway, and Bodo in Northern Norway. JRCC-NN is responsible for SAR operations above 65 degrees North and is listed in the Barents SAR agreement as a competent national authority. The JRCC's function under the auspices of the Ministry of Justice and Public Security, and it functions as the main organizer for other, local authorities, such as police, coast guard, and local health authorities (Hoveredningsentralen 2016).

In a SAR-related study based on the Norwegian Government's Arctic Policy from 2016, it was noted that while most incidents registered by the JRCCs happened in the southern part, the number of remote incidents on Bodo's jurisdiction had steadily increased in the past 5 years (SARiNOR 2016, 6). It is unlikely that trend has changed since.

The increasing traffic in Norway's waters is not limited to its coastal areas, but also the region around the Svalbard archipelago, some 700 kilometres north of Norway. In that region, a particular concern is the increase in cruise traffic with increasing passenger amounts, as resources when facing those issues are severely limited. Norway held its own AMRO 2020 exercise of evacuation a massive cruise ship in distress (Nilsen 2021).

In a shipping risk assessment article, collision and grounding were seen as high-risk concerns for coastal Norway. The risk of such incidents is higher closer to the coast which would ease SAR efforts. Tourist vessels create another challenge mostly in the number of passengers and potentially greater distance from coastline and SAR resources. Cooperation and frequent training with resources capable of handling long distances and ice and icing is again noted to be important. (Marchenko et al 2018, 112).

The importance of drills and training exercises is also brought up in the SARiNOR report. Particularly when multiple actors are involved, ensuring effective communication is vital. Awareness of other organizations specializations, resources, and practises eases planning work and promotes a more streamlined actions in actual emergencies (SARiNOR 2016, 16). Another factor noted is debriefing, following joint drills, and implementation plans for potential changes based on the findings of said drills (SARiNOR 2016, 9).

#### 4.5 Russia

The Russian competent national authority in Barents SAR activities is the Marine Rescue Coordination Centre in Murmansk, operating under the Ministry of Emergencies EMERCOM. There are however multiple actors in the Russian Arctic whose job includes the implementation of Arctic SAR: border guards, coast guards, army and navy, and Ministry of Transport (Serguinin 2020).

In a shipping risk assessment report, the increased transport activity relating to the petroleum industry in Russian Arctic waters is noted as an issue of concern. Collision and grounding of these vessels would be disastrous also for the surrounding environment. The report calls for re-examination of monitoring systems and promoting partnerships across borders in the north (Marchenko et al 2018, 112).

The Northern Sea Route is a notable part of Russia's Arctic ambitions, and SAR is a priority point for that. As reported by Barents Observer in 2020, the Russian government has not been able to meet its own goals for SAR in the Arctic: the proposed 16 new SAR vessels had not begun construction, and the state of new SAR bases across the Arctic coastline is unclear. It is however clear that safety in general and SAR specifically is an issue of importance and requires improvement if NSR is ever to become a viable option for international shipping traffic (Staalesen 2020).

As noted earlier in the chapter, Russia has somewhat of a reputation of withholding information regarding its assets, procedures, and resources. Norwegian sources note that for example getting clearance for border crossing can be a challenge, with answering times varying from 15 minutes to 6 hours, as "clearance from Moscow" is required (Sydnes et al 2017, 124).

For Russia the problem is also internal. There are multiple government agencies responsible for the Northern Sea Route and other Arctic water areas, and their responsibilities can, and often do, overlap. While EMERCOM maintains SAR bases, it is the border guard that ships need to report their route and locations to, and coast guard ships are often the closest should an emergency arise. Multiple Arctic military bases can also be used to assist in SAR situations (Serguinin 2020).

## 5 Economic Developments in the Barents Sea region

The Arctic is economically an important area for both Norway and Russia. Particularly so for Russia, as 20% of its exports and 10% of its gross domestic product are produced in its Arctic Zone (Klimenko 2020). The economic development of the Arctic relies on its natural resources: oil and gas, fishing, and most recently tourism. Oil and gas will be assessed in this chapter as a part of extractive industries, which includes mining as well.

The development of the key economies of the Arctic relies on functional and effective transportation on sea. While traffic is concentrated on coastal areas, much of e.g. fishing takes place further out in the seas. The lack of infrastructure creates a problem for emergency management, pollution response, as well as radio and satellite communication (AMSA 2009, 5).

Systems for monitoring and controlling the movement of ships have been implemented in the Arctic, particularly in the Barents Sea region. From 2013 onwards a mandatory Barents Ship Reporting System has been active, where ships meeting certain specifications must report themselves to authorities when entering the Barents SRS area. This is to ensure that ships have adequate information for safe navigation (Kystverket).

The ship reporting system active in Barents is approved by the International Maritime Organization and is a part of the international Safety at Sea convention. Another notable part of IMO's work on Arctic seafaring in particular is the Polar Code. It entered into force in 2017, and has requirements for both vessels and crew, in terms of supplies and training. It is intended to enhance the safety of seafarers and the environment of the fragile polar waters around the Arctic and Antarctic (IMO).

While the overarching strategic goal of the region is to establish sustainable development and limit negative impacts on the environment, economic development, particularly of natural resources such as oil and gas, is inevitably going to affect the environment. As increasing traffic is tied to economic development, the importance of risk evaluation and preventative measures grows. Regional regulation can differ, and more pan-Arctic coordination is called for (PAME 2009, 174-175).

### 5.1 Transport systems

Arctic marine activity relies on the natural resource development of the region: extraction of oil and gas, hard minerals, fishing, and cruise tourism. It also includes non-Arctic actors; most traffic is destinational, so ships sailing from a non-Arctic port to an Arctic one, returning once

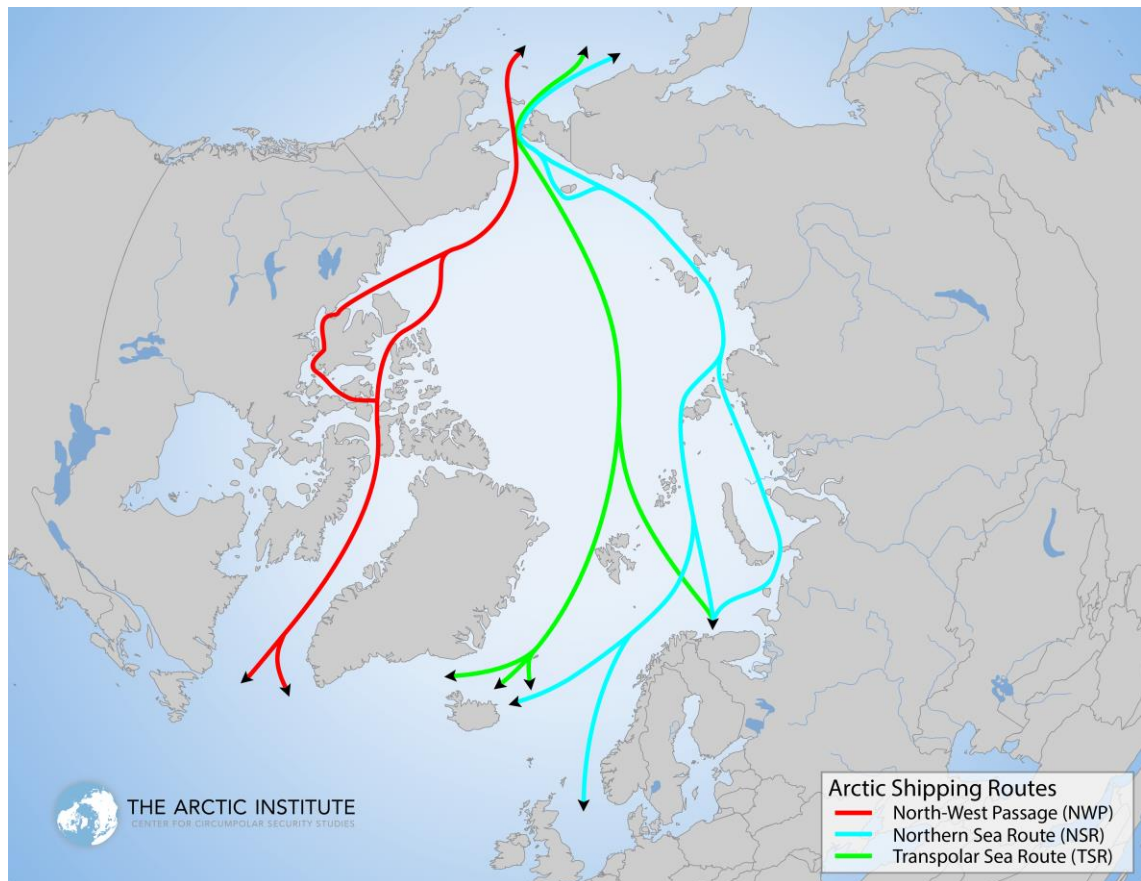
the trip is complete. This has been mostly attributed to the lack of major ports in the Arctic (PAME 2009, 6).

The traffic in the Arctic has been increasing. Arctic Councils PAME's report studied the period from 2013 to 2019 and noted that the number of unique ships traveling in the Arctic increased by 25%. Fishing remains the biggest cause for traffic, as 41% of ships in 2019 were fishing vessels. Other ship types included cargo and container ships, gas and oil tankers, chemical tankers, cruise ships, bulk carriers, and other ships, such as research vessels and icebreakers (PAME IAS 2021).

The traffic in the Arctic waters is unlikely to decrease soon and conversations regarding the infrastructure for vessel traffic in the region has become more pressing. While particularly Russia and Norway are investing in their coastal infrastructure in ports and emergency services, the developments lag behind the growing traffic amounts (PAME 2009, 172).

Despite the plans, and perhaps hopes of some, for cross-Arctic transportation, its expansion has been very slow. The expectation of ice-free summers over the Central Arctic Ocean does not make the area less difficult to travel; it is expected that storms and drifting ice might increase, which does not encourage time-sensitive transport (Stephen 2018). The increasing accessibility and longer shipping season for intercontinental travel are still likely to affect activity levels in the future (JBTP 2018, 32).





## 5 - Arctic Sea Routes

The northern Barents Sea region is referred to as the Northern Maritime Corridor in Barents Council reports. In its Joint Barents Transport Plan report of 2019, the traffic along the Barents and Norwegian Seas was classified into five categories: intercontinental traffic, coastal traffic, fisheries, petroleum, and maritime tourism. Internal destination shipping between ports in the region was identified, and traffic focuses mostly on the coastal regions, except for offshore supply shipping and routes to Svalbard (JBTP 2019, 32).

Norway's National Transport Plan for 2022-2033 promotes traffic on sea, with studies on several coastal corridors to reduce travel time and remove bottlenecks. The plans include increasing efficiency in tune of larger capacity of transport both on land and sea. To promote this, Norway aims to enhance port facilities to allow access for larger ships in multiple ports (JBTP 2019, 43). However, when it comes to Svalbard, port developments aim to improve facilities for small and medium-sized passenger and research ships (JBTP 2019, 42).

Sea port infrastructure is on the Russian state agenda as well. In 2018, a federal project "Sea ports of Russia" was approved until 2024 for the modernization and expansion of infrastructure. There are multiple development plans for the Murmansk transport hub, including a

second cargo area, a new coal terminal, and an LNG complex (JBTP 2019, 44). Much of these plans were to be realized in 2021, but in 2020, the infrastructure for the coal terminal were terminated (Kubny, 2020). Coal is not likely an economically viable option, but the Murmansk Transport Hub is considered of strategic importance and the construction will likely continue (Nilsen 2022b).

### 5.1.1 Northern Sea Route

The Northern Sea Route has featured notably in Russia's national Arctic policies, particularly in 2008 and 2018. Russia's goal for the route was to increase its traffic to 80 million tons annually by 2024. That has seemed unrealistic for a while, as in 2020 the traffic amounted to less than 30 million tons, and the route can hardly be considered a competitor in the game of international shipping routes. NSR however plays a notable role in Russia's domestic transport (Klimenko 2020).

It is legally defined as a set of marine routes from Kara Gate, south of Novaya Zemlya, in the west to the Bering Strait in the east. It is a challenging route to navigate due to narrow straits, weather patterns that might strand ships in ice for weeks even during summer months, and lack of support infrastructure (PAME 2009, 23).

As discussed in earlier chapter regarding the search and rescue activities in the Russian Arctic, the management of the Northern Sea Route has also been somewhat uncertainly divided under multiple actors. The Northern Sea Route Administration has been headquartered in Moscow under the Ministry of Transport since 2013, but in 2018, the management responsibility has been shared between Rosatom and the existing NSRA under the Ministry of Transport (Serguinin et al 2020).

While the port of Murmansk is ice-free all through the year, the Northern Sea Route is under ice during winter, meaning most of the traffic happens between July and October (Humbert 2017). Some traffic occurs during the winter months as well, as concentrates from Dudinka region are transported to Murmansk all year around (PAME 2009, 76).

Russia sees contradictory interests in the Northern Sea Route. National security interests would suggest keeping traffic on the route to a minimum, however economic interests push towards increasing traffic to gain more transit fees to fund infrastructure projects. So far, the economic interests seem to have won out (Laruelle 2019).

Traffic on the Northern Sea Route is mostly domestic, from Arctic oil field developments to ports for further development. This traffic will likely increase, as Russia's development of oil and gas fields has expanded. However domestic traffic does not bring much revenue, and

foreign traffic has stayed a small part, only 500 000 tons in 2018. The state had hoped to fund 2/3 of its huge 900 billion ruble budget for the Arctic from foreign investments (Laruelle 2019). That is not likely to happen.

The current global situation has affected the NSR as well: as reported by Humber in High North News, the route had no reported international transits in September 2022. Last year, international transit shipping reached 2 million tons, a record for the route, in 86 voyages. The Russian state plans triple the cargo volume to 100 million tons by 2025, aiming for 200 million tons by 2030, by huge investments in port infrastructure, terminals, icebreakers and ice-class vessels. However, as even Russia's own LNG projects are delayed, it is unlikely that these goals will be met in the coming years (Humbert 2022).

## 5.2 Fisheries

Fishing in particular is an issue of interest to multiple non-Arctic nations and actors. As most fishing takes place in the EEZs of the coastal nations, they are the ones who set the rules and allocate catchment quotas. Multiple international treaties, commissions, and agreements exist to manage fishing in the region, but none that cover the entire Arctic basin (Gornova 2016).

In the 2009 report Arctic Marine Shipping Assessment, 6 000 individual vessels were identified travelling on Arctic waters. Of those, approximately 1600 were fishing vessels. In the follow-up Increase in Arctic Shipping report of 2020, 41% of all ships entering northern polar waters were fishing vessels. These reports of course include the entire Arctic Ocean but do give some indication of the general trends that also affect the Barents Sea.

In the Barents Joint Transport Plan from 2019, fishing is noted to be a key industry of the region. In Northern Norway's sea areas, fishing vessels stood for over half of the total distance. Fish are also an important product transported from the Norwegian coasts to international markets mainly via Finland (JBTP 2019, 32).

Climate change effects in the Arctic is expected to cause notable changes in fish stocks and behaviours in the Arctic, as the receding sea ice allows access to areas previously untouched. It is also expected that as the ocean warms, fish will migrate to colder waters in the north. The ecosystems under the Arctic Ocean ice cover are however largely unknown (Blomeyer et al 2015).

As climate changes effects of the Arctic Ocean environment are still largely unknown, an international treaty was signed to halt the expansion of fishing in the region until more is known. The International Agreement to Prevent Unregulated Fishing in the High Seas of the

Central Arctic Ocean was signed in 2018 by Canada, Denmark, Norway, Russia, United States, Iceland, China, Japan, Korea and the European Union. It entered into force in 2021 and is in effect for 16 years to create a better understanding of the ecosystems before commercial fishing can be sustainably allowed.

### 5.3 Tourism

Tourism is identified as a sector of notable potential growth in the Arctic. In the Joint Barents Transport plan from 2019, deterrents for the growth of tourism were noted to be limited transportation options, particularly across borders in the west-east-directions, as well as the climate (JBTP 2019, 13).

The sector is already a notable sector in most of the Barents region nations. In Northern Norway, almost 7% of employment in 2017 was from tourism, on par with fisheries and energy sector as employers. When compared to 2013, the number of foreign tourists increased by 52% (JBTP 2019, 14).

The seasonality of particularly cruise tourism is notable. In the period from 2013 to 2019, on average 70% of passenger ships operated in more than one month of the year, but only 10% of ships operated for six months or more. A notable amount, on average 30% ships operated only for one month in the Arctic waters (PAME 2021a, 16).

A notable trend is the change in ship capacity. According to PAME's Arctic Marine Tourism Report, the capacity of cruise ships in the Arctic has increased to 91,166 passengers in 2019, in comparison to the 74,116 in 2013 (PAME 2021a, 20). In Northern Norway, the number of cruise-ship calls has declined from 2013 to 2017, but the number of passengers has increased. A similar trend is observed in Svalbard: the number of ships has decreased, but as they grow in size, the number of passengers increased (JBTP 2019,14).

In a Norwegian government report from 2022, cruise traffic is an issue of interest to Norway. Approximately 26% of global cruise operators operated voyages in Norway in 2019, and larger cruise ships are visiting Norway's ports. Conventional cruises take place in the coastal waters of western and northern Norway, but expedition cruises seek more extreme conditions and often sail to Svalbard. As sea ice recedes further north, it is expected that expedition cruises follow. It is also reported that cruise operators extend their seasons into winter months, which combined with the expected increase in extreme weather can be challenging. This creates a problem in terms of rescue and recovery efforts, as those resources are vastly limited further from Norwegian coastline (NOU 22).

There are calls for cruise traffic to be more prominently included in Norway's future national tourism plans, particularly regarding safety and emergency preparedness. In this, national policies and legislation are seen as solutions. Notably some limitations are considered in the capacity of tourist ships voyaging to or around Svalbard, as rescue and health resources are severely limited due to the small population (NOU 2022).

In Russia, tourism in its Arctic region is seen as a niche venture for a very small audience. The vast distances and limited infrastructure make tourism in the region challenging, and while cruises to the Russian North Pole on board nuclear ice breaker are offered, the industry is small as they are very expensive. From 2011 to 2018 the tour was taken by 6500 people from over 70 different nations. Russians were a minority in that group (Sevastyanov et al 2021, 7).

Tourism in the Russian Arctic is not seen as a priority by the government. No overall strategic plans have been made to tie tourism into the overall economic and social development of the Arctic region, even though calls for it have been made (Timoshenko 2020, 6). Environmental concerns are also brought up when it comes to tourism, as little to no infrastructure exists there either (Sevastyanov et al 2021).

Some effort has been made by the Murmansk and Arkhangelsk regional governments to promote cruise tourism. Entrance to both is allowed without a visa, and initial plans have been drawn by Murmansk to extend the Norwegian Hurtigruten cruise line from Kirkenes to Murmansk. This has been planned for 2018, but since delayed. Following Russia's invasion of Ukraine, all cruise travel to Russia was halted in 2022 (Nilsen 2022).

## 2. Extractive industries

The Arctic is rich in oil and natural gas, it is estimated that up to one-fifth of world's undiscovered resources could be there. Over 70% of the untapped resources are estimated to be in Russian and Alaskan Arctic and are mostly unusable with current levels of marine infrastructure and operations (PAME 2009, 97). Majority of the oil and gas in the Arctic lies within the Exclusive Economic Zones of the coastal states, so their development is a national issue and does not pose a conflict threat (PAME 2009, 98).

Both Norway and Russia have multiple offshore active oil and gas productions. The Integrated Ocean Management Plan that has been made valid for the Barents Sea as well, has some limitations on offshore extractive activities. These limitations are mostly related to scheduling e.g., no production during seabird hatching seasons, but also on the amount and type of chemicals used in the processes (PAME 2021).

Russia particularly sees its Arctic resources as a key to its current and future economic development, as oil and gas counts for about 10% of its GDP and 20% of its export (Devyatkin, 90). Russia also extracts more minerals and commodities than any other Arctic nation, mainly copper, nickel, platinum, diamonds, and gold (Devyatkin, 95). The extractive industries are also strictly in Russian state control, and operative control is maintained by government regulation. Most of the regulation is prescriptive in nature and does not promote site-specific actions (Bouffard 2017, 12). Of course, Russia's reliance on gas and oil as the main drivers of its economy have faced challenges in the 2022 world situation, where Russia can no longer export gas and oil to Europe at the same volume or indeed the same price as before its invasion of Ukraine.

In early 2020, Norway had 2 active petroleum fields in the Southern Barents Sea, and explorative wells are drilled at a rate of about 50 per year (PAME 2021). While Norway also invests heavily in the extraction of oil and gas in the Arctic, the industry is not as vital to the Norwegian government or the country's economy or energy production. Norwegian regulations on extractive industries tend to be performance-based to emphasize the competence and integrity of the industry actors. The decision to avoid over-reliance on gas and oil production was deliberate, and as oil and gas industry boomed, diversifying efforts in energy and economy were made on a governmental level (Bouffard 2017, 14). As the western world turns from Russian oil and gas, it is likely to increase the production pressure on Norwegian petroleum fields. The balancing act between environmental interests to halt and downsize fossil fuel production and economic interests to produce much-needed oil for European markets is not a new one, but will challenge the Norwegian government.

## 6 Discussion

Scholarly debate around the Arctic co-operative structures has presented the region as a brewing ground for conflicts and international tensions. The juxtaposition of the interests of USA and Russia elsewhere in the world was seen to inevitably reach the Arctic as well. As mutually beneficial co-operation under the Arctic Council platform was established and has continued to grow, the tune has changed. The Arctic exceptionalism, the notion that issues elsewhere do not affect work in the region, can be considered a success.

The deliberate focus on non-military issues such as the environment and economic development and civil security, has made Arctic co-operative structures free of tensions. The decisions and agreements align with international treaties and commissions, which are seen to benefit everyone. Particularly the work in search and rescue, with the first legally binding agreement of the Arctic Council, can be seen as a success of international cooperation.

As noted by Sydnes et al in their 2017 study of the SAR co-operation in the Arctic, daily communication both requires and creates trust on an operational level. Joint exercises and international planning meetings are a valuable tool in creating cohesive procedures and aid in creating an atmosphere where daily contact is easy. The co-operation on an operative level can endure in situations where state-level co-operation is challenged.

Russia's invasion of Ukraine forced a reaction and in condemnation, the work of co-operative platforms across the board were halted. This is a blow to the notion of Arctic exceptionalism, but an understandable one. As the work of both the Arctic Council and the Barents Euro-Arctic Council has relied on international conventions and treaties, Russia's blatant disrespect of them makes continuing co-operation questionable.

Strong regionality seen as a strength for the Arctic - especially Barents Euro-Arctic regional council, where work is separate from state-level tensions and anxieties. This can be seen in the actions of the European Union as well; when all other joint projects with Russia were halted already in 2014 in response to Crimean annexation, the Kolarctic and Northern Dimensions programmes continued. While regional programmes can be seen to be somewhat removed from the central government, strongly central politics can interfere - or consider regional co-operation as an endorsement of the central state actions elsewhere. This is not in the interests of others involved.

International platforms and structures are only functional as long as all participants hold the same respect for common treaties and principles. Can meaningful co-operation be built with Russia, as they have clearly shown that they uphold international conventions only when it suits them? It is also evident that co-operation in the Arctic region at a higher level has

benefitted all Arctic countries, Russia included. It then becomes a balancing act of necessary rebuilding of co-operation while maintaining condemnation of illegal actions elsewhere.



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## 8 Images

1 - Artic Council nations, administrative areas, and capitals .....	10
2 - Barents Euro-Arctic Council regions and capitals .....	13
3 - Northern Polar Code area .....	23
4 - Map of the Arctic SAR agreement areas .....	25
5 - Artic Sea Routes.....	33