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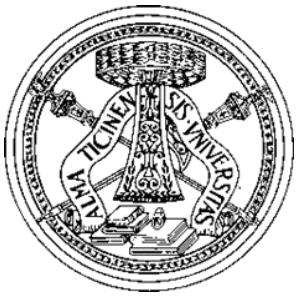

The Arctic Nexus: Security and Governance in a Changing Region

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Abstract

This thesis examines the evolving nexus of security and governance in the Arctic. Climate change, resource exploitation and shifting geopolitical dynamics are the main drivers of the profound transformation this region has undergone in recent years. What was perceived as an isolated, far-away region for many centuries is now slowly becoming a central geopolitical arena where vast natural resources, emerging maritime routes and strategic rivalries converge into a complex entity. Using a mixed-method approach that combines qualitative analysis of policies, strategies and governance frameworks with selective quantitative data on resources and transit routes, the thesis offers an insight into the peculiar interplay between state and non-state actors which is shaping the order of the High North. Case studies of the United States, Canada, Russia and China highlight an apparent realist turn in their Arctic strategies, with power projection increasingly overshadowing cooperative norms. At the same time, institutional mechanisms of the region, such as the Arctic Council and UNCLOS remain absolutely critical, as they are illustrative of the region's hybrid governance model. This hybrid governance model, while fragile and conditional, is still anchored in the legal and institutional framework of the international law principles. The thesis further investigates the security dimension, focusing on infrastructure vulnerabilities, hybrid threats and the implications of rising tensions and realist turn in the region. Ultimately, the thesis argues that the Arctic serves as a litmus test for the resilience of international cooperation under the intensified geopolitical competition. The region's future trajectory, whether it is marked by confrontation or collaboration, will not only define regional stability but also reflect broader shifts in the global order.

Astratto

La tesi esamina le dinamiche di sicurezza e governance nell'Artico, una regione che sta cambiando rapidamente a causa dello sfruttamento delle risorse, del cambiamento climatico e della crescente importanza geopolitica. Grazie ai nuovi passaggi marittimi e all'abbondanza di risorse naturali, un'area che un tempo era marginale è diventata strategicamente importante e attira l'interesse di attori statali e non statali. L'analisi utilizza un approccio misto, con prevalenza qualitativa, per valutare l'impatto delle principali potenze (USA, Canada, Russia e

Cina). I casi di studio mostrano una tendenza comune verso un approccio più realistico in cui la proiezione di potenza si affianca o prevale sugli strumenti di collaborazione. Sebbene organizzazioni come l'Arctic Council e UNCLOS continuino a fornire un quadro normativo essenziale, la loro efficacia appare limitata a causa della crescente tensione. Inoltre, le vulnerabilità infrastrutturali e le minacce ibride sono al centro della ricerca. Per concludere, l'Artico si presenta come un banco di prova per la cooperazione globale: La stabilità regionale e gli equilibri globali saranno fortemente influenzati dal suo futuro percorso di confronto e cooperazione.

1. Introduction

Up until recently, any sort of discussion where the Arctic's political, economic, or strategic significance was mentioned, could only be understood in a metaphoric way, as the region was at the very bottom of the priority ladder in geopolitical context. It was during the Cold War that the Far North, the coldest part of the world, began to gain ground and its strategic importance was only being discovered. At that time, it was viewed only in the light of the potential military conflict between the two blocks and its value was estimated through the military success and strategic military positioning it could bring to one of the parties[1]. Today, the Arctic region is among the critical arenas in international politics due to intensive thawing of the ice cover which brings new opportunities and challenges to the region. The Arctic's vast natural riches and an ever-growing importance of the Arctic transit routes is what brought the region right up to the top of the geopolitical arena, where the interests of various state and non-state actors are colliding.

With the recent discoveries of profound resource riches in the Far North, it is apt to assess that the influence race in the region is well and truly underway. In that manner, it is important to understand the current governing structure of the region, as it could explain the future trajectory of this 'race'. This rising complexity and importance of the region is not really showing in the governing picture, as the current mechanisms and institutions rely on the intergovernmental forum such as the Arctic Council and on the legally binding international agreements such as the United Nations Convention on the Law of the Sea (UNCLOS). In that light, major players in the region, including the United States, Russia, China, and Canada, are becoming more assertive with its policies, strategies, and alliances. It ought to be stated that the newly discovered abundance of minerals and fossil fuels is driving some of the non-state actors in the region. On the one hand, indigenous communities are facing extremely complex and comprehensive challenges with global warming and the arrival of the drilling industry in the Far North. On the other hand, multinational companies and energy corporations are rubbing their hands and seeking a way to gain ground and make profit up North. The very intersection of these interests is the product of an increasingly complex geopolitical landscape.

[1] Proximity of the Soviet Union and the United States led to the Arctic being a "critical frontline" of heightened military activity and surveillance (Donnelly, 2024).

This study will focus on the four key stakeholders in the region, the United States, Russia, Canada, and China. The United States' policymakers found themselves in an uncommon position when it comes to the Arctic region, as the US is forced to play a game of catch-up. While Alaska was always important for the US economy, especially when it comes to military industry, in the light of newfound political attention the US began to understand and approach the Arctic region in a much broader and strategic manner, in order to counter the Sino-Russian influence. Russia, as the biggest Arctic state, currently represents the dominant presence in the region. Its Arctic capabilities are all-encompassing and represent a great challenge to the 'Western Alliance'. Canada is one of the biggest states up North and remains strongly committed to the international order and preservation of the peaceful and cooperative region. However, in its most recent Arctic strategy there was a notable turn towards a more realist approach which puts emphasis on the national interests of Canada. China, despite being a non-Arctic state, declared itself as a 'near-Arctic' state and acted upon it ever since.[2] PRC is displaying an aggressive strategy over the Arctic region as it is trying to gain as much influence in the region as it is possible.

The thesis aims to explore intricate relations between major players in the region. The Arctic's importance is not solely based on its resources or transit routes, but the rapid warming of the Far North is proving to have profound influence on the rest of the world as well. From the disturbance of the marine ecosystem and the outbursts of some of the new deathly illnesses due to the thawing of ice covered bacterias, to the global rising of the sea level, which is directly correlated to the reduced ice mass, the region's importance is on the rapid rise. It is of utmost importance to comprehend the power dynamics and strategies of the key stakeholders as that might prove to be of substantial importance when discussing the future trajectory of this region's governance and security.

Problem Statement - This thesis aims to examine roles, policies, and strategies of the major stakeholders in the Arctic region and assess the governance and security consequences of the amplified interest in the region. Fundamental questions driving this research are:

- How have the actions of the United States, Russia, Canada, and China shaped the geopolitical competition in the Arctic?
- What are the implications of this competition for regional governance and stability?

[2] PRC's engagement in the Arctic region is closely connected to the country's bid to establish itself as a global (maritime) power, and investments, research activities and economic interests can be understood through the lens of China's rise to the global power piedestal.

This thesis is structured in the following manner: The first chapter of the thesis provides a conceptual framework which guides readers through some of the most important terms. Here, the study provides an insight into what falls under the umbrella of the Arctic region and what are some of the foundational mechanisms of the regions governing structure. Moving on, in the second chapter the thesis gives a comprehensive insight into the Arctic's natural resources. It focuses on the Arctic's key resources, which are fossil fuels, but it also covers the abundant mineral riches spread throughout the whole region. Additionally, the paper also outlines the in-depth outlook of the climate change role in the region, discussing risks and opportunities for the Far North. Following, the next chapter of the paper covers key stakeholders strategies, policies, and initiatives in the region. It highlights the United States, Russia, Canada, and China's intentions in the region and showcases the apparent realist turn by all actors up North. Moving on, the fourth chapter of the thesis covers the existing governing framework of the Arctic. It assesses the current governing structure, which is heavily reliant on the UNCLOS, legally binding convention and on the Arctic Council, the intergovernmental forum. It evaluates new trends in the Arctic's governance and provides an insight in the post-Ukrainian war cooperation up North. Following, the next chapter examines strategic alliances in the region in the light of new military and infrastructure build-up. Finally, the last part of the thesis discusses potential future trajectories of the region. It ought to serve as a policy recommendation, as the paper will outline some of the crucial pathways towards a more cooperative and prosperous region.

Methodology - This thesis used a mix-method approach, as the qualitative and quantitative approaches were used simultaneously. The cornerstone of this study is a qualitative analysis, which actually represents a descriptive analysis of every key actor's policies, strategies, and activities. This approach provided an overview of the current governance structure in the region and of the roles of both state and non-state actors in the stability of the governing structure. Quantitative analysis was also employed, in a much slighter manner than the qualitative approach, as it was used to verify certain statements, to showcase patterns within the region and amplify the points being made. Data on the resource riches of the region and data on the rise, or fall-off, of the Arctic transit routes provided an excellent foundation for the paper. National strategy documents, governmental and intergovernmental reports alongside the international treaties were primary sources of this research. Followed up by the secondary sources, which

were some of the think tank reports, academic literature and media articles and narratives within the Arctic-related media.

2. Theoretical Framework

2.1 Conceptualizing Arctic

"There in the north where ice, water and air mingle is, without doubt, the end of the earth. There, I have seen the lung of the sea." Pytheas, fourth century BCE.

Sometime in the fourth century BCE, a geographer called Pytheas from the Greek colon of Massilia (modern Marseilles) sailed through the Straits of Gibraltar and turned north. Its visual imagery perfectly captures the nexus between North Atlantic and Arctic Ocean waters. Even back in the times of great Greek philosophers, the Arctic region's uniqueness was recognized in the prescient allusions of the region's role as the 'lung of the sea' (Cunlife, 2003). Today, the Arctic represents so much more than prescien allusions, as its importance is on the constant rise due to intense global climate changes. Prior to delving into the intricate complexities of the High North, the paper ought to define what the Arctic region actually stands for and what actually falls under the Arctic umbrella. While there is not a single correct definition of what exactly is Arctic, following three definitions are the most common ones (Arctic Portal, 2025):

- The Arctic region is the region in which the average temperature for July is below 10°C.
- Arctic Tree line boundary. The Northernmost latitude where trees can grow, farther north, it is too cold all year round to sustain trees.
- The Arctic Circle definition refers to the southernmost latitude in the Northern Hemisphere. What is interesting about this definition is that it uses the sun as its tool, as the definition states that the Arctic Circle region is the one where the sun remains continuously above or below the horizon for 24 hours.

According to the Geological Survey of Norway (NGU, 2016), the Arctic region refers to the area 60° North. This is a geographically convenient definition and it has been continuously used for geoscientific projects. Under this definition, the Arctic region covers: Most of Alaska; The Yukon, North West Territories and Nunavut in Canada, the northernmost parts of Quebec and of Labrador; The whole of Greenland, Iceland, the Faroe Islands and the Shetland Islands except for the southernmost 12km of mainland; Fennoscandia, which refers to everything North of the capitals, Oslo, Stockholm and Helsinki; Northern Russia, including almost all areas North of the

10°C summer isotherm. As notable, this definition is a broad and convenient one due to its simplicity and inclusiveness.

What stands out as an interesting phenomenon in the modern day representation of the Far North, most cartographic depictions conceal the Arctic's physical vastness. For example, Alaska has more coastline than the lower 48 states combined (Borgerson, 2013) while Greenland is larger than all of the Western Europe. The Arctic Circle encompasses about 6 percent of the Earth's surface, an area of more than 21 million km², of which almost 8 million km² is onshore and more than 7 million km² is located on the continental shelves under less than 500m of water (USGS, 2008). The rest of this region consists of international waters that lie beyond the exclusive economic zones of the eight Arctic states (Rowe, 2022). Until recently this gigantic part of the globe was ignored due to its inaccessibility. As the Earth started to heat up and we began to comprehend potential and riches this part of the world is comprised of, the race for the biggest piece of the cake was on. This influential race is particularly interesting within the governing mechanisms in the region, as what was once considered as a perfect example of the institutionally governed region is now becoming a playfield of many interests.

2.2 Governing the Far North

The framework for the governance of the Arctic region is as unique as the region itself. It is characterized by the peculiar combination of the legally binding international documents, intergovernmental forums and sub-regional bodies. This combination is showing off the institutionalist approach, as it focuses on the spheres of cooperation, rather than discussing tricky matters, and it functions on the basis of the common interest between the stakeholders. Its peculiarity is in the fact that no other region was governed in a similar fashion and in the fact that the classical realism, which was used to analyze states' behavior for decades now, could not be applied to this region (Kearns, 2009).

A brief look into the historical pathway towards the current governing infrastructure is outlining the important role of the NGO sector, as denser multilateral ties first emerged within this sector which then spurred regional states to join. Østerud and Hønneland (2017) are defining this as an appearance of the 'veritable cooperative Olympics' in the Arctic. First progress was made by an

informal group of polar scientists who were eager to combat the data gap caused by the Cold War, hence created the International Arctic Science Committee in 1990, in an attempt to combine Western and Soviet data. Following this progress was the Finnish initiative, which produced the intergovernmental Arctic Environmental Protection Strategy (AEPS). This initiative brought the concept of permanent working groups, tasked with various programme activities, to the Arctic governing infrastructure (Stokke, 2017). Building governing capacities in the region was placed in the hands of the Arctic paradiplomacy, which produced some notable bodies that were a cornerstone for further development. One of the bodies, the Barents Euro-Arctic Region (BEAR), emerged in 1993 as the result of a Norwegian initiative with the overall objective of ensuring sustainable development in all the different fields of cooperation (BEAR, n.d.). Another sub-regional body, the Council of Baltic States, has engaged in environmental and health issues in the region, enhancing coordination and knowledge-sharing on the important topics (Stokke & Tunander, 1994). A crucial body emerged as a result of the enhanced activity in the year 1996, with the Ottawa declaration. The Arctic Council is the main, and only, all-encompassing organization governing the Arctic region. Its purpose is to augment cooperation, collaboration, information-sharing and peaceful solutions in all the fields Ottawa Declaration allows it to. Its all-encompassing character comes from the fact that the Arctic Council includes all eight Arctic states (USA, Russia, Canada, Sweden, Norway, Denmark, Finland and Iceland), six Indigenous Peoples; organizations and allows an observer status to all entities engaged and interested in the region's developments (Ottawa, 1996).

When it comes to the legal aspect of the Far North' governance, the situation is far simpler. As for now, the consensus remains within all eight Arctic states that the current legal framework is functioning. The United Nations Convention on the Law of the Sea (UNCLOS) regulates the majority of the Arctic's sea life. Besides the UNCLOS, the Polar Code, which was initiated by the International Maritime Organization, regulates certain aspects of the Arctic shipping, hence upgrading the current legal framework (IMO, 2017). This legal framework, while quite simple and broad, provides an excellent foundation for the institutionalist approach we witnessed develop in the Far North. However, in recent years the geopolitical situation kept changing and the Arctic felt it as well. What was once governed in a peaceful, cooperative fashion, with the regards to the common interest, is now another influential battlefield with realism crawling back onto the Arctic's governing scene.

3. The Arctic's Resources and Strategic Importance

3.1 Key Arctic Resources

3.1.1 Fossil Fuels in the High North

A century ago, whalers talked of 'harvesting' the cetaceans[3] that plied the waters of the High North. As the Arctic is warming up and melting, and becomes easier to gain access to, the talk increases of another harvest, of the fossil fuels and minerals that lie beneath the land and the seabed (Rowe, 2022). The exploration and exploitation of hydrocarbons in the Arctic is not new. Fossil fuel-related activities began in the 1970s throughout the whole region, with the majority of the Arctic nation-states engaging in this modern-day harvest (Borgerson, 2009). While the exact quantities of the region's resources are uncertain, it is undeniable that, as of now, the primary energy resources of interest to commercial operators are oil and gas. According to United States Geological Survey scientists, who completed an appraisal of future additions to world oil and gas reserves from new field discoveries in the Arctic, the total mean undiscovered conventional oil and gas resources of the Arctic are estimated to be approximately 90 billion barrels of oil, 1,669 trillion cubic feet of natural gas and 44 billion barrels of natural gas liquids (USGS, 2008). According to the survey, these numbers are painting a picture of 22% of the world's undiscovered, theoretically recoverable fossil fuel. In this manner, the USGS research makes a bold and daring assumption that the vast Arctic continental shelves may be 'the geographically largest untapped prospective area for petroleum remaining on Earth' (USGS, 2008). More than 70% of the average undiscovered oil resources are expected to be found in five provinces: Arctic Alaska, Amerasia Basin, East Greenland Rift Basins, East Barents Basins, and West Greenland-East Canada. More than 70% of the undiscovered natural gas is thought to exist in three provinces: the West Siberian Basin, the East Barents Basins, and Arctic Alaska. It is also predicted that roughly 84 percent of undiscovered oil and gas occurs offshore (USGS, 2008).

[3] A marine mammal of the order Cetacea: Whale, Dolphin or Porpoise.

Learning from the appraisal, the main Arctic regions associated with oil and gas exploration are the Beaufort Sea and the northwest Russian Arctic.

The appraisal, using a probabilistic geology-based methodology, concluded that the Arctic is the home to approximately 30% of the world's undiscovered gas and 13% of the world's undiscovered oil, which is mostly based offshore, under less than 500 meters of water. The undiscovered natural gas in the Arctic is three times more abundant than oil, with the majority of it concentrated in Russia. In that manner, the fact is that the natural gas potential, laying within the Russian Arctic shore, is about to transform the gas world market and completely change the current market outlook, powering Russia as the dominant force. On the other hand, oil resources, while important to Arctic countries, are unlikely to dramatically change the current geographic distribution of global oil supply (Gautier, et al., 2009). As previously stated, the Eurasian side of the Arctic is more natural gas-prone, whilst the North American side is more oil-prone. The North American side of the Arctic is thought to contain approximately 65 percent of undiscovered Arctic oil, but only 26% of unknown Arctic natural gas (EIA, 2012). The Arctic Alaska region, the Amerasia Basin, and the East Greenland Rift are believed to contain 48.6 billion barrels of undiscovered oil, accounting for approximately 54 percent of all undiscovered Arctic oil. Following up, approximately 2.5 billion barrels of oil have previously been identified in significant fields in both the Amerasia Basin and the Northwest Canadian Interior Basin that are not yet producing (EIA, 2011). On the other hand, the estimated amount of undiscovered gas is more significant, as it accounts for approximately three times as much as the estimated oil on an energy-equivalent basis. The Appraisal (USGS, 2008) found that the Arctic's gas abundance is estimated somewhere between the 770 and the 2990 trillion cubic feet of undiscovered, conventional natural gas, with the majority of it laying within the Russian border. When discussing matters of the Arctic's resource exploitation, it is of utmost importance to mention some of the critical issues when it comes to the exploration industry. These critical shortcomings are often connected to the lack of infrastructure and to the lack of knowledge. Just as a lack of infrastructure, such as the Arctic-class drilling vessels, ice breakers, quick response vessels, limits the ability to prevent and respond to the oil spill in the region, so does the lack of knowledge (Barber et al., 2014).

3.1.2 Mineral Resources

Mankind has employed mineral resources since the beginning of civilization. The division, at least as it's taught in Europe, of most of the 10,000 years since the end of the last Ice Age into archeological periods such as the Stone Age, Iron Age and Bronze Age demonstrates the importance of mineral-based materials within human progress (NGU, 2016). In spite of the aforementioned fossil fuel rush in the Far North, oil and gas exploration does not represent the sole cause for the intensified interest in the region. There is a school of thought that would argue that the presence of vast mineral riches is the fundamental driver of the resource interest spurring up North. It is worth noting that, while the region is undeniably rich in raw material, extremely high labor prices and quite unwelcoming regulatory framework hampered the activities of the vast majority of mining enterprises. To explain further, short daylight and extreme weather conditions have proven to be a barrier for investors trying to create a viable infrastructure in the region. As a result, in spite of the region's abundance of mineral resources, the region's mining potential has remained mostly unexplored (Evans, 2025).

To put this untapped potential in perspective, Alaska is believed to possess 49 out of the 50 minerals that were deemed vital to the US economy and national security (Lasley, 2022)[4]. In that manner, this part of the US has the unquestioned potential to produce almost all of the essential minerals listed by the USGS for 2022. Alaska is the top zinc producer in the country, has the largest graphite deposit, has the only domestic tin mine, and has produced essential minerals during times of national need, e.g. WWII (Watson et al., 2023). It ought to be mentioned that Alaska has more than 150 potential rare-earth deposits and, if the state were a sovereign country, it would rank among the top ten in global reserves for these minerals (Borgerson, 2013). Another peculiar example of the mineral riches up North is the Arctic Russia, which has a mining history that dates back over 300 years. At the very beginning of Russian exploitation up North the focus was on gold and silver mining. However, with time Russians discovered bigger and bigger reserves, hence by the mid twentieth century, Russia became a leading source for a variety of metals and diamonds (Borgerson, 2013). For example, a decade ago, Norilsk Nickel, which operates in Krasnoyarsk oblast and in Murmansk oblast, was the world's third largest producer of nickel (9,7%) and the second largest producer of platinum (13,4%) and palladium (42,4%). As of

[4] Aluminium is the only commodity on the US critical mineral list that has not been found in appreciable quantities. https://www.miningnewsnorth.com/story/2022/11/04/in-depth/49-critical-minerals-in-the-49th-state/7623.html

the recent appraisal, the estimated value of minerals in Arctic Russia stands at 1,5-2 trillion US dollars (Rowe, 2022). It is worth noting that this abundant potential is critical for the future of the Russian economy while it also represents a profound geopolitical advantage for the Kremlin. In the words of Qvist Frederiksen (2022), an executive director of the Arctic Economic Council (AEC), the region's biggest export strengths are fish, energy and raw materials. In that sense, an ever-growing need for minerals and energy in the modern world is in line with growing attention the region has been receiving. According to the recent study conducted by the International Energy Agency, demand for essential minerals is on pace to nearly triple by 2030 and reach more than 3.5 times current levels by 2050 (IEA, 2020). In a changing world where energy and minerals are shaping international economic trends and influencing political trends throughout the globe, the appearance of the Arctic's resources came like a breath of fresh air. Critical materials, of which there is abundance in the region, fuel current technology ranging from renewable energy sources to advanced electronics. Metals such as lithium, cobalt, rare earth elements and graphite are required to manufacture high tech products such as batteries, semiconductors, magnets and catalysts (Watson et al., 2023). These minerals are also of profound importance for the military industries. It is important to note that the dominant majority of the known resources up North are located within the Arctic nation-state sovereign borders.

The Geological Survey of Norway (2016) found that the subsurface of Kola Peninsula includes an outstanding quantity of minerals. Moreover, Canadian Shield, which stretches from the Great Lakes to the Arctic Ocean, is home to high-grade metamorphic rocks rich in copper, gold, lead, molybdenum, and uranium deposits. It is important to mention that the Canadian Arctic, which covers nearly 40% of Canada's land, is another extremely resource rich region. Some of the biggest uranium deposits can be found in this part of the Arctic, which can help enhance the transition towards the greener, cleaner energy up North. The Canadian government developed a comprehensive critical mineral plan and allocated funds to critical mineral projects (Neil, 2023). For example, one of the world's richest reserves of high-grade iron is located in Nunavut, Canada. According to the Canadian Critical Minerals Strategy Annual Report (CCMSAR), Canada ought to be recognized as a global leader in critical minerals as it possesses all 34 minerals deemed critical in its Strategy. The country is also one of the top five producers of ten essential minerals, including potash, niobium, uranium, palladium, tellurium, indium, aluminum, platinum, titanium and nickel (CCMSAR, 2024).

The European Arctic is also blessed with astounding natural riches, but mostly with the mineral resources. As Greenland is melting and its dry surface is being exposed, mineral belts rich in gold, nickel, platinum-group metals, copper, lead, zinc, molybdenum, diamonds and rare earth elements are also being exposed. Grenland is predicted to have around 25% of the world's important mineral reserves (Coninsx & van Loon, 2022). According to the AEC report (2024), Greenland is one of the greatest sources of nickel and cobalt. In January 2023, a Swedish mining firm LKAB reported an astounding discovery of Europe's greatest critical mineral deposit, located in Kiruna, Sweden (Gunn Bye, 2023). Also, Kiruna is the largest iron mine in Europe, as it was opened in 1898 and it still represents a giant in European iron production (Neil, 2023). In the summer of 2024, 8,8 million tonnes of rare earths were discovered in southeastern Norway. Rare Earths Norway (REN), a Norwegian mining corporation has claimed the discovery of the largest rare earth deposit in continental Europe (Hache, 2024). Another peculiar fact about the European Arctic's mineral riches pertains to the Kittila mine, located in central Finnish Lapland, and it contains Europe's biggest gold deposit (AEC, 2024).

3.2 Climate change and emerging opportunities

3.2.1 Arctic Melting

With the amplified warming of the planet Earth, its polar regions are being hit the most, as they are quickly thawing. Just over the last 50 years, Arctic temperature has risen at a rate more than twice that of a global average. In that sense, if these current trends continue, the Arctic ought to be mostly ice-free during summer months by 2030 (Rowe, 2022). The last time the Arctic was completely free of ice during summer months was 125,000 years ago, at the peak of the last major interglacial period, known as the Eemian period (Field et al., 1994). Currently, the High North is one of the last regions which is not fully exploited nor researched by humans. However, that picture is rapidly changing with glacial melting and an ice-free summer ocean expanding with each year passing (Rowe, 2022). The phenomenon, known as Arctic amplification, is caused by the fossil fuel emissions which are distinguished by its heat-trapping character. This unique polar phenomenon testifies to the worrying extent and rate of the globe's warming and is a clear sign of its rapid progress. To explain the occurrence, ice, which is an excellent reflector of incoming solar energy due to its high surface albedo, and due to that high albedo, the bulk of

solar radiation is reflected rather than absorbed. However, as the temperature in the Arctic rises, ice melts. The ice is replaced by darker ocean or land, resulting in a lower surface albedo and more solar radiation absorption than reflection (Glisa, n.d.). Moreover, melting of the ice represents an even greater danger to the planet's overall well being due to the greenhouse gasses that are trapped within. With the ice melt, these gasses are off to the atmosphere, hence contributing to the global and regional temperature rise. In that manner it would be fair to assess that this phenomenon is one of the most visible manifestations of climate change and all its complexity. In one of the gut-wrenching reports recently published, a group of scientists concluded that the Arctic region has warmed at a rate nearly four times faster than the global average over the last 43 years (Rantanen et al., 2022). This ratio is far worse than it was generally reported in the literature and in the media. 90% of the melting is the result of human-caused global heating, with natural factors accounting for a significantly smaller chunk (Carrington, 2023).

As it can be understood from the Arctic Amplification phenomenon, the sea ice cover is a critical component of the polar climate system. There has been an appreciable spur of attention towards the sea ice cover, owing to its significant drop in recent years and to modeling results showcasing the magnified impact of global warming in the Arctic due to ice-albedo feedback. This is due to sea ice's higher reflectance than ice free waters (Comiso et al., 2025). As Scott Elias (2021) explained in his book, it is only in the last 30 or 40 years that oceanographers and climatologists recognized the worldwide significance of the Arctic sea-ice cover and its profound influence that extends far beyond the region's latitudes. In late 2020 NASA and the National Snow and Ice Data Center (NSIDC) came out with the head-turning data that the sea ice cover shrank to 3,74 million square kilometres, which is 2,48 million square kilometres below the 1981-2010 average and stands as the second-lowest extent since modern record-keeping began during the late 1970s (Ramsayer, 2020). Arctic sea ice reaches its minimum each September, hence that is when the summer sea ice is being measured in order to showcase the pace of its shrinking. What remains both interesting and worrying at the same time, is the fact that the September sea ice is shrinking at a rate of 12,2% per decade, compared to its average extent during the period from 1981 to 2010 (NASA, n.d.). According to the newest data from NSIDC (2025), the average February 2025 Arctic sea ice extent was 13,75 million square kilometres, the lowest February extent in the 47-year satellite record, 220,000 square kilometres below the previous February record low,

which was set in 2018. For example, in the previous year sea ice covered an area of 3,67 million square kilometres (NASA, 2024) which is a new record low, at least for now.

It's not just the ocean that is warming. In 2012, Greenland logged its hottest summer in 170 years, with its ice sheet melting more than four times quicker than it had during an average year over the previous three decades. That same year, eight of the ten permafrost-monitoring sites in northern Alaska registered their highest-ever temperatures, and the remaining two tied record highs. Borgerson used an interesting example of the newly established practice in the hockey arenas in northern Canada, where they have even begun installing refrigeration systems to keep their rinks from melting, to showcase the dramatic effects of global warming (Borgerson, 2013). According to the NOAA study (2024), Arctic annual surface air temperatures for 2024 are the second warmest since 1990, with the last nine years being the warmest recorded in the High North. These profound climate changes are throwing the region's fragile ecosystems into chaos. Frozen tundras are reverting to swamplands from 50 million years ago, indigenous tribes' homes are being wiped out due to changing conditions, while storms are destroying clean-water sources. In this light, continuously changing conditions up North are causing fundamental issues to the everyday life of its inhabitants.

Another Arctic-specific characteristic relates to the structure of the region's marine ecosystems, as they are not as species-divers as lower latitude marine ecosystems. To put it in perspective, out of more than 20,000 species of fish known from all over the world's oceans, there are only 400 species living in Arctic seas and adjacent waters. Just as a cord of many strands is more difficult to break, species-rich ecosystems are more resilient to environmental change than those with fewer species (Elias, 2021). This makes polar marine ecosystems particularly vulnerable to disturbance because the elimination of just a few species may cause the collapse of the entire food chain. According to Johannessen and Miles (2011), the ocean-ice-atmosphere system has a significant impact on the Arctic and sub-Arctic marine food webs. For example, the Barents Sea's food web can be simplified to include phytoplankton (first level), zooplankton (second level), capelin and herring (third level), cod (fourth level) and seals and whales (fifth level). It is worth mentioning that phytoplankton, capelin, seals and whales are all strongly associated with the sea ice edge. Furthermore, every member of the ecosystem is heavily reliant on one another (Stone, 2015). Given these circumstances, one must pose a question, are we witnessing the initial stages of the collapse of the Arctic ecosystem that has existed for thousands of years, is this what

is currently happening in the Far North something a climate scientist might label a regime change?

3.2.2 Opportunities behind the Arctic melt

No matter what one thinks should be done about global warming, the fact is, it's happening. The 2024 Arctic Report Card outlines record-breaking and near-record-breaking findings that show drastic change in the environmental outlook of the Arctic. For example, Arctic tundra is transitioning from carbon sink to carbon source, while historically enormous inland caribou herds are recording profound decreases. The Card also showcases regional variances, as local and regional experiences of environmental changes for people, plants and animals are profoundly different (NOAA, 2024). Warming of the globe is transforming the Arctic in unprecedented ways, turning what was once an inaccessible body of water surrounded by lonely wilderness into a booming hub of commerce and trade, comparable to the Mediterranean Sea. The coming Arctic boom will involve more than just mining and drilling. The region's riches of resources extends far beyond the mere exploration of gas, oil or minerals. The Arctic's Boreal forests of spruces, pines and firs amount for more than 8% of worldwide wood reserves, while its accessible waters already account for more than 10% of global fishing catch (Borgerson, 2013). Essentially, with the ice thawing and the globe warming up, the Arctic's all-encompassing natural riches are becoming more and more available, hence the Arctic has much more to give in terms of both crucial resources for a more environmentally friendly globe and enhanced international transport routes. In this light, the High North appears to be on the cusp of an extraordinary change so a legitimate question ought to be posed: is a new Great Game set to be played out, with major powers scrambling for their ice axes and crampons in a bid to gain an early advantage? In that light, the saying 'what happens in the Arctic stays in the Arctic' is no longer viable nor showing off the real picture. As Borgerson aptly explained (2013), just as melting Arctic glaciers cause sea-level rise in the Mediterranean, the growing strategic and political importance of the Arctic is causing an influential race up North. The ongoing drilling for fossil fuels on land and on the continental shelves is probably the most concerning aspect of the Arctic economic development. In that regard, neither the scientific community nor the oil industry have a thorough

understanding of the potential environmental consequences of oil spills, particularly at sea (Elias, 2021).

With summertime Arctic sea routes saving thousands of kilometres during a journey between the Pacific Ocean and the Atlantic Ocean, the Arctic stands to become a central passageway for global maritime transportation, as it already is for aviation (Borgerson, 2013). While the Arctic Ocean is still largely covered in ice, and has been isolated from the globalization effects up until recently, intensified global warming has put the Ocean at the centre of the energy globalization discussion. Shipping, tourism, fishing and offshore oil and gas activity have already expanded in the Arctic Ocean, as sea ice keeps receding. As Overland deftly argues (2016), energy globalization, in combination with extreme warming of the Globe's poles, has made the Arctic Ocean a focal point of long-distance transportation discussions. While the states, and international community, prepare for the negative effects of this process on the environment, melting of the polar ice is creating new opportunities for ship transit and traffic in and across the Arctic. One might even argue that this polar region is at the very heart of the scramble for energy security. Two main shipping routes through the Arctic, Northern Sea Route (NSR) and Northwest Passage (NWP), hold the immense potential to completely change the dynamics of international shipping (Gunnarson & Mo, 2022). NSR stretches along Russia's Arctic coast, covering approximately 5,600km, from the Kara Sea to the Bering Strait. It connects the Atlantic and Pacific Oceans, offering a shortcut between Europe and Asia. NWP runs through the Canadian Arctic Archipelago, also connecting the Atlantic to the Pacific Ocean (Gunnarson & Mo, 2022).

3.2.3 Risks and challenges of the environmental changes

Melting of the High North presents numerous opportunities for various actors in the international arena, starting from the Arctic nation-states, multinational corporations and similar business entities, to the non-Arctic states which are seeking a way to utilize the enormous potential of the region. However, these opportunities come with some additional risks and challenges, to the region and its inhabitants. First of all, environmental groups have been voicing their concerns about the impact the mining industry has had, and could have, on a landscape that is already quite volatile and vulnerable. These concerns go beyond the sole focus on the regulatory framework and are more focused on the preparedness to respond to oil spills (Evans, 2025). The

level of preparedness to respond to such a spill is quite different between the Arctic states. On the one hand, Norway and Denmark are prime examples of well prepared countries, with already established workable oil spill remediation plans and acquired the necessary equipment. On the other hand, the US remains ill-prepared to such occurrence, while Russia and Canada remain somewhere in between, as they seem well prepared on paper but there is a reasonable doubt as we haven't witnessed any practical proof of such preparedness (Evans, 2025). Similarity between Canada and Russia lies in the existence of the extensive oil spill framework on the Arctic region (GAC, 2014); (Heshka et al., 2024); (Ivanova, 2011); (Bambulyak et al., 2014). However, there is no way to be sure whether the two are indeed well-prepared as we are yet to see if their respective plans are workable and whether they have acquired the necessary equipment for this scenario. With the apparent fossil fuels riches up North, the drilling has been expanding, and will only continue to do so. In that sense, it is fair to assess that a major oil spill in Arctic waters is an accident waiting to happen. Due to the geography of the region and its isolated position from populated centers, any such leak is bound to have substantial, long-term consequences, making a quick reaction to an Arctic oil spill fairly close to impossible. Once the response team arrives, there are only a few technologies which could effectively contain and clean up oil spills in the Arctic (Elias, 2021). These logistic-based issues must be solved in a quick manner, as efficient and cheaper cleanup technologies and appropriate response procedures must be developed in a swift fashion. Beside apparent consequences of the oil spills, a region-unique occurrence of the oil being trapped beneath the ice layer is another reason behind the need to develop an all-encompassing region-adapted technology. Oil spills in the Arctic can have profound consequences for both marine ecosystems and local communities.

When discussing the effects of the planet’s warming on the Arctic region, consequences are dire and wide-spread to the region's inhabitants. Local communities are hit in unprecedented ways, as their traditional ways of life and customs are being challenged, forcing them to adapt to these newly-established conditions. As Kalaugher (2019) deftly notes in his work, a significant portion of these communities are heavily reliant on the sea ice pathways as these pathways are the only way to get to their traditional hunting grounds or some culturally significant sites. A result of this premature lakes, rivers and sea ice thawing is increasingly difficult navigation, with some historic transit routes being inaccessible. For example, restricted access to wildlife, which has traditionally been the foundation of the Inuit people diet, has caused significant issues to this

community (Mercer, 2018). Another critical problem, inflicted directly by the Arctic's melting, is the introduction of new species and contaminants. In that light, there is a growing concern among the scientific community that rising temperatures in the Arctic might release viruses from thawing permafrost, which have been there for centuries or thousands of years in a frozen state. The threat is only getting bigger as the permafrost is thawing at unprecedented rates (Bottollier-Depois, 2020). World renown virologist dr. Jean-Michele Claverie confirmed that viruses can survive in permafrost for thousands of years. A decade ago, dr. Claverie thawed a gram of permafrost, permanently frozen soil in the Arctic, and managed to get a 30,000 year old virus to revive and infect an amoeba (Guell, 2024). An extremely worrying example of this infectious danger is the case from 2016, where a 12-year old Siberian boy died after being infected with anthrax, the suspected result of a frozen reindeer who had contracted anthrax over 75 years ago (BBC, 2016). It is not only the way of life, the customs and traditions, that are being endangered. Local communities' ability to live and survive up North is being seriously challenged due to the severity of climate changes in the region.

3.3 Strategic Importance of the High North

As Borgerson deftly noted (2013), viewed from the top of the globe, the region stands at the crossroads of the world's most productive economies. What was once considered a solely picturesque region is today of significant importance due to its intriguing environmental, economic, political and military potential. Also, the scientific community is highly interested and invested in the region. The Arctic plays a crucial role in global temperatures and weather systems and is being described by some scholars as 'our planetary air conditioning system' (Moon et al., 2023). Moreover, with some of the world's most powerful tides, the Arctic has spectacular hydropower potential while its geology holds tremendous capacity for geothermal energy (Borgerson, 2013). From the scientific point of view, the region's high latitudes make it an excellent place to expand existing ground stations for satellites in polar orbits (Miller & Hildenbrand, 2019). Moreover, the research potential of the High North is extraordinary and the scientific community is deepening its engagement throughout the whole region.

Moving on, the strategic importance of the Arctic can also be viewed through the lens of the increased accessibility of Arctic ports and opening of new Arctic shipping lanes. Geopolitical

competition up North is spurred and sparked with these new trans-Arctic routes, such as NSR and NWP, alongside the apparent investment in polar maritime infrastructure from every key stakeholder (Gricius, 2021). A report from the US Congressional Research Service (CRS) on the Arctic notes that, although there still ought to be important cooperation in the region, the Arctic is now increasingly seen as an area for geopolitical competition between the US, China and Russia (CRS, 2023). Realization that the Arctic's shipping routes will have enormous potential in the near-future brought about this new power struggle between the region's key players. According to Gosnell (2018), states expressed their interest in using new shipping lanes for shorter transit times, strategic resources extraction, military purposes as well as regional fishing and tourism. However, there are geopolitical implications concerning the NSR that raise some quite interesting questions. Perhaps the most basic one, and the most important one as well, is who has the governing power over the NSR. According to the Kremlin, the NSR lies within its territorial waters, hence the exclusive rights to develop the area and patrol ships is with the Russian authorities (Gordon, 2019). On the other side, the US-led coalition of countries disputed this narrative coming from Moscow, as they believed the passage ought to be governed through the international community. What is an interesting occurrence, Canada does recognize Russia's claim over the NSR, as Russia also recognizes Canada's claim over the NWP (Gricius, 2021). Once again, the US-led coalition of countries disputed Canada's claim of sovereignty, as their stance is that the NWP, similarly to the NSR, ought to be governed by the international community, as it is international strait (Gricius, 2021).

Even though the notion of the 'race for the resources' up North is not reflective of the real situation, the fact that major world powers are extremely involved in Arctic dynamics is indicative of the region's importance. The Arctic is a contested space among major world powers, particularly the United States, Russia and China. Canada shall also be thrown in the mix while discussing the Arctic, as its posture, importance and policies are reflective of a major Arctic power. By observing official national strategies and policies of these countries (SCIO, 2018); (DoS, 2022); (GAC, 2024); (MFA, 2023), it is apparent that the Arctic is becoming a playground for major geopolitical games. Russia, as the country with the longest Arctic coastline, identified the Arctic as one of the most important regions for its future, and in that manner we are witnessing profound engagement of the Russian side in the Arctic dynamics. The US found itself in an unusual position, as it is forced to play a game of catch-up with its rivals,

but recent strategies are showing off the quick rise of the Arctic's importance within the White House. China, despite not being an Arctic country, has declared itself a 'near-Arctic state' and invested heavily in the region, as its strategy is apparent and could be summed up in a bid to gain as much control and influence over the developing region. Canada is quite an interesting actor up North, as it keeps showing an intriguing combination of realist and institutionalist approach, which is understandable if we look at the position, resources, advantages and challenges Canada is facing in the Arctic.

4. Important Actor's Strategies: Case Studies of USA, Canada, Russia and China

When discussing key actors in the Arctic region, the author's choice is to focus on three biggest Arctic countries, the USA, Russia and Canada, and on one non-Arctic country, China. The choice comes as a result of the combination of the size of those countries, impact they have on the region, their global geopolitical reach and their newfound aspirations for the High North. The USA, which was the global hegemon for the past three decades, is understood as a critical actor in pretty much every region in the world. The fact that its 49th state is located in the Arctic, alongside the proximity of this region to the US landmass and the growing importance of this region in the geopolitical context are all reasons behind the involvement of the United States in this study. Canada, as a country with the second biggest Arctic landmass and coastline is another obvious choice. Its position as one of the closest allies of the US is extremely important in this context. Also, Canada's proactive approach to the Far North is another reasoning behind its involvement in the study. Russia is the country with by far the biggest Arctic landmass and coastline and as such is one of the most important stakeholders Up North. Its profound attention to the Arctic region is another important aspect of it being included in the study. Finally, the only non-Arctic state is China, which is involved due to its global power position and its significant engagement in the Arctic's affairs. Their engagement can mostly be viewed through joint projects with the Russian Federation, as that might be the only way for China to gain any power over decision-making in the region. China views the High North as a critical arena for its development as a global maritime power, and its activities are showing this aspiration. The Chinese bid to become a true global power, partly through the Arctic, is the key reasoning behind its involvement in the study.

4.1 United States of America

It has been a while now, almost two decades, that the biggest power in the world has been playing catch-up to its rivals in the Arctic region. The White House did not pay much attention to the Far North as there was no official strategy or plan of action for this region. In that sense, the

National Security Presidential Directive on Arctic Policy from 2009 broke the deadlock. This directive outlined the US Arctic policy from a national security, economy and environmental viewpoint. It established the United States as an active Arctic nation and affirmed its sovereignty, maritime rights and environmental responsibilities in the region (NSPD-66, 2009). The Directive provided insight into strategic objectives of the US in the region, noting early warning systems and missile defense, freedom of navigation and overflight and marine domain awareness, as some of the crucial points of interest for the White House. This document highlighted its support for the Arctic Council's role as a major venue for international cooperation in the region, while it also negated the notion that the Council could grow from an intergovernmental forum to a legally binding international institution (NSPD-66, 2009). Another interesting aspect of the Directive is its unwavering support for the UNCLOS and advice to the policy-makers to join the Convention, as it provides an excellent framework for the protection of the country's sovereign rights over the Arctic resources (NSPD-66, 2009). It is important to note that the US still did not join the 'Constitution of the Oceans' despite its loud accusations against other nations' lack of respect for the Convention (Schrepferman, 2019).

Following the Directive, the US' interests and ambitions for the High North have been on the constant rise with each year passing and with decision-makers in the White House recognising enormous potential of the region. As Pechko (2025) aptly explained, Russia's aggressiveness and the PRC's 'Polar Silk Road' influenced the US government to adopt a much different approach to the Arctic region. As a result, the Department of State adopted the National Strategy for the Arctic Region (NSAR) in 2022, clearly showcasing the Arctic's rise on the priority ladder within the government. The Strategy envisions the United States as an active and engaging actor in building a prosperous, cooperative and peaceful Arctic region. It emphasized the role of Russo-Ukrainian conflict and its effects in the region, as the Arctic has seen a notable increase in strategic competition, dating from 2013. In that manner, the US ought to prepare for the period of higher tensions while mitigating the role of external effects on the region (DoS, 2022). The first pillar of the US' Arctic strategy relates to the development of security capabilities. The document recognizes region-specific challenges in the Arctic as it calls for deeper investments when it comes to the Arctic-tailored technology and infrastructure. "To secure our interests as attention, investments and activity grow in the Arctic over the coming decades, the United States will enhance and exercise both our military and civilian capabilities in the Arctic as required to

deter threats and to anticipate, prevent and respond to both natural and human-made incidents" (DoS, 2022). In order to do so, a greater understanding of the Arctic operating environment is needed to inform real-time decision-making and respond to changing conditions. Moreover, as a way to accomplish this goal, the United States will enrich and advance its military presence in the region. This includes expansion of the current US Coast Guard icebreaker fleet, to support its continuously growing presence in the US Arctic or any other part of the region necessitating intervention (DoS, 2022). Moving on, the Strategy emphasizes the importance of the preservation of Arctic communities and ecosystems in the light of profound climate changes. It focuses on helping communities adapt through research and financial aid while it also seeks to enhance living standards of the indigenous communities by various investments in infrastructure and food security webs. With its emphasis on the exploration of resource riches of the Far North, the Strategy aims to create long-term economic opportunities and ensure well being of the local communities (DoS, 2022). The final pillar of this strategy provides quite a peculiar insight into the US' perspective on the High North cooperation, as it accentuates the importance of the multilateral approach and international cooperation in order to ensure functioning governing structure. It outlines the role of the Arctic Council as a key multilateral forum and urges the US policymakers to engage in a more active fashion within its structure (DoS, 2022). It ought to be mentioned that this strategy represents an important turn in the US foreign policy strategy, as it acknowledges the rising importance of the region and the severity of the threat coming from other powers up North. Notably, its last pillar stands as an excellent example of the White House' willingness to balance the imperative of responding to Russia's invasion in an efficient manner with a cooperative, peaceful and prosperous vision for the Arctic region.

In a previous year, only two years after adoption of the NSAR, the US government felt the need to address the quickly changing power dynamics in the region caused by the sudden spur of interest in the region by its major shareholders. In that light, the Department of Defense adopted the Arctic Strategy in the summer of 2024. DoD's Strategy outlines that "the region is critical to the defense of our homeland, the protection of US national sovereignty and our defense treaty commitments" (DoD, 2024). While the Arctic was largely unattended in the White House for past decades, some of the profound geopolitical changes caused the US policymakers to adopt two strategies within the span of three years and accept the newly established importance of the region. These geopolitical shake-ups, such as Russo-Ukrainian war, Sweden and Finland's

accession to the NATO pact, deepening and widening of the Sino-Russian collaboration up North, combined with the accelerating effects of climate change have fueled the need for this new strategic approach to the Arctic. In that manner, this increasingly accessible region is developing into a strategic battleground between some of the world's greatest powers. This new strategy is reflective of the US government perceiving the Arctic region vital for homeland defense, hence making the role of the North American Aerospace Defense Command (NORAD), a binational US-Canada command, profoundly important (USNORTHCOM, 2023). The DoD's Strategy highlights the growing importance of the Arctic's significant marine chokepoints, such as the Bering Strait between Alaska and Russia and the Barents Sea north of Norway, as it pertains to the US's ability to project power in the Indo-Pacific region, as the Arctic remains integral to the execution of Indo-Pacific operations (DoD, 2024). Russia's role and engagement in the region is also emphasised in the Strategy due to the proximity of two countries and Russian Arctic-based military capabilities. This document reflects DoD's way of adapting to this newly-established operating context, with infrastructure and capacity building being at the very heart of enhanced US activity in the region (DoD, 2024). In that light, DoD ought to enhance Joint Force's proficiency with structural investments in sensors and intelligence and information sharing capabilities.

In the words of Keneth Rosen (2022), "a battle for the Arctic is underway and the US is already behind." While this chapter outlined apparent, systematic changes in the way the White House perceives the Far North, it is abundantly clear that the US has a lot of catch-up to play with its main rivals, if the plan is to actively exploit its Arctic advantages and capabilities. As for the policies and strategies, they are now established and ingrained in the US system, now is the time to double down and invest in the High North, just like their main adversaries have been doing for quite a while. As Admiral Daryl Caudle (2025) aptly noted, Russia dominates the Arctic geography and possesses the corresponding ability to dominate with its capabilities and infrastructure. In this manner, established strategies and policies are reflective of the situation on the ground, as Russia is labelled as the biggest threat to the US' vision for the Arctic. Moreover, ever-growing Sino-Russian partnership in the region, which goes far beyond economic partnership of the two allied countries, is more allusive to the bloc building in the Far North. This emerging partnership certainly raised eyebrows in the White House and expedited the process of the Arctic's rise on the priority ladder. While it is a fact that the High North is still not

among the top priorities in the US, fast-changing outlook in the region and its growing significance are forcing the US government to invest in infrastructure and enhance its Arctic capabilities.

4.2 Canada

Almost 40% of Canada's geographical mass is classified as Arctic and Northern, which includes the Northwest territories, Nunavut, Yukon and northern sections of many provinces. Canada's Arctic is home to around 150,000 people, more than half of whom are Indigenous. Despite its large size, Canada's Arctic region is home to less than one percent of the country's population (Arctic Council, n.d.-a). Having that in mind, the Arctic has long been a top priority for the Canadian government. The importance of this region for Canadian statehood is further demonstrated by the narrative that Canadian nation-building has occasionally been concentrated around its 'true north' (CIRNAC, 2013). The case of the Canadian Arctic Policy is quite a peculiar and interesting one, as the country keeps juggling between the interests of its Arctic residents and the foreign policy interests of the Canadian state, which are often in contrast to each other (Østhagen, 2013). Even though this is a fairly common trait within Arctic states, due to the uniqueness and complexities of the region, the example of Canada is probably the most distinctive owing to the influence Canadian Indigenous communities have within the government.

As a result of growing international interest and competition in the region, Global Affairs Canada adopted Canada's Arctic and Northern Policy Framework (CANPF). The Framework represents a long-term strategic commitment towards resolving socioeconomic inequities, environmental challenges, infrastructure capabilities and national security concerns in Canada's Arctic. It is a collaborative policy which came to fruition as a product of Indigenous people, territorial governments, provinces and federal agencies cooperation. The Framework is completely representative of Canada's general approach to the region, as it presents a shared vision for the Arctic and northern regions where the focus is mainly on the people and on providing the best possible environment for local communities, with the same services and opportunities as other Canadians (GAC, 2019). Unlike past top-down approaches, this framework ensures that policies for the North are shaped by the communities that live there. A key focus of the Framework

pertains to the preventive approach towards the Arctic environment, where the Indigenous communities are at the very heart of conservation efforts and sustainable resource management. It recognizes the impacts of climate change and amplifies the importance of transition to renewable energy sources to reduce dependence on fossil fuels. Moreover, Indigenous protected areas and climate research initiatives are being expanded to monitor long term environmental changes (GAC, 2019). A testament to the Framework's local-based character is its turn away from the traditional resource extraction industries and towards promoting tourism, cultural industry and cold-climate research. Canada's state-based investments in fisheries and sustainable food production are of critical importance for the long-term economic stability of the locals, and another proof of Canada's detailed approach. Infrastructure development is labelled as a major priority of the Framework, as building of all-season roads, improving airports' operating capabilities and improving internet connection throughout the Canadian Arctic remained of critical importance for the government's Arctic strategy (GAC, 2019). Even though the government is focusing on the wellbeing of its local Arctic communities, the High North is of profound importance for Canada's future, hence the Framework represents a balanced mix of the national interests with the local communities' interests. In that sense, asserting Canada's sovereignty over Arctic waters stands as another major priority of the Policy. It ought to improve military and coast guard operational capabilities in the Far North and enhance its search and rescue competences, while closely collaborating with its international partners (GAC, 2019). This policy marks a profound shift in the way the government approaches the Arctic region. Framework is an outlook of a collaborative vision for the Arctic as it focuses on ensuring long-term prosperity while preserving the region's uniqueness. In that manner, it seeks to balance sustainable development and local communities' quality of life with national interests in maintaining sovereignty and security.

As it appears, 2022 is the 'Black Swan' (Taleb, 2007) due to its effect on the international power dynamics and shifts in the current international order the year has caused. The Arctic is not isolated when it comes to these profound shifts and the region felt the consequences of the Russo-Ukrainian war in 2022, as foundations of the region's cooperation were severely shaken. At the same time, the Arctic is experiencing significant effects of global warming, with considerable implications for the security of the communities inhabiting the Far North. More than ever, the Arctic is a theatre of interest for an abundant variety of state and non-state actors

aspiring for a greater role in the region. As a response to these changing geopolitical dynamics and to enhance the country's preparedness to fulfill its national interests in the region, Canada adopted Arctic Foreign Policy. As a supplement to the International chapter of the CANPF, once again in deep collaboration with Canadian Arctic local communities, the government decided to adopt the Policy, as the moment was deemed critical by Canadian policymakers. The Policy envisions advancement of Canada's national interests through pragmatic diplomacy and multilateral approach to the Arctic governance (GAC, 2024). It focuses on strengthening the country's diplomatic and security presence Up North, as it includes appointing an Arctic ambassador and opening new consulates in Anchorage and Nuuk. Furthermore, it promotes Arctic security dialogue with allied nations and expands framework for information sharing on security threats (GAC, 2024). The Policy emphasises two key pillars. On the one hand, it focuses on strengthening military capabilities by nearly tripling defense spending by 2030 and enhancing Arctic operations with new patrol ships, drones, fighter jets, submarine and NORAD modernization. On the other hand, it envisions the current governing structure as the efficient one and calls for ensuring its proper functioning. Also, it supports the Indigenous-led conservation programs as an effective means of reinforcing sovereignty (GAC, 2024). Another critical characteristic of Canada's new Arctic approach is viewed in its embracement of the leadership role in the region. In that manner, the Policy insisted on increasing funding for its scientific projects, expanding global climate cooperation, promoting sustainable development and on reinforcing Canada's role in the Arctic Council (GAC, 2024).

It is apparent that the Arctic is no longer a low-tension region it once was. A clear indicator of such change is Canada's newly developed emphasis on the security issues in the region. The CAFP is an astute evidence of this transformation, as Ottawa is now initiating an Arctic security dialogue, strengthening security ties at a regional level and opening new consulates in Anchorage and Nuuk (Edvardsen, 2024). On the one hand, Canada's unique approach to the Arctic region is driven by their commitment to close collaboration with Indigenous communities in the name of creating the best possible living environment for locals and in mitigating the impact of climate changes. On the other hand, with the region's strategic importance growing so are the Canadian national interests Up North, and it is showing in their recent strategies. One quite peculiar signal of Canada's unique Arctic approach is the emphasis this country puts on diplomatic activities in the region, as it seeks to project its soft power through diplomatic channels, as a huge chunk of

the most recent Arctic strategy elaborated on the significance of using diplomatic means for Arctic governance and disputes. With its all-encompassing strategic approach to the region, Canada is leading by example, as it offers a newly-established blend of institutionalist and realist approach to the region.

4.3 Russian Federation

Russia is the biggest Arctic state as it accounts for 53 percent of the Arctic Ocean's coastline. To be more specific, the Russian Arctic covers 24,150 kilometers of coastline. Another peculiar fact, the Russian Arctic is home to roughly half of the global Arctic population, as somewhere around 2,5 million people are inhabiting the area of Russian Arctic (Arctic Council, n.d.-b). To say that the Arctic is significant for Russia would be an understatement. The country's interest in the Arctic dates back to the sixteenth century, when it first conquered Siberia in search of more resources and new trading routes (Lipunov & Devyatkin, 2023). The Arctic's political relevance in Russia has expanded gradually since the beginning of the 2000s, as evidenced by various strategies, programs and presidential addresses, as well as the reactivation and modernization of military bases in the region. In the light of recent developments in the region, as well as on the global stage, it is understood within the Kremlin policymakers that there is increasing conflict potential in the Arctic which necessitates a persistent extension of the country's military presence there (Kluge & Paul, 2020). On March 5, 2020, President Vladimir Putin approved the policy principles outlined in Russia's new, 15-year Arctic plan. Basic Principles of the Russian Federation's State Policy in the Arctic Zone until 2035. These principles highlight Moscow's goals and measures for carrying out state policy in the country's Arctic Zone (Kremlin, 2020).

The Kremlin identifies six national interests at stake in its Arctic Policy 2035 (2020): To ensure Russia's sovereignty and territorial integrity; To preserve the Arctic as a world territory through cooperation with is partners; To guarantee high living standards and prosperity for local communities in the Russian Arctic Zone; To develop the region as one of the most important strategic resource base use it as an engine of the national economic growth; To develop the Northern Sea Route as a competitive transport line in the global market; To protect the Arctic environment, the primordial homeland and the traditional way of life of the Indigenous communities in the Russian Arctic. Led by the Policy, Moscow has clearly increased the

importance of its Arctic territories, in both domestic and foreign policy (Lanteigne, 2020). The Policy specifies three key goals, each of which could put Moscow at odds with other Arctic nations, due to its realist character. First priority remained the safeguarding of Russian sovereignty and territorial integrity. Of course, this is the responsibility of the state military, as the region now houses Moscow's Northern Fleet and nuclear-armed submarines located on the edges of the Kola Peninsula. It is apparent that the Kremlin intends to prevent any military force from endangering its national Arctic interests, while also strengthening its operational capabilities in the region. In that manner, it is fair to assess that control of the Arctic security dynamics is the key towards fulfilling this goal (Kremlin, 2020). Moving on, the Kremlin aims to further develop and establish its Arctic zone as a strategic resource base, given the fact that the Arctic already accounts for 10% of Russia's GDP and 20% of its exports. Its economic importance for the biggest country in the region cannot be understated as the Policy outlines the need to maximize use of the region's natural resources as a crucial step towards ensuring economic wellbeing of the state. The third goal of the Policy is development of the Northern Sea Route as a vital global transportation corridor which connects Europe and Asia. Development of the NSR is also profoundly connected to Russia's sovereignty and territorial integrity aspirations in the region, as the Route is deemed crucial for the safe and prosperous region (Kremlin, 2020). Another peculiar aspect of the Policy is its harsh stance towards the current governing structure, as it aims to reduce the impact of 'Western-led forums', such as the Arctic Council, despite Russia's devoted participation in them. It ought to be noted that Moscow remains willing to cooperate and collaborate, but only with countries that respect its sovereign interests. Also, bilateral relations with non-Arctic states like China are emphasized as a way to bolster the country's Arctic ambitions (Graceffo, 2024). While the Kremlin has stated that it believes the Arctic may remain a place of collaboration rather than rivalry, it is also plainly evident that Moscow will not hesitate to preserve its Arctic national interests. For example, in June 2020, Russian Deputy Foreign Minister Sergey Ryabkov warned that Russia will not in any way stay quiet if someone would try to 'test our readiness to defend our interests of national security in the Arctic' (Ryabkov, 2020). The Kremlin's realist approach to the region is abundantly apparent and in that way it is fair to assess that the region's increasing importance is driving this strategic, influential race Up North.

Going back to Taleb's (2007) Black Swan, 2022 appeared to be one of those legacy-defining years for Moscow and the Kremlin started acting upon it. Moscow's rhetoric about Western intrusion has been getting more and more aggressive, coinciding with its strengthened military posture and ambitious economic and infrastructure projects. With the Arctic melting, and numerous opportunities emerging from that process, it becomes clear that Russia has recognized how vital this region could prove to be for its economy and military potential. This shift in priorities and amplified attention the Arctic has received is not only notable in the official documents and strategies, it is also visible in the form of increased investments and heightened level of military and civilian exercises Up North. Following months of inter-departmental approvals, the Kremlin unveiled a revised version of its Foreign Policy Concept on March 31, 2023, in which the Arctic takes on new significance. This revised strategy, which was prompted by the quickly changing conditions in the international power dynamics, placed much greater emphasis on the Arctic region, elevating it to the second most important geographic region, right after the 'near abroad' (MFA, 2023). Rise of the Arctic's importance in the eyes of Moscow's policymakers is reflective of a broader trend in which the Kremlin puts much bigger emphasis on domestic issues and developments, rather than on international cooperation. This shift is quite indicative of the perceived significance and potential Russian Arctic holds (MFA, 2023). Moreover, the reassessment of the Arctic's position in relation to other regional priorities should be understood through the recent realist turn by the Kremlin, as we have witnessed Russia's turn towards the East, in a bid for a greater role in the changing international system. It is safe to conclude that Moscow will no longer pursue integration into the Western community of states, and its institutions will not be viewed as a value in and of itself or as a status marker. This approach originated in Russian foreign policy several years ago but has since been codified. However, this does not imply that Russia is locking its doors and dismissing established institutions as such. Its attitude is becoming more utilitarian and pragmatic, as it is only willing to use the current governing mechanisms if it serves its national interests (Lipunov & Devyatkin, 2023). One could argue that this shift is merely a response to other Arctic countries' policies and strategies towards Russia, as instead of constructive international cooperation we are witnessing a realist turn towards national interests. The Policy focuses on mitigating effects of global warming in the region, on reducing threats to national security and enhancing operational capabilities in the Arctic and on ensuring favorable international conditions for the

socio-economic development of the Arctic zone (MFA, 2023). The importance of the Northern Sea Route cannot be overstated as that has been one common thread of every modern Arctic document. In both the Arctic Policy 2035 (Kremlin, 2020), and the Foreign Policy Concept (MFA, 2023), the NSR is referred to as the most important entity in the Arctic to Russia. Internally, the Route serves as a connective tissue between the Arctic landmass and the economic potential which the infrastructure development might bring to this zone. Externally, the NSR links Russia's economic viability in the Arctic to the rest of the world and in that light, Moscow is counting on the Route to become a competitive international shipping route between East Asia and Europe, hence profoundly reducing transit times (Soroka, 2016). This trend and understanding of the NSR's importance might be indicative of the way Russia perceives itself and its future, as the Route is understood within the Kremlin as a critical strategic advantage over the rest of stakeholders.

Russia's strategic focus on the High North has been on a constant rise in the past 10-15 years. With its Arctic Policy 2035 (2020) emphasizing topics like sovereignty and military potential of the region, it became apparent what are Russia's national interests Up North. 2022 and the war in Ukraine expedited and amplified this process, as it turned Russia away from the West and made the Kremlin realize that the North and East ought to represent the future of this new Russian Arctic project (Komin & Hosa, 2025). Currently, the Kremlin recognizes the Arctic as a core national interest of the country, with some scholars arguing that Russia's Arctic policy is 'iceberg policy' due to its fragmented and tactical approach. Moscow's outstanding economic investments in the region represents the visible tip of its Arctic policy, as it is an attempt to establish the NSR as the future of global transportation. On the other hand, the Kremlin's militarization of the Arctic is considered submerged from the view, due to the veil of secrecy and lack of public information on this aspect of the country's engagement Up North. This military activity is often conducted in collaboration with the People's Republic of China, which is another critical aspect as this military partnership Up North is extremely worrying for the collective Western interests (Komin & Hosa, 2025). It is worth noting that Moscow's approach in the region is now increasingly pragmatic, as the country is prioritizing its national interests over anything else. Russia is currently the dominant Arctic power and, in the light of the region's amplified importance and strategic significance, the Kremlin is only going to use its leverage Up North as a means of influencing global power dynamics.

4.4 People's Republic of China

China was a latecomer in Arctic exploration. While European nations got acquainted with the area as early as the 16th century, China did not become heavily involved in the region until the late twentieth century. Despite its late start, Beijing is now resolved to establish itself as a major participant in the Arctic (Zhang, 2024). As Gadzala-Tirziu (2025) exquisitely noted, “China’s Arctic ambition might defy geography, but it perfectly aligns with its bold plan to reshape global culture.” China, as a non-Arctic state, is adamant that the situation in the High North has evolved beyond its original inter-Arctic or regional nature, and now has a critical bearing on the interests of states outside of the region, as well as the interests of the international community as a whole, as well as humanity’s survival, development and common future. State and party leader Xi Jinping announced China’s ambition to become a ‘major polar power’ in 2014, following the People’s Republic China being granted observer status in the Arctic Council the year before. Xi explained that the goal of becoming a polar power was an important component of becoming a great maritime power (Paul, 2025). According to this view, while states outside of the Arctic region have no territorial sovereignty over the region, they should have rights to scientific research, navigation, overflight, fishing and anything else that may fall under the umbrella of the future significance of mankind. China is by no means an Arctic country, however PRC’s officials view the region as a new global crossroads, a new source of raw materials and new routes for demonstrating their expanding influence. In that light, it ought to be mentioned that China is collaborating closely with Russia in an attempt to establish itself as an Arctic power (Garamone, 2024).

As per the only official Arctic policy adopted by the Party leaders (SCIO, 2018), China is described as a ‘near-Arctic state’, which was used to showcase the country's proximity to the Arctic Circle. It is stated that the Arctic’s natural conditions and environmental changes have a direct impact on China’s climate and ecological system, as well as its economic interests, majorly in agriculture, forestry, fishery and on the maritime industry. As a direct consequence, China ought to have a vote in the region’s future course. PRC’s Arctic involvement began in the realm of research. China ratified the Svalbard treaty back in 1925 while its research activities began in the early 1990s when their scientists engaged in the Arctic and Antarctic trips onboard the

research icebreaker Xue Long. Currently, the two operating research stations are located in Svalbard, Yellow River station which was established in 2004, and in Iceland, China-Iceland Arctic Science Observatory which was established in 2018. Also, as a resultant of enhanced activity in the region, China established its first overseas land satellite reception station in 2016, named China Remote Sensing Satellite North Polar Ground Station which is located in Sweden (Kopra, 2020). It is worth noting that similar projects were planned in Greenland, Iceland and Finland, however these plans so far did not come to fruition, as the PRC is struggling to penetrate further and build deeper connections with aforementioned countries (Wood et al., 2021). By the time the government published its Strategy for the region, China had already completed eight scientific missions to the Arctic Ocean and has been active for 14 years in its Yellow River station (Lanteigne, 2020).

The PRC's government published its first official Arctic White Paper in January 2018 which outlined the country's strategic intentions in the Far North. China's Arctic policy is outlined in its four essential objectives for the region, as the country focuses on the research activities in the region, on the enhancement of the climate change mitigation technology, on the economic development and on a more cooperative governing structure Up North. It is highlighted that the Policy seeks to protect common interests in the region while promoting sustainable development (SCIO, 2018). The Policy prioritizes scientific research to improve its understanding of the Arctic, with the goal of deepening knowledge of Arctic science and exploring the natural mechanisms influencing environmental changes (SCIO, 2018). Despite these benevolent and positive signals from Beijing, it is apparent that Chinese main priority in the region is expanding its sphere of influence and enabling as greater access to the natural resources as it is viable. China's involvement in Arctic governance is guided by established international regulations and legal frameworks. The country commits to regulate all Arctic-related activities in accordance with valid international treaties (Paul, 2025). Official Beijing insists and propagates the narrative of Chinese engagement in the region which is built on the pillars of respect, cooperation, mutual benefit and sustainability. There remains a huge gap between the reality and the Chinese narrative, as we see a significant number of the PRC's activities in the High North that are not reflective of the aforementioned pillars. Respect refers to the adhering to international law and the recognisement of the sovereign rights of the Arctic-nation states. The cooperation pillar is showing off the Chinese multilateral, institutionalist approach to the region's governance. Mutual

benefit outlines the pragmatism in Beijing's stance, as it pertains to the collaboration and engagement with every stakeholder in the region in the name of further development of the Arctic. Finally, ensuring sustainable development is critical to Beijing, according to their Arctic white paper (SCIO, 2018). However, the other side of the coin needs to be mentioned here as well. Chinese research missions, while under the flag of ensuring sustainable environmental protection, often entail oceanographic surveys and acoustic modeling, mirroring their activities in the South China Sea where mapping of the underwater terrain played a crucial role in the Army's strategic positioning (Gadzala-Tirziu, 2025). This is a common practice from the PRC's playbook, hiding under the scientific missions umbrella while in reality conducting much different, strategic reconnaissance missions.

It would be fair to assess that China's participation in Arctic affairs is driven by the necessity for development of Arctic shipping routes, by recognizing the importance of scientific research in the region and the need for a more effective approach to environmental protection. As part of the Belt and Road Initiative, the Arctic Ocean is considered the third Silk Road corridor. In that manner, Chinese arrival in the Arctic appears to be a simple and inevitable consequence of the country's growing global interests (Paul, 2025). Regarding Arctic shipping routes, the PRC advocates for their management in accordance with international treaties, including UNCLOS, and upholds the principle of freedom of navigation (Hadley, 2024). It seeks to collaborate with other nations to develop a 'Polar Silk Road', encouraging Chinese enterprises to contribute to infrastructure and conduct trial voyages to facilitate commercial operations (Paul, 2025), although it shall be mentioned that, beside Russia, other Arctic states are not as receptive to the growing Chinese influence and investments. China also plays a constructive role in Arctic governance, endorsing the existing legal framework centered on the UN Charter and UNCLOS. As an observer country to the Arctic Council, China is "overwhelmingly the most active" (Paul, 2025) while also being one of the most active proponents of the peaceful resolution, through international law, of territorial and maritime disputes Up North. Their approach focuses on enabling as best conditions as possible for the safe economic development of the region (SCIO, 2018).

While the Policy did set clear guiding principles in terms of Arctic approach, profound changes in the international relations caused the stir in the Far North as well. China was more than prepared to gain ground and raise its influence. In that sense, the PRC is leveraging its support

for Russia's open confrontation with the West, in Ukraine, to increase its access to the Arctic, where the two are now engaged in what can only be described as an 'unprecedented style of collaboration' (Hadley, 2024)[5]. Up until recently, the PRC has maintained a cautious and reserved presence in the Arctic, sort of in the shadow of Russia and its fleet of icebreakers. However, China is using this turmoil to enhance its position and establish itself as an important Arctic stakeholder. In the previous year, Beijing sent three icebreakers, Xuelong 2, Ji Di and Zhong Shan Da Xue Ji Di, in the Arctic waters, thus signalling more ambitious intentions in the region (Grady, 2024). In actuality, the current level of Chinese investment in the Arctic is not particularly significant. With the exception of the Russian Arctic, where China is becoming more visible, it is impossible to find a single example of a significant Chinese investment. One reason for this is because most Arctic states have rejected such proposals (Paul, 2025). One critical feature of the Arctic states' rejection is related to the PRC's attitude to the Arctic (Internationalization) vs the South China Sea (nationalization).

The reasoning behind China's Arctic engagement is far deeper than the simple 'race for influence in the North' explanation. In its bid to become a global power, China is facing a "Malacca Dilemma", coined by the President Hu Jintao back in 2003. This peculiar situation refers to the hostile outlook of the Malacca Strait's geopolitical dynamics, as China is deeply dependent on this Strait, which is controlled by the US and its allies (Paszak, 2021); (Mudunuri, 2020). The importance of the Malacca problem for the Chinese government cannot be overstated, as their bid to discover a viable substitution has been ongoing for decades now. In that manner, the Arctic and its Northern Sea Route are offering what could be described as a 'Black Swan', in terms of geopolitical dynamics in the world. Not only that the NSR is offering significantly shorter travel, it also provides an extremely valuable strategic advantage, which China did not have in the past. Having that in mind, Beijing's investments along the NSR are of the biggest strategic importance. For example, China has financed up to 60 percent of Russia's Yamal lng project, often referred to as the 'crown jewel' of Moscow's Arctic ambitions (Gadzala-Tirziu, 2025). Despite not being an Arctic state, in the past ten years the PRC has managed to establish itself as a valuable and committed Arctic partner, to anybody who wishes to cooperate. While it is a fact that its influence in the region is not substantial at the moment, for all the reasons mentioned in

[5] Deputy Assistant Secretary of Defense for Arctic and Global Resilience of the US noted that China and Russia, in the previous year or two, have conducted a significant number of joint patrols with warships, bombers and their coast guards. https://www.airandspaceforces.com/dod-china-russia-ukraine-war-arctic-access/

this chapter it is apparent why the Chinese Communist Party keeps engaging and investing in the region. Its activities in the Arctic are of the same nature as its activities worldwide, often under the international law umbrella and multilateral institutionalism, the CCP is gunning for a bigger prize and establishing valuable infrastructure and logistics in its broader bid to position itself as a recognized global power.

4.5 Concluding Thoughts on the Crucial Stakeholder's Behavior Up North

This chapter provided insight into the reasoning, strategic planning and policies of some of the most important actors in the region. It highlighted the early ill-preparedness of the US policy-makers and the late realization of the region's importance. Recent amplified engagement in the region is showing the turn in perspective among the Washington officials, as we witnessed a significant number of strategies and policies for the Arctic region's prosperity and security. Moreover, the chapter showcased a unique approach Canada is implementing in the High North, which can only be described as an interesting combination of the realist and institutionalist approach. This is evident in the duality of Canadian policies, where the focus is put on both the local communities living standards and on the newly established security dynamics in the region. The Russian Federation showcased a notable rise of the Arctic's priority within its policy makers as it now describes the region as the second most important for the country's future, right behind the near abroad. This rise of importance is followed by the amplified Arctic activity, evident in the numerous infrastructure and military projects Up North. The Chinese impact on the Arctic region is quite interesting, due to the sole fact that China is a non-Arctic state, yet it has profound strategic interests in the region. China is using scientific research and the infrastructure investment projects to gain ground in the region and secure itself a more meaningful role Up North.

5. Governance of the Arctic

The governing structure of the Arctic is characterized by the uniqueness and the peculiar interplay between diverse actors across various legal, diplomatic, institutional and political frameworks. Ever since the 1990s there has been a continuously growing web of international treaties, soft-law instruments and multilateral mechanisms which shaped the region's governing outlook. It is fair to assess that this constantly evolving character of the governing framework contributed to the complexity we are witnessing today, as the number of the stakeholders kept on growing as the region's impact and influence grew. Critical to this architecture in the High North is the Arctic Council. This high-level forum enabled and enhanced cooperative and collaborative efforts across every major field. While the Council discussed and engaged in numerous important projects Up North, it never went as far as to infringe on sovereignty issues or security/military matters of the Arctic states. The United Nations Convention on the Law of the Sea is another crucial pillar of the governing architecture as it provides a stable legal framework by which maritime rights and responsibilities are established in the High North. Furthermore, the multifaceted character of the region's governing framework is viewed in its paradiplomatic bodies, such as the Barents Euro-Arctic Region and in the concrete international, legally binding documents, such as the Polar Code. This chapter offers insight into understanding these critical mechanisms, provides an overview of their strength and weaknesses, but it also touches upon the recent pivot towards a far realist, power-burdened region. It is true that the Arctic Council survived the Ukrainian war, but the real question is in which shape and form. The narrative of the region's exceptionalism lost quite a bit of ground due to the newly-established situation. Geopolitics and the alliances in a bid for more power in the region substituted the previous cooperative and collaborative character of the governing architecture.

5.1 Arctic Council

Arctic states have been pivotal actors in regional governance, representing the main architects of the existing institutional infrastructure. Multilateralism and pragmatic co-operation between these states have dominated regional dynamics. The Arctic Council, an intergovernmental forum, is the only all-encompassing governing body Up North, as it includes the biggest array of actors.

It is the main governing body in the Arctic. Its legal framework is entrenched in the 1996 Ottawa Declaration and the Arctic Environmental Protection Strategy (AEPS, 1991) and it accentuates consensus-based decision-making among member states (Andreeva and Rottem, 2025). In Ottawa (1996), the governments of Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States of America signed the declaration with which the Arctic Council was created, as the highest form of multi-state organization in the region, with the purpose of promoting cooperation, coordination and peaceful resolutions among the Arctic States. This framework deliberately avoids military security issues. What is of utmost importance, and what enabled the Council to govern and function in a proper manner is the fact that the Ottawa declaration (1996) provided a mechanism for inclusion of the local Arctic communities, as it granted the organizations representing the indigenous people of the North the status of Permanent Participants. This represented a critical turning point, as the Council gained legitimacy within every important actor in the region. Currently, the Arctic Council counts six Indigenous Peoples' organizations with a Permanent Participants status. These are: Aleut International Association (AIA), Arctic Athabaskan Council (AAC), Gwich'in Council International (GCI), Inuit Circumpolar Council (ICC), Russian Association of Indigenous Peoples of the North (RAIPON) and the Saami Council (Arctic Council, n.d.-c). This is a unique arrangement which grants Indigenous communities a platform and opportunity to engage with every important stakeholder, to express their views and concerns regarding further developments (Smieszek, 2023). Initial evaluations of the AC revealed a weak and uncertain anatomy. Evan Bloom, an American diplomat engaged in the council's formation, described the AC in 1999 as a forum without legal existence, and hence not an 'international organization' as that term is understood under international law (Landriault et al., 2019). This definition, and the soft-law character of the Council should come as no surprise if we observe a broader picture, as neither state actor in the region was really willing to give up any sort of sovereignty over decision-making in the region to the international body. In that light, just two years after the Ottawa declaration with which the Council was established came the Iqaluit Declaration, with the sole purpose of reestablishing the existing mechanism, responsibilities and obligations of the AC in the region (Arctic Council, 1998). The Declaration confirmed the Council's role in promoting cooperation and coordination among Arctic states while it remained silent in the military security department.

The Council's activities are conducted in six working groups. It is the responsibility of the working groups to execute the programs and projects mandated by the Arctic Council ministers, during the ministerial meetings. An outcome of these meetings are the ministerial declarations, which are official documents through which each working group gets assigned its mandates, methods and goals. The working groups are: Arctic Contaminants Action Program (ACAP), Arctic Monitoring and Assessment Programme (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Emergency Prevention, Preparedness and Response (EPPR), Protection of the Arctic Marine Environment (PAME) and Sustainable Development Working Group (SDWG) (Arctic Council, n.d.-d). As imagined in the founding declaration, the Council lacks the power for a decision-making statement or a declaration. The strength of the AC lies in its all-encompassing approach. In that manner, it is worth noting that the Council lacks the authority to impose sanctions, or act in a similar fashion, hence allowing its working groups to make clearer recommendations without constraints of consensus-driven decision-making. As Rottem (2019) astutely explained, the Arctic Council could be defined as a 'decision-shaping' body and its strength lies in the very nature of its existence. As such a unique body, somewhere between the forum and the international organization, it is an ideal platform for non-state actors in the region to contribute to the governing structure. It offers an opportunity to a variety of different entities to engage within the governing mechanisms, which proves to be extremely useful as it offers an all-encompassing picture. According to the Ottawa Declaration (1996), observer status is open to non-Arctic states, intergovernmental and interparliamentary organizations, global or regional and to non-governmental organizations. In that light, the Observers are profoundly useful in the AC's bid to understand complexities of the issues it tackles, as the Observers often offer important scientific insight, expertise and financial resources. Involvement of Observers is understood as a pathway towards enhancing and complementing the work of the Council (Arctic Council, 2013). Currently, the AC counts 38 total observers, from which 13 are the non-Arctic states, also 13 inter-governmental and inter-parliamentary organizations and 12 non-governmental organizations (Arctic Council, n.d-d).

Four major insights characterize the AC's role and evolution within the broader Arctic governance framework during the last quarter-century. First, the Arctic Council began as a restricted environmental governance entity established and dominated by the Arctic republics. Second, there were initial debates over its role in policymaking and the scope of its mandate.

Third, the AC's policy-making role and mandate have expanded, to include not just generating and catalytic roles, but also a regulatory role in harmonizing national regulations. The duties altered, but the body's international character remained constant. Fourth, new platforms have evolved that allow a broad range of actors to contribute to Arctic governance issues and, some critics suggest, threaten the pre-eminence of the AC (Landriault et al, 2019). However, the real value of the Council was never about its diplomatic or political stature or influence, even though it carries a significant value among stakeholders. It was much more about the practical work being done through working groups and various projects.

5.2 UNCLOS

Under the 1982 United Nations Convention on the Law of the Sea (UNCLOS), or "constitution of the oceans," Arctic coastal states have specific rights and obligations that cast them in a central role in regional ocean management. According to a significant group of scholars, this Convention represents the most important legal framework governing maritime rights in the Arctic (Landriault et al., 2019); (Moe, 2017); (Østerud and Hønneland, 2017). The Convention is often referred to as the Constitution of the Oceans, as it defines states' rights and responsibilities in their use of Ocean space and resources (UNCLOS, 1982). According to the UNCLOS, all states have the right to establish territorial seas out to 12 nautical miles from their baselines. Within this limit, the coastal state has sovereignty over the sea, seabed and the airspace. However, the Convention, which was concerned about the conditions for international shipping, ensures that ships from all states have the right to innocent passage through the territorial seas. Coastal states may also establish exclusive economic zones (EEZs), to 200 nautical miles from the baselines, which may extend to a maximum of 350 nm from baselines, provided the geological connection to the mainland can be established. (UNCLOS, 1982). In that manner, UNCLOS established the Commission on the Limits of the Continental Shelf (CLCS) to review documentation from the coastal states of the outer limit of their continental shelves (outside 200 nm). According to the Convention' provisions, coastal states must submit scientific data to the CLCS along with their entitlement to a specific stretch of the shelf (UNCLOS, 1982). It would be fair to assess that the Arctic region remained a region of low tension specifically because of the impact of this convention, as all Arctic states comply with the Convention. This is

extremely important as a big majority of the unexplored resources in the Arctic falls under the umbrella of national jurisdiction, with a significant portion of these natural resources ought to be found within the national continental shelves.

However, the situation in Arctic shipping is more complicated. The UNCLOS establishes maximum standards for what governments may require of a vessel flagged by another state, and those regulatory ceilings become lower as a vessel operates further away from the coastline. Coastal states enjoy the same regulatory and enforcement monopoly in ports and internal seas as they do on the land. In the territorial sea, they may 'adopt laws and regulations for the prevention, reduction, and control of marine pollution from foreign vessels' as long as they do not obstruct 'innocent passage' or go beyond 'generally accepted international rules and standards' regarding 'the design, construction, manning, or equipment of foreign ships' (UNCLOS, 1982). Coastal governments, on the other hand, are not permitted to create any rules in their EEZs that do not comply with and give effect to generally recognized international norms and standards established by the competent international institution, namely the IMO (UNCLOS, 1982). The Convention's article 234, also known as the 'ice article', grants greater power to the coastal states, as it enables them 'the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of vessels marine pollution', as long as those rules show due regard for navigation (Stokke, 2013).

Even though there is an established and functioning network of legal and forum-based governing mechanisms, there was a school of thought which insisted that the Arctic is the 'lawless frontier' or the 'reincarnation of the Wild West' (Riddel-Dixon, 2008). In that light, in May of 2008, in Ilulissat, Greenland, representatives from the five Arctic Ocean coastal states held their first formal meeting. The meeting was held in a bid to revise the efficiency of the current legal framework, and the result of it was the Ilulissat Declaration, which concluded that the High North, and the Arctic Ocean are already governed by a comprehensive legal framework. The A5, which includes Canada, Denmark, Norway, Russia and the US, shared a common commitment to the orderly resolution of overlapping claims to the enlarged continental shelf, hence sending a strong message to the rest of the world that this current legal framework is advantageous to them, and that there is no need to update it (Landriault et al., 2019). Despite the fact that the discussions touched upon some of the critical topics for the whole region, from climate change effects to maritime safety, the decision to exclude the three Arctic States without Arctic Ocean

coastlines as well as the Indigenous communities reflected an apparent message of sovereignty of coastal states. The A5 used the declaration to send a strong political message that they backed the existing global framework established by the law of the sea as a solid foundation for responsible management by the five coastal States. This stance is predicated on the idea that an extensive international legal framework applies to the Arctic Ocean as it does to other maritime regions around the world.

5.3 Other Governing Mechanisms in the Far North

The Arctic uniqueness is to be seen in its governing mechanisms as well. The region is governed by a complex mix of legally binding documents, inter-governmental forum, regional and specialized organizations. The nature of political systems found in the Arctic region varies considerably, with three federal states and five unitary national governments. This situation, in turn, allows for an interesting sample of possible paradiplomatic activities, even if it limits the potential of co-operation between these units. Accordingly, Arctic paradiplomacy is characterized by dominant functional patterns, with a pragmatic focus on local issues such as regional economic development, infrastructure, natural resources exploitation, and environmental protection (Landriault et al., 2019). The Barents Euro-Arctic Region is exactly the example of functional paradiplomacy in the region. The Barents Sea region encompasses the northernmost regions of Norway, Sweden, Finland, and Northwestern Russia. Accordingly, Barents Euro-Arctic Region cooperation resulted from the new post-Cold War strategic environment and the associated peace dividend. In 1993, the European Commission, Russia, and Nordic countries (Finland, Norway, Sweden) signed the Kirkenes Declaration to enhance regional stability, progress, and international peace and security, hence creating BEAR (Kirkenes, 1993). These four countries share thousands of kilometers of common borders, with millions of people crossing every year at the Finland-Russia border alone, giving rise to a range of transport, economic, and environmental issues. Challenges faced by the different regional authorities are strikingly similar, including high unemployment rates, an ageing population, and lacking transportation infrastructures (BEAR, 2014). Sub-national entities in the Barents Sea region promoted and facilitated the initiative, conceiving of BEAR as a two-layered structure involving both national and sub-national governments (Zimmerbauer, 2013). On the first level,

the Barents Euro-Arctic Council (BEAC) is composed of sovereign states and one supranational entity. On the second level, regional governments cooperate in the Barents Regional Council (BRC), encompassing sub-national authorities from Finland, Norway, Russia (Northwestern regions), and Sweden. As part of the Kirkenes Declaration, governments agreed to cooperate on several different fronts: environmental issues; economic, scientific, and technological cooperation; regional infrastructure; Indigenous peoples' issues; cultural relations; and tourism (Kirkenes, 1993). Barents collaboration, especially on health and environmental issues, is marked by a strong east-west orientation, with Northwest Russia as the primary or sole recipient and the Nordic countries serving as aid providers.

As mentioned, the High North governing structure is as complex as there is and international, legally binding documents are viewed as one of the cornerstones of the region. In that manner, the International Maritime Organization adopted and entered into force on January 1, 2017 the International Code for Ships Operating in Polar Waters, commonly called the Polar Code. It refers to a set of mandatory safety and environmental regulations for ships navigating the Arctic and Antarctic waters (IMO, 2017). Not only does it recognize the special hazards shipmasters face when navigating ice-covered waters, ranging from freezing temperatures, harsh and unpredictable weather and extended periods of darkness. It also introduces pragmatic measures shipowners have to take to ensure the safety of ships and crew in the face of these threats. Moreover, the new Code also addresses a different area of concern, as it puts emphasis on the environmental effects of the amplified traffic at the poles. By prescribing ship designs to prevent accidents and putting limits on the discharge of oil, chemicals, sewage and garbage, the Code aims to drastically reduce the eco-footprint, which is one of the critical issues Up North, when it comes to polar shipping (Schopmans, 2019). To sum it up, the Code's importance and uniqueness is highlighted in its all-encompassing character, where the Code aims to offer the best possible framework for the environment and ecosystems protection at the two poles, alongside the clear-cut instructions about the operational eligibility of the ships (IMO, 2017). The Code is thought to be crucial for balancing economic opportunities (new shipping routes) with environmental and safety concerns in the Arctic, alongside UNCLOS. However, stronger enforcement and expanded regulations may be needed as Arctic shipping continues to grow.

5.4 Pivot Towards a More Realist Region

Over the last 30 years, the Arctic Council has become the trusted Arctic “messenger” delivering Arctic knowledge and putting the Arctic on the agenda at the global level (Smieszek, 2023). In the middle of March of 2022, roughly twenty days since the beginning of Russia’s invasion of Ukraine, seven of the Arctic Council’s eight members, all except Russia which held the council’s rotating chairmanship at the time, have agreed to boycott future meetings, indefinitely pausing council proceedings on issues from climate change to Arctic oil drilling (Harvey, 2022). When it came to a decision by the seven Arctic states on pausing the AC´s work, Permanent Participants were not consulted on it. PPs remain also adversely affected by the lack of formal communication channels that the Arctic Council normally provides (Smieszek, 2023). It would be fair to assess that this effectively halted all kinds of work being performed in the Arctic region given Russia’s size, impact and role in the Far North. As dr. Sfraga (Sfraga, 2022), founding director of the Polar Institute, astutely noted, there is a wide array of social, cultural, environmental, economic and political aspects of the Arctic that are feeling the tensions rising in Europe. In that manner, we can see how connected, interdependent and integrated the Far North really is, despite some scholars insisting on the exceptionalism narrative. At the onset of the Ukraine war, many polar pundits heralded the end of Arctic "exceptionalism" - a post-Cold War concept that characterises the Arctic as such a unique place due to its geography and history that it is immune to some geopolitical tensions and is therefore an arena for peaceful cooperation (Fouche and Dickie, 2024). The invasion did spur conversations about the Arctic exceptionalism (Devyatkin, 2023), as there is an abundance of reasons for keeping the cooperation alive despite changing international dynamics. The Arctic’s uniqueness and importance is not just a cliche, developments in the Far North are of much greater importance than the current power struggle between Russia and the collective West. In that fashion, blockade of the Council is having a huge impact on every aspect of the Arctic’s life, as the profoundly important environmental and scientific projects are blocked and indigenous communities feeling direct consequences of this power struggle. Even if work on several AC projects without Russia's involvement continued, the functioning of the AC Working Groups, as well as the implementation and quality of their work, were and continue to be impacted by the suspension. The inability to make official decisions and hold regular formal WG meetings makes it difficult for WGs to follow their guiding principles and rules of procedure, appropriately involve representatives of Permanent

Participants and Observers in the work, and apply for funding for future projects and activities (Smieszek, 2023). This resulted in knowledge loss and the dissolution, to a certain extent, of existing expert groups and networks. The breakdown of pan-Arctic climate research and environmental protection could have serious long-term effects. Geopolitical conflicts and a narrow concentration on strategic objectives may have spillover consequences in the Arctic region, as well as a disrespect for indigenous inhabitants' concerns.

Two schools of thought can be detected, when discussing the current situation in the Arctic. On the one hand, arguments are made in favor of keeping the Far North as safer and prosperous as possible, in the interest of all parties involved. It is not about 'letting Russia win' as the other narrative might suggest, it is more about not letting everybody in the Arctic lose (Greenwood, 2022); (Exner-Pirot & Bloom, 2022). On the other hand, the argument and the narrative is that protecting human rights and stopping totalitarian regimes matters more than maintaining the status quo of a region (Cunningham, 2024). The collective West took up on the latter policy, completely cutting off ties with Russia in the first place, hence pushing Russia towards the East. While this policy gave results at the very beginning, the transit cargo along the NSR plunged to 41,000 tonnes in 2022, from just over 2 million tonnes the year before. However, in 2023 it made a miraculous recovery to 2.1 million tonnes, a record high, with more than 95 percent of it being delivered to or from China (Hong, 2024). As a result, Russia was neither isolated or defeated; rather, it was compelled to form new alliances with partners from the East. One may say that the collective West adopted a Cold War-esque mindset in the Arctic, as their stance pushed Russia and China closer together. We are currently witnessing deep collaboration between the two in a variety of domains, ranging from energy to military. China has stated unequivocally that any sustainable future Arctic Council must include Russia, and there is mounting evidence that the Arctic is becoming divided into a Russian-Asian Arctic and a European and North American Arctic. China, India, and others have big aspirations for the Arctic, including science, energy, fisheries, and cross-oceanic transportation. Russia is a willing collaborator (Andreeva et al., 2024).

With Norway taking over the chairmanship of the Arctic Council in May of 2023, there was a glimmer of hope that the route Norwegian governance will choose will be the one of lowering tensions in the region and making some sort of middle ground. It is important to note that the Scientific and technological interaction at the working group level has gradually restarted with

Russian scientists in certain subject areas and initiatives. New technical standards for working groups have been developed, and one of the primary difficulties of the current Norwegian chairmanship is combining science and policy in the Arctic Council. So far, the emphasis on 'technical' and scientific activity appears to be the rationale for working group operations and the Arctic Council's overall survival plan (Arctic Council, 2024). The Arctic Council's secretariat said in February it would resume working group meetings on environmental and safety issues in a virtual format, with Russia at the table, and some analysts saw grounds for hope (Fouche and Dickie, 2024). Another positive effect of the Norwegian chairmanship is the oil spill exercise which took part in northern Norway in the March of 2024. Russia also took part which was an extremely rare sign of cooperation between Moscow and the West, and in a way it highlighted the special status of the polar region. It also showcased Norway's keenness to keep some limited cooperation alive through the Arctic Council. As chair of the Arctic Council's Emergency Prevention, Preparedness and Response working group, which led the drill, noted, communication between all states was on a professional level, with Russia simulated sending two vessels to the exercise (Fouche and Dickie, 2024). The main objective for the Norwegian chairmanship has been to make sure that the structure survives, because "we cannot afford to lose it," Norway's foreign minister Maria Varteressian astutely explained (Varteressian, 2024). While it is a fact that the Norwegian governance during 2024 produced a certain progress in keeping the structure alive, these are only baby steps.

There is a significant number of scholars referring to the Ukrainian war as the greatest obstacle to Arctic governance since the Cold War. That claim may very much have the ground in the simple fact that nothing caused that big of a stir and brought the biggest governing body to a halt in the past 35 years in the Far North. With the conflict now drawn out for over two years with no end in sight, it is apparent now how the invasion has affected the Arctic. The Arctic Council's determination to boycott future meetings has substantially changed the way in which governance will occur. While the removal of Russia from the Council does allow for a temporary end to Russian participation in one of its few remaining soft power venues capable of meaningful international coordination, it also means the Council forfeit the institutional legitimacy and progress it has fostered with little utility existing in such an organization without Moscow (McVicar, 2022). This spells severe problems for the Arctic as the Council can no longer claim to be fully or wholly immune to armed geopolitical conflicts and also indicates that the Council will

“lose legitimacy and goodwill and its agenda will shrink in both scope and size as future Russian statements on Arctic cooperation will likely be met with more skepticism from the other seven members than ever before (Cunningham, 2024). Overall, the Arctic remains highly vulnerable to changing geopolitical developments, and has likely never been more vulnerable in its history, considering increased global interactions with the region. In fact, the Arctic affairs have become even more vulnerable in recent months, considering Russia’s threat to leave the Arctic Council and their refusal to pay the annual contributions (Nilsen, 2024). While the Arctic Council grapples with its current restraints, other cooperative frameworks, especially legally binding agreements, remain relevant (Andreeva et al., 2024).

5.5 Concluding Thoughts on the Governing Future Up North

This chapter highlighted crucial governing pillars of the Arctic region and provided an insight into their functioning. It outlined a delicate balance between the region’s multilateral mechanisms, the role of sovereignty and pragmatic cooperation. This unique balance offered an excellent architecture for the peaceful and collaborative region in the past three decades. However, as noted in the final subchapter, this fragile order faced issues it never faced before, and the cracks started to show. The very notion of Arctic exceptionalism was shattered with Russia's invasion of Ukraine and the fall-out it caused Up North. The Arctic’s governing reality is highlighted in the current geopolitical rifts and profound geopolitical power-play between the converged stakeholders in the region. It is fair to assess that the conflict in Ukraine had a “seismic effect on Arctic cooperation” (Jacobsen & Rotten, 2025). What became apparent is the fact that the Arctic governing architecture is deeply intertwined with broader global tensions, and that is a new reality every key stakeholder in the region ought to accept. Going forward, the region needs a more inclusive and cooperative approach from all sides, as there is too much at stake in the High North and consequences of further deterioration in relations between converged stakeholders could be dire for the whole world.

6. Security Dynamics in the Changing Region

Emergence of the Arctic as one of the central arenas of geopolitical tension and strategic competition meant that it is only a matter of time before the major international actors get deeply involved in the region's dynamics. Even before Russia's invasion on Ukraine, the situation in the High North started to heat up. As the professor Rob Huebert neatly explained, some of the critical security requirements of the three of the most powerful states in the world are overlapping in the Arctic region (Lackenbauer, 2019). In that manner, a region that was once looked solely through the lens of environmental and energy concerns is currently primarily understood through the viewpoint of military infrastructure, communication networks and surveillance capabilities. At the very core of this changing dynamics of the Arctic region is the critical infrastructure, which is the essential aspect of Arctic operations (Friedrich, 2022). The region's geography, characterized by an extremely unwelcoming weather and the sheer size of the region hampered any potential development of reliable command and control systems. With the High North rapidly melting, the region is becoming increasingly vulnerable to various sorts of military escalations, such as hybrid threats or infrastructure sabotage missions. The constant use of dual-use technologies, especially in undersea and space domains, only further complicates already complicated security outlook in the region. Undersea communication cables, satellite ground stations and surveillance infrastructure represent the backbone of the region's situational awareness, even though this infrastructure remains heavily vulnerable. This chapter offers crucial insight into the securitization process in the High North, outlining the critical infrastructure as a key tool of the geopolitical competition. It examines how infrastructure remains both the foundation of regional functionality and a major target for strategic disruption. Moreover, the chapter engages into the patterns of infrastructure sabotage missions that are employed by the Russian and Chinese side. It suggests a purposeful strategy of low-threshold conflict which is designed to undermine Western states' security and disrupt normal functioning of the critical infrastructure without triggering a full-scale confrontation Up North. In that light, the chapter concludes that the infrastructure became not only a tool of power projection but also a litmus test of sorts, where the endurance and stability of the Western-ruled system is being put to test.

6.1 Critical Infrastructure in the Arctic

While the Arctic region is the home of numerous profoundly important energy-based facilities, it is not the energy infrastructure that the thesis will discuss in this section. It is a fact that energy infrastructure, and its safety, is of utmost importance for the future of the High North. However, when discussing the security dynamics in the Arctic region and developments in that area, it has to be mentioned that the Arctic has primarily been the critical location for the defense missile capabilities, surveillance infrastructure and a strategic forces deployment (Østhagen et al., 2018). What ought to be recognized prior to further delving into the matter are some of the essential Arctic characteristics. The geography landscape in the region is vast and remote, making the establishment and maintenance of a comprehensive surveillance and communications network an increasingly tough task. In that light, a cold and rugged climate, subjected to rapid environmental changes, make the Arctic a profoundly challenging environment for the establishment of an operational command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) infrastructure (Long, 2018); (Brooks & Meijer, 2021). An extremely challenging operating environment, constraints for building robust infrastructure and extreme volatility of the existing infrastructure in the High North are main reasons behind the newly-established securitization of the region.

Critical undersea infrastructure (CUI) encompasses energy infrastructure, including pipelines, liquefied natural gas terminals, and offshore wind farms, as well as communication infrastructure and fiber-optic cables on the ocean floor and is instrumental in the Arctic's functioning and further development (Falco et al., 2024). In the absence of an efficient communications network, long-range communications in the Arctic are primarily reliant on undersea cables, meaning that the very essence of the communication system Up North is vulnerable (Boulegue, 2024). According to Falco et al. (2024), undersea cables offer little resistance to sabotage and are one of the easiest targets for an adversary to go after. For example, the Svalbard zone, which is dependent on two fiber-optic cables for outside communications, is in an interesting and very vulnerable position. A loss of both cables would carry strategic implications, as transmissions to and from the K-SAT satellite station[6], which is of immense strategic importance, would effectively be lost (Conley et al., 2024). It is due to this newly-understood importance of the

[6] The biggest ground satellite station in the world.

critical undersea infrastructure Up North that NATO has intensified its focus on the CUI protection in the region. The importance of this infrastructure is not in correlation with the level of protection it currently has, as the CUI that transits international waters and heavily trafficked areas is easily damaged by as simple a tool as dragging an anchor across it (Conley et al., 2024). It seems as if the undersea domain is becoming a new battlefield in the Arctic region, with the Sino-Russian bloc continuously conducting operations and subversive actions in the High North (Conley et al., 2024). Russia amplified its activities and engagement in the undersea domain through GUGI, the directorate for deep-sea operations. The Directorate is responsible for conducting sabotage and surveillance against critical maritime infrastructure (BI, 2023). In this light, NATO officially launched its new Centre for Security of Critical Undersea Infrastructure whose sole task is to enhance security and ensure safety of the Allied CUI (NATO, 2024). This domain's significance in the Arctic is undeniable and profound, with the CUI being the pillar of the Arctic's communication networks. Berge & Bergmann (2024) deftly noted that, in order to alleviate the Arctic's crucial security concerns, maritime domain awareness has to be enhanced with the further technological development, which would ensure at least minimal level of security to the CUI.

A viable alternative to this fragile communication system in the Arctic may be space. The modern day world is witnessing a 'race for space' of sorts, where the emphasis is being put on the dual-use technologies up there. Dual-use technologies, those that serve both civilian and military purposes without significant modifications, go hand in hand with the space domain activities. For the Arctic region, satellite ground stations are in the focus due to their dual-use capabilities and significantly complex legal and security implications they entail. The Arctic is a key location for these stations because of its geographical advantages for satellite communication but, because of that, the region is also a focal point of international power competition with global powers seeking to optimize their interests via the strategic placement of ground stations (Falco et al., 2024). The Arctic's strategic location is perfect for the early warning systems, as both the USA and Russia depend on the Arctic infrastructure for their early warning systems, both through ground-based radars and even more importantly through ground stations for satellite communications (SATCOM) (Asnes-Sagild & Weidacher-Hsiung, 2024). However, this infrastructure comes with its restrictions as well. All states that wish to expand their power-projection through the Arctic's space-based capabilities system need to rely on the ground

infrastructure in the Arctic due to the latitude-restricting coverage of these ground stations (Bateman, 2024). The fact remains that space-based communication is the only viable and effective alternative to undersea cables, the Arctic is hampered by significant shortcomings in satellite capabilities. Conventional SATCOM from geosynchronous orbit is unstable or unusable in large parts of the region due to limited coverage above 70 degrees latitude (Andersen & Johansen, 2013). Currently, Arctic SATCOM mainly encompasses narrowband frequencies with constrained data rates and high latency, thereby limiting functionality. The accuracy of precision, navigation, and timing (PNT) systems, such as GPS, is also limited in the Arctic, causing potential challenges for precision-based munitions and navigational awareness (Berge & Bergmann, 2024). Aside from SATCOM, bolstering situational awareness depends on continuous and accurate ISR (intelligence, surveillance, and reconnaissance) over the vast Arctic region, which is only achievable through a foundation of space-based ISR. While aerial capabilities such as P-8 reconnaissance aircraft and unmanned aerial vehicles (UAVs) may supplement localized ISR, these capabilities have insufficient range and speed to cover the vastness of the Arctic geography (Berge & Bergmann, 2024).

The Arctic's communication and intelligence systems are heavily dependent on the undersea cables, making the region vulnerable and ungoverned in that domain. With the further melt, we might see some more developed approaches to the protection of this critical infrastructure but as of now, the region is extremely volatile. An important substitute for the CUI Up North could prove to be the space-based communication system, despite its numerous restrictions in the region. Arctic ground stations are integral to space operations as they provide the necessary link between space assets and their users on Earth. What further complicates the security landscape in the region is the dual-use nature of these ground stations, which is being heavily exploited by the Russian and Chinese forces. For states that have an ambition of a global space-power projection, like the USA and the PRC, the Arctic and this infrastructure are incentives for a growing presence in the region (Falco et al., 2024). Russia, with the biggest Arctic coastline, is already in a peak position in this infrastructural space race. Some scholars are noting that Russia and China are increasingly collaborating in developing defense technology, with space and new technologies being prioritized (Asnes-Sagild & Weidacher-Hsiung, 2024) but we are yet to see any major breakthrough or actual result of this collaboration.

6.2 Rising Tensions: Infrastructure Disruption as a Prelude to Further Escalation

If we observe the US' posture, and the whole NATO alliance as well, the Arctic's critical significance is outlined in its profound early-warning and intelligence, surveillance and reconnaissance capabilities and in the deterrent role it has against the growing Sino-Russian bloc (DoD, 2024); (NATO, 2024). On the other hand, the importance of the Northern region for Moscow cannot be overstated, and quickly growing military posture and presence only speaks to that extent. Its Northern Fleet Joint Strategic Command and the Eastern Military District are at the core of Russia's military presence Up North, as they ensure the security of the Russian Arctic, beneficial operational conditions for Russia's Arctic nuclear capabilities and serve as a critical tool towards ensuring the homeland's safety (Wall & Wegge, 2023).

In the past couple years the Arctic became a theater of various sabotage and military actions whose goal was to test the durability of the current infrastructure Up North and gain insights into potential retaliating actions. One of the most notable incidents happened back in January of 2022 when the subsea cable at Svalbard was cut and its fiber-optic cable dependence was put to test. The archipelago remained entirely reliant on the reserve capacity from its one remaining cable (Schia et al., 2023). This incident showcased the complexity of the Arctic's infrastructural picture and highlighted the amplified vulnerability of the critical infrastructure. Even though the cause and the perpetrator remained unknown to the wider public, some Russian trawlers were spotted by the cable shortly before the incident occurred. In a similar fashion, in April 2021 a 4,3 kilometer section of an undersea cable outside the Norwegian coast went awol, with no information on how or who did it (Berge & Bergmann, 2024). As the years are passing by, the incidents are piling up in the Arctic's CUI. In 2023, two undersea cables were cut by the ship registered on the Hong Kong, the Newnew Polar bear, in the gulf of Finland. By the time the Swedish, Norwegian or Danish authorities responded to the incident, the ship was already in the Russian Arctic waters, hence legally out of their reach. It was only a year later when the PRC's authorities acknowledged the vessel's responsibility but insisted that it was nothing other than a simple incident in a tricky environment (Asnes-Sagild, 2025). The ship's dual ownership, with Shanghai and Moscow being the official offices, only amplified the argument of Russian involvement in this sabotage mission. The Finnish National Bureau of Investigation shortly after

concluded that it was not an incident and that the ship dragged its anchor over the Balticonnector pipeline and then made a quick escape into the safety of Russian waters (Staalesen, 2024). Another sabotage mission in the Arctic region occurred in the November of 2024 and it involved another Chinese ship, Yi Peng 3 vessel, which dragged its anchor for more than 100 meters over the Baltic seabed, seriously damaging two critical fiber-optic cables (Asnes-Sagild, 2025).

These incidents are suggestive of an emerging strategy of infrastructure disruption in the High North. The pattern of these sabotage attacks raises some of the critical questions about maritime security, infrastructural vulnerability and the complex geopolitical situation between China, Russia and the collective West. The fact that attacks of this type have started to influence the Arctic's security dynamics is quite showing off the new geopolitical reality in the world, where the Arctic is certainly not an exception, nor isolated anymore. As Asnes-Sagild (2025) aptly noted, the dynamics of the sabotage missions and low-threshold conflicts are becoming a new reality of the Arctic. Interestingly, constantly rising traffic and resource exploration only heightens the vulnerability of these assets, especially when discussing deliberate attacks orchestrated from Moscow or Beijing. Both powers rely on dual-use assets whose main characteristic is the plausible deniability, while further developing undersea warfare capabilities. Ambiguity and plausible deniability make hybrid attacks attractive for the likes of Russia and PRC, both of which extensively use cyber operations and electronic warfare (Conley et al., 2024). Having all this in mind, it could be expected that both of these actors may engage in kinetic attacks against infrastructure by non-military means to impose costs while minimizing risk of escalation. Kinetic attacks on undersea infrastructure, especially by non-military vessels, which is a field of expertise for these two countries, can easily be passed off as an unintentional occurrence (Conley et al., 2024). Russia and the PRC have the required civil-military and commercial capabilities to conduct effective attacks on the Arctic's CUI. Another important aspect of this security development is the fact that both of these countries have been actively engaging in hydrographic mapping and development of undersea warfare technologies, hence making the future development in the region uncertain.

Security dynamics of the Arctic cannot be viewed through the isolated lens. The world is witnessing some of the most important changes ever since WWII and the Arctic is just another theater of these global power games being played. It is certainly not an accident that the two major challengers to the current global order, China and Russia, are only now engaging in

various sabotage and infrastructure disruption activities Up North. As Cunningham deftly noted (2022), these attacks are also a sign of the non-Western nations desire to circumvent the US, and their hegemony in this field, and acquire their own methods of telecommunications. This is of critical importance for the future of the region, as the whole C4ISR infrastructure is dependent on these fragile telecommunication methods. The significance of the safety of the data pipelines is also amplified, as adversaries with heightened level of technological development could be able to 'tap into these cables', record, copy or steal data or even execute a kill switch which would erase the wavelengths previously used for the data transmission (Wall & Morcos, 2021). The outcome of the growing tensions in the region of highly vulnerable military, communications and energy infrastructure is an increased naval activity with the number of accidents and sabotage missions on the constant rise.

6.3 Final Thoughts on the Changing Security Dynamics

The changing security dynamics of the High North highlights the transformation this region has undergone. What was once a remote, peripheral environmental and economic space has now developed into one of the most critical geopolitical arenas of the world. What makes the Arctic one of the focal geopolitical points in the world is its unique vulnerability to the infrastructure disruptions. The High North is home to a significant amount of critical infrastructure, such as undersea cables, satellite ground stations and surveillance systems, and any disruptions to these can lead to a major security crisis. It would be fair to assess that the infrastructure has become the backbone of the Arctic functionality, while also being the primary target of strategic competition in the region. Recent sabotage incidents and the systematic use of hybrid tactics by Russia and China are only proving of the infrastructure importance Up North.

Key reasoning behind the Russian and Chinese active engagement in the infrastructure disruptions in the region lies in the plausible deniability, as it is showing of their broader strategy of low-threshold conflict. Dual-use technologies and non-military assets are being employed in a bid to undermine Western resilience without a direct confrontation. On the other hand, the collective West, led by NATO, is heavily reliant on the fragile communication systems Up North, which is indicative of the discrepancy between the level of protection of the region and its strategic importance. In the future, the security of the High North will be heavily dependent on

the development of a resilient C4ISR infrastructure. What is currently happening in the Arctic is both a warning and a test case of the endurance of the Western-led security order, as there remains a question of the ability of the system to withstand persistent, covert infrastructural challenges in one of the world's most unforgiving environments.

7. Conclusion

The Arctic has emerged at the forefront of global geopolitics and in that light, this thesis set out to examine how the strategies, policies and activities of the United States, Russia, Canada and China have shaped competition in the High North and what are the implications for the regional governance and stability. By providing the insight into abundant natural resources, analyzing governance frameworks, strategic postures and security dynamics of the region, the research highlighted that the Arctic is no longer an 'exceptional', isolated zone of cooperation but rather a complex geopolitical arena in which we are witnessing a collision between the institutionalist mechanisms and the realist power politics. A synthesis of the findings outlines that natural resources and climate change are the crucial drivers of the High North's transformation, as profound fossil and mineral reserves, with the emergence of new shipping routes, have caused this growth of the strategic importance of the region. While it is a fact that climate change and resource riches offer a number of opportunities, there is also a downside to this development. The promise of prosperity is inseparable from profound risks as we are witnessing environmental degradation, ecosystem disruption and infrastructure vulnerabilities while the resources and new shipping routes are being used for profits and strategic competition.

The strategies of four examined actors reveal divergent but overlapping trajectories, with each of the actors showing a great interest in the region. The US has found itself playing catch-up in the High North and is currently investing in security capabilities, in establishing more favourable governing mechanisms and in infrastructure resilience. Canada is playing on both, institutionalist and realist spectrum, as it keeps being a crucial proponent of cooperative governance, with the special accent on local empowerment. On the other hand, its policies are painting a picture of the realist turn where the emphasis is put on sovereignty and security. Russia stands as the dominant Arctic power due to its geography, resources and military capacity. It uses these advantages to consolidate and expand its influence in the region, often at the expense of governing frameworks. China, as a non-Arctic state, has found a way to engage in the region through various scientific and infrastructure projects, and strategic partnerships, most of which are with Russia. These converging strategies are showing off a widening gap between the institutionalist aspirations and realist imperatives and in that manner, this shift carries a theoretical significance. The Arctic was always labelled as an 'exceptional' place, where cooperation prevails over anything else. The

thesis shows that the case for this exceptionalism of the region is no longer valid. Impact of the Ukrainian war, numerous and continuous sabotages of undersea infrastructure alongside the growing Sino-Russian collaboration illustrate that realist logic is now the dominant one. However, crucial institutional mechanisms such as the Arctic Council, UNCLOS and bilateral agreements remain highly important in the governing reality of the region. Having that in mind, the Arctic can be defined as a hybrid order, with cooperation being conditional, fragile and often overshadowed by power competition.

Taking a look into the future, a few critical points are to be addressed. Critical infrastructure and its resilience must be of the highest priority for NATO and its allies. Western actors must find a way to mitigate vulnerabilities that are being used by their adversaries through various hybrid tactics. All actors in the region must work together towards establishing a new, more effective governing framework, the one which will incorporate national interests with the need for collective action on some of the pressing issues in the region. In the midst of this geopolitical competition and climate changes effects, the emphasis must also be put on the local communities. They are taking the biggest hit in this process and all actors must pay extreme attention and must ensure the best possible conditions for indigenous communities and their safety. The Arctic's trajectory is highly uncertain at this point. The most likely outcome is a region that is in constant struggle between the cooperation and national interests where competition will continue to be moderated by the high costs of confrontation, the persistent need for navigational safety, environmental response coordination and infrastructure security.

This thesis suggests that the Arctic will serve as a litmus test for the international system. If cooperative frameworks manage to endure the complexity of geopolitical rivalry in the High North, the Arctic will remain a place of managed competition. However, if frameworks collapse under the weight of national interest-based policies, the consequences might extend much further than the region itself. This collapse could profoundly undermine confidence in the capacity of international law and institutions to mitigate conflict. In that light, the Arctic is not merely a regional concern but a mirror of a global order transition. It reflects the struggle between realist imperatives of sovereignty and power projection and institutionalist aspirations for cooperation and shared governance. The endurance of peace and stability in the High North is solely dependent on the states and whether they will choose confrontation or collaboration. As the ice melts and opportunities expand, so too does the responsibility to craft policies that will balance

security, sustainability and inclusivity. While the Arctic's future remains highly unclear, one thing is certain. How the world navigates this frontier will reveal much about its ability to govern, not just the polar regions, but the whole globe.

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