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**Development of the Arctic Geopolitics from the
Perspective of Russia-US Relations**

Master's thesis

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Year of the defence: 2021

Declaration

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References

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Abstract

The Arctic region because of its unique geographical location and the huge amount of resources has always been one of the most popular topics in the international relations. And as two important players in world politics, Russia and US are both main members of Arctic states. The Russia-US relations always have great impacts in Arctic geopolitics. So, it is necessary to analysis the Arctic geopolitics under the Russia-US relation to answer the question of “How will the Arctic Geopolitics develop in the future.”

During the cold war, because of the intense competition between this two great powers, Arctic region which has a superior strategic location, became the one of the strategic frontiers of the global confrontation between the United States and the Soviet Union. After the Dissolution of the Soviet Union, Arctic region became the key for Russia to develop its geopolitical strategies. In that case, Russia put significance effort in the development of Arctic resources, sea route and also the military. That makes US reformed the Arctic policy to establish hegemony in Arctic. Under the transfer of the Russia-US relation, the Arctic has undergone an evolutionary process of "militarization – de-militarization- re-militarization".

Based on the regional security complex theory and the Arctic Geopolitical features, The Arctic security will develop under the “Arctic Rim Super Complex” which is a supra-regional (inter-regional) super-complex based on political, economic, military and environmental security in the Arctic region, consisting of the US, Russia and other Arctic Participants Rim security complexes and their “inner ring” of the Arctic region.

Abstrakt

Arktický region byl díky své jedinečné zeměpisné poloze a obrovskému množství zdrojů vždy jedním z nejpůvodnějších témat v mezinárodních vztazích. A Rusko i USA, jakožto dva významní hráči světové politiky, jsou hlavními členy arktických států. Vztahy mezi Ruskem a USA mají v arktické geopolitice vždy velký dopad. Je tedy nutné analyzovat arktickou geopolitiku v rámci vztahu Ruska a USA a odpovědět na otázku "Jak se bude arktická geopolitika vyvíjet v budoucnosti".

Během studené války se kvůli intenzivnímu soupeření těchto dvou velmocí stala arktická oblast, která má vynikající strategickou polohu, jednou ze strategických hranic globální konfrontace mezi Spojenými státy a Sovětským svazem. Po rozpadu Sovětského svazu se arktická oblast stala pro Rusko klíčovou pro rozvoj jeho geopolitických strategií. V tomto případě Rusko věnovalo značné úsilí rozvoji arktických zdrojů, námořní cesty a také armády. Proto USA reformovaly arktickou politiku s cílem získat v Arktidě hegemonii. V rámci přenesení vztahů mezi Ruskem a USA prošla Arktida evolučním procesem "militarizace - demilitarizace - re-militarizace".

Na základě teorie regionálních bezpečnostních komplexů a geopolitických rysů Arktidy se bezpečnost Arktidy bude vyvíjet v rámci "arktického superkomplexu", což je nadregionální (meziregionální) superkomplex založený na politické, ekonomické, vojenské a environmentální bezpečnosti v arktickém regionu, který se skládá z bezpečnostních komplexů USA, Ruska a dalších arktických účastníků a jejich "vnitřního prstence" arktického regionu.

Keywords

US-Russia relations, Arctic, Geopolitics, security, Cold war, Arctic Resources

Klíčová slova

Vztahy USA-Rusko, Arktida, geopolitika, bezpečnost, studená válka, arktické zdroje

Title

Development of the Arctic Geopolitics from the Perspective of Russia-US Relations

Název práce

Vývoj arktické geopolitiky z hlediska vztahu Ruska a US

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<p style="text-align: center;">Institute of politic studies Master thesis proposal</p>
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Topic Characteristics / Research Question(s):

My research question is how will Russian-US relations influence the Arctic region's geopolitical development in the future. With the global warming and melting of the Arctic ice, the development of Arctic resources and the commercial operation of Arctic water ways seems more practical. These changes have prompted Arctic countries to give more attention to the Arctic and led to intensified competition for the Arctic. The Arctic region has become one of the hot spots in international politics today.

As the main leaders, the Russian-US relations plays a significant role since WW2. I will start with the evaluation of Arctic region's geopolitical importance, and other important factors of Arctic region to the world. Then I will collect the data of Arctic region's geopolitical development from the cold war period in the context of the Russian-US relations. Then, I will find all the other important players' in Arctic geopolitics that may influenced the policy making of Russia and US. Combining all these data, the final passage will answer the research question from different perspectives on Arctic future region's geopolitical development.

Methodology:

As my research question is How will the Russian-US relations influence the Arctic region's geopolitical development in the future, the methodology of this paper will be based on documentary analysis approach. I will use Comparative Historical Method to analysis the past data of US-Russia relations and the arctic region polices. All the data used in the article will be secondary literature and part of primary sources.

To answer the research question, I will describe and analysis the Arctic geopolitics throughout the development of the US-Russia relations by using Comparative Historical Method. Then processing my conclusion by analysis the Artic geopolitics developing under the US-Russia relations.

Outline:

1. Arctic region's geopolitical importance
 - 1.1 Analysis of the geographical location of the arctic
 - 1.2 Arctic resources assessment
 - 1.3 The geopolitical development of the Arctic geostrategy's importance
2. Russia and the United States in the Arctic geopolitical game
 - 2.1 Before the Cold War
 - 2.2 Cold war period
 - 2.3 Post-cold war period
3. The Arctic geopolitical changes under the Russia-American relation
 - 3.1 The international system and regional security of the arctic
 - 3.2 Conflicts and Cooperation with the Participation of other players
 - 3.3 The Arctic geopolitics development model
4. Future Arctic geopolitics development under the Russia-America relation
 - 4.1 Arctic energy development
 - 4.2 New arctic route
 - 4.3 The new arctic international regime

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Introduction

The subject of this thesis is the development of Arctic geopolitics in the context of Russian-US relations. The research will examine how Arctic region became an essential issue in the international geopolitical landscape and its role in its future development regarding its uniqueness, importance, and potential for sustainable development. The central part of the paper will focus on how the competition and cooperation between Russia and the US as important players among the Arctic countries, affect the Arctic geography development in the current international framework.

As can be inferred from the above, this thesis's central research question is: How will the Arctic geopolitics develop in the context of the Russian-American relationship? So that this thesis will focus on developing the Arctic geopolitics since cold war period to now. It includes Arctic resource exploitation's future direction, the development of new shipping routes and the Arctic region security. With the development of globalization and technology, the geopolitical theory has gained new space for expansion. The traditional geopolitics strategic is mostly aggressive. That kinds of approach does not solve the unique problems of the Arctic in global governance. Although Russia and the US are still the leading players in international relations, other Arctic-rimmed and near-Arctic countries cannot be ignored. To achieve a better Arctic geopolitical development in the future, Russia and theUSneed to take the lead in developing an interconnected and mutually beneficial way. Unless, the over completion between them may lead to a new cold war .This thesis believes that Russia-US relations will make big difference of Arctic development in security system and the resources exploration.

During the Cold War, due to its geographical location, the Arctic became the front line of conflict between the two major military blocs-the United States and the Soviet Union. The Arctic region was densely populated with offensive weapons and early warning systems. Later, as the Cold War ended and various international organisations related to the Arctic emerged and developed, the confrontation between the Arctic states gradually became stable and more cooperative.

With the significant influences of climate warming on the Arctic region, which stimulate the development of resources and commercial operation of shipping routes in the

Arctic region, the competition for resources development has become a major trend. Arctic states and Arctic stakeholders compete and cooperate around geopolitical issues such as maritime sovereignty, border areas, controlling of shipping lanes, resource development, and Arctic territories. The Arctic is no longer a neglected, barren land but has become the focus of geopolitical games among the world's countries and a significant global strategic gathering area.

Therefore, the research on Arctic geopolitics is of great importance, and there are many studies in this field. Such as "Geopolitics and the Northern Sea Route" by MARGARET BLUNDEN and "Arctic geopolitics then and now" by S.CHARTURVED, they both mentioned the importance of the Arctic's development to the international relations. From current research of the Arctic geopolitics, it is not hard to see, The Arctic region has become an important object of study in today's international frame. This paper hopes to provide a possibility for the future development of the Arctic geopolitical region under Russian-US relations.

This thesis will be divided into four parts. The first chapter will analyze why the Arctic geopolitical situation has become a priority for all countries in terms of its geostrategic significance and the importance of its unique resources. The second chapter will analyze the development of Arctic geopolitics in the post-WW2, Cold War, and post-Cold War periods, respectively, from the perspective of Russian-American relations. Chapter 3 analyzes the impact of international relations, mainly Russian-US relations, on the Arctic geopolitical situation from the perspective of Arctic geopolitical development. Chapter 4 will synthesize the above analysis to answer the research question of this thesis: How will the Arctic geopolitics develop under the influence of Russian-US relations? And to give a direction for sustainable development.

Methodology

This thesis uses a documentary analysis approach. Current research findings and literature are screened and organized on the basis of US-Russian Arctic policy. The thesis will explain and analysis Arctic geopolitics from the perspective of official reports and leaders' speeches. Reasoning and deduction are also used simultaneously. By sifting, organizing, classifying and analyzing the relevant literature, the direction of the research, the

main purpose of this thesis and the overall idea of writing are clarified.

Literature Review

As the arctic region is getting more and more attention since the cold war, there has been a lot research about Arctic geopolitics. Most research are based on the international regime during the cold war back then, like *Arctic Research in the National Interest* by A. L. Washburn and Gunter Weller, the research purpose was start to *establish national policy, priorities, and goals and to provide a Federal program plan for basic and applied scientific research with respect to Arctic.* (1986)

Biological specimen banking in Arctic research: An Alaska perspective by Paul R.Becker and Barbara J.Koste et al(1993). *Preliminary Notes on the Ecology of Freshwater Algae in the Arctic Slope, Alaska, with Descriptions of Some New Species* by G. W. Prescott and *An Arctic Alaskan Kelp Bed* by John L. Mohr, Norman J. Wilimovsky and E. Yale Dawson(1953), these two research paper are both focus on the Biological Resources and Environment. As can see the environment research in Arctic has always been very important to this region s research. In these articles they all talked about the cooperations between countries in the arctic region.

From the geopolitical way, there are also a lot researches, *The Arctic: Environment, People, Policy* by Joseph S. Roucek (2000), *The geopolitics of Arctic melt* by Chaeles K. Ebinger, Evie Zambatekis(2009), *The geopolitics of Arctic melt* by CK Ebinger and E Zambetakis, *Historical atlas of the Arctic* by Hayes, Derek and Haglund, Donn K(2004). These thesis all focus on the Arctic geopolitics in international relation perspective and gave a brief conclusion of the arctic geopolitics from the International regime change by realism approach. Although no research system has yet been formed, the research perspective covers the national, regional and local levels, and most research that focused on the geo-relations of the Arctic region in recent years can be summarized as sovereignty politics and indigenous peoples, and the use of waterways and resource management.

There are also researches particular focus on the Russia or US Arctic policy, *From Russian competition to natural resources access: Recasting US Arctic policy* by Ariel Cohen(2010), *United States' Arctic Policy: The Reluctant Arctic Power* by Robert Huebert, *Russia: The Greatest Arctic Power?* by Michael L. Roi(2010), *US Arctic policymaking under*

Trump and Obama by Weingartner and Robert W. Orttung (2020), *Russian Arctic Policy* by Viatcheslav V. GAVRILOV(2019), *The Arctic policy and port development along the Northern Sea Route: Evidence from Russia's Arctic strategy* by Chuan-YingLiu(2021) These researches assessment the US and Russia's Arctic policy and They highlighted that the geopolitical environment of Arctic region is becoming more complex and potentially more dangerous than it has been in the past decade. They both mentioned that resources and sea routes are the two vital factors in the development of Arctic policy of Russia and the United States.

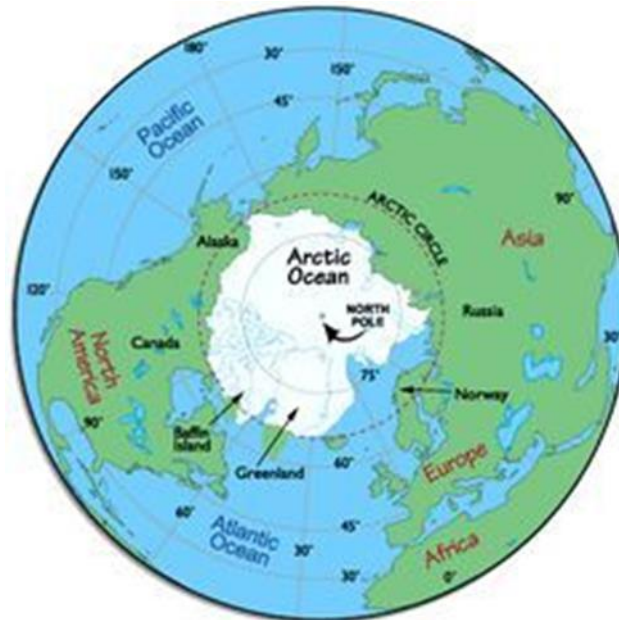
Given the tendency given by above researches for the Arctic geo-sphere to spread globally, an analysis of Arctic geopolitics needs to address not only the regional level of inter-state relations, but also the inter-regional level of the region's interaction with its neighbours, as well as the global level of the influence of great power relations on the system. A distinctive feature of Arctic geopolitics is that its external pressures are endogenous, with the influence of the regional powers, Russia and the United States, interacting outside the region being so strong that it generates spillover effects that subordinate regional international relations or security mechanisms to the structural contradictions and rivalries between Russia and the United States. Therefore, it's necessary to analysis the arctic geopolitics development from the Russia-US relations, as it is influenced the arctic region's development.

1. Arctic region's geopolitical importance ---- resources and geographical advantages

1.1 Analysis of the geographical location of the arctic

The Arctic region is dominated by the Arctic Ocean, while the surrounding land mass is the permafrost zone of Northern Europe, Asia and North America, see in Map1 For the shipment term, the Arctic is a donut at the top of the Earth, an enclosed ocean surrounded

by frosty land. The land area within the Arctic Circle is approximately 8 million square kilometers. (“Arctic”, 2021) Its land mass is divided among the eight Arctic Nations: Russia, the United States, Canada, Denmark, Norway, Iceland, Sweden and Finland. The main areas of the water are the Greenland Sea, the Norwegian Sea, the Barents Sea and the White Sea.



Map1: Facts about Arctic and the Arctic circle

Source: <https://www.worldatlas.com/webimage/countrys/polar/arctic.htm>

The Arctic Ocean is the smallest ocean in earth, with an area of approximately 14, 788, 000 square kilometers, about seven per cent of the area of the Pacific Ocean and 16 per cent of the area of the Atlantic Ocean. Despite being the smallest, shallowest and coldest ocean in the world, it is of great strategic importance. Its unique geographical characteristics make it a great asset for maritime transport. Spanning 360° longitude, the Arctic Ocean is the world’s most longitudinal ocean The Arctic Ocean route is a shortcut between the European part of Russia and the Far East countries (Japan, Korea and China). The distance between Murmansk and Vladivostok in the east is 10,400 km, which is more than 13,700 km closer than the route around the Suez Canal and more than 20,000 km shorter than the route via the Cape of Good Hope. The air route over the Arctic Ocean which made its maiden voyage in 1957. It is the shortest air route between East Asia, North America, Western Europe and Northern Europe. From Tokyo in Japan to Copenhagen, the capital of Denmark, is 2, 700

km shorter than the original voyage. However, the huge ice cap, icebergs and ice floes are not conducive to the movement of ships, but are very beneficial to the activities of submarines. For example, the obscuring of ice can make submarines free from the surveillance of aircraft and reconnaissance satellites; the drifting of ice floes hinders the tracking of listening devices; the noise generated by the squeezing between icebergs or the scouring between ice and water can interfere with the sonar devices of ships, etc. The increasing number of Soviet and American nuclear submarines cruising under the ice in the Arctic Ocean is an indication of the strategic significance of the area. In short, the strategic importance of the Arctic Ocean, which became even more prominent after the Second World War, led many countries to intensify their activities in this region, especially the US and the USSR, which both established many military bases against each other, including nuclear weapons in the coastal areas of the Arctic Ocean. (“Arctic”, 2021)

But the Arctic Ocean has Extreme cold climate and most of the ocean surface is frozen all year round. In winter, more than 80% of the sea surface is frozen over and in summer that most of the sea surface, too, is dominated by ice. The biggest disadvantage of the Arctic Ocean for shipping is therefore the short navigable period. Apart from the southern Barents Sea, which remains frozen all year round, the northern coasts of Russia, the USA and Canada are only navigable for 50% or 30% of the year. Even during the short navigable period, it is necessary to rely on icebreakers to open the way, and the capacity is limited, with ships having a tonnage of 4, 000-5, 000 tons per ship. (“Arctic”, 2021)

The Arctic land area includes the land within the Arctic Circle of Canada, the United States, Russia, Finland, Norway and Sweden, as well as much of Greenland, which is permafrost and sparsely populated, covering a total area of approximately 8 million square kilometers. The countries that have more dominate power in the competition of Arctic resources development are obviously the United States and Russia. Russia occupies the largest territory and has always strived for dominance of the Arctic region, also they arguing that Russia should be involved in all matters within the Arctic. The US, as a great power, is more interested in the development of the Arctic region as part of its global strategy, and its main objective is to prevent Russia’s monopoly or dominant role in the Arctic so as to gain a geopolitical advantage in the region.(Konyshv & Sergunin, 2018)

Despite its extreme climate and Unsuitable for habitation, the Arctic is an important

area for the development of commercial routes due to its unique geographical position. Besides, the Arctic continent is also rich in natural resources, which has led to various countries seeking a share in the development of the Arctic region. The Arctic has naturally become one of the world's most popular geopolitical hotspots.

1.2 Arctic resources assessment

The Arctic region is very rich on resources, oil, gas, mineral resources, abundant fisheries and freshwater resources. In addition to oil and gas resources, the world's largest coal mines are found in the Arctic, as well as iron, copper, lead, zinc, asbestos, tungsten, gold, diamond, phosphorus and other precious metal mines. With the development of tourism and scientific research, the Arctic also has significant exploitable hydroelectric resources. Nowadays, with the advancement of science technology and the trend of global warming, the exploitation of Arctic resources will enter a new phase.

The development of hydro energy in the Siberia region of northern Russia has gradually processed as well as the James Bay Project in northern Canada. *“Hydroelectric power is developing rapidly in response to increased availability of water; as glaciers melt more quickly and snow melts more often during winter. More than 80 GW of hydroelectric power is already generated in Arctic regions”*(“AMAP”, 2012) The Arctic has become a large scale hydroelectric power base to meet the demand for electricity from wealthy societies in the south of Canada and Russia, or to provide cheap energy for energy-consuming industries. Compared to fossil fuels, hydropower is indeed a clean and non-polluting source of energy, which is of particular significance to the fragile ecology of the Arctic. The exploitation of hydro energy resources holds good prospects for the sustainable development of the Arctic region and the protection of the global environment.

However, the most valuable resources in the Arctic are energy resources like oil and gas. And in 2008, USGS Arctic Oil and Gas Resource Assessment report shows that the total amount of oil and gas to be discovered in the Arctic is 412 billion barrels. This number means it is equal to 22% of the world's total oil and gas resources to be discovered, including 134 billion barrels of oil (including condensate) and 1,669 trillion cubic feet of natural gas. These pending oil and gas discoveries represent 15% and 30% of the world's total pending oil and gas discoveries. Also the American journal Science (2009) published a map of the

distribution of oil and gas reserves in the Arctic shows that 30% of the world’s untapped natural gas and 13% of the world’s untapped oil lie beneath the ice around the Arctic, protected by permanent ice sheets. This energy map in Science magazine has led many countries to re-assessment of the Arctic region. The report shows that most of the oil is likely to be found in shallow waters. The US Geological Survey reports (2019) that the Arctic holds reserves of crude oil that could supply the world market for decades to come. Although this is not enough to change the balance of oil extraction in the world, “it could affect the economic landscape, and in particular the way of life of people in the region”. Donald Gautier of the US Geological Survey, who led the mapping team, noted (2009) that the Arctic’s oil reserves are relatively small compared to the total amount of oil produced in other parts of the world. Nearly a third of the world's untapped gas is found in the northern Arctic Circle, mostly in four areas: the South Kara Sea, the North Barents Sea Basin, the South Barents Sea Basin and the Alaska Plateau. And from these four areas, the South Kara Sea off the Siberian coast contains 39% of the Arctic's untapped gas.

Table 1: Arctic undiscovered oil and gas

Petroleum Province	Crude Oil (billion barrels)	Natural Gas (trillion cubic feet)	Natural Gas Liquids (billion barrels)	Total (oil equivalent in billions of barrels)
West Siberian Basin	3.66	651.50	20.33	132.57
Arctic Alaska	29.96	221.40	5.90	72.77
East Barents Basin	7.41	317.56	1.42	61.76
East Greenland Rift Basin	8.90	86.18	8.12	31.39
Yenisey-Khatanga Basin	5.58	99.96	2.68	24.92

Amerasian Basin	9.72	56.89	0.54	19.75
West Greenland-East Canada	7.27	51.82	1.15	17.06

Source: <https://geology.com/articles/arctic-oil-and-gas/>

The map above clearly shows that the Arctic is undoubtedly the world's new energy treasure trove. Oil, gas, coal and hydroelectric energy will continue to be the basis of energy for the foreseeable future, until new sources of energy such as nuclear, solar and wind are large enough to support modern industry and life. The Arctic's abundant oil, gas, coal and hydroelectric energy sources are therefore vital to the world's current and future economic development and social progress. In the near future, the Arctic will become a major global energy centre.

1.3 The geopolitical development of the Arctic geostrategic importance

The Arctic, with its superior energy resources and unique geographical position is one of the most significant topics in international relations when analyzed from a geopolitical perspective. However, due to the uniqueness of its climatic environment - the extremely cold weather - it is not an easy task to detect and exploit Arctic energy resources. As a result, the Arctic was a Military strongholds form the beginning geopolitical perspective. However, with climate change, there has been a qualitative leap in the exploration in resources development. From a military stronghold under traditional geopolitical analysis to a major player in resource and commercial exploitation from a geoeconomics angle is the new trend in Arctic region.

This is, of course, also related to the theoretical development of geopolitics itself, which from the very beginning has been closely linked to power politics in international relations, as it is based on an emphasis the relationship between Geographic and the struggle for power between states. Whether it was the early arguments of the founding fathers of geopolitical theory-Friedrich Ratzel and Rudolf Kiellen or the later famous American geopolitician

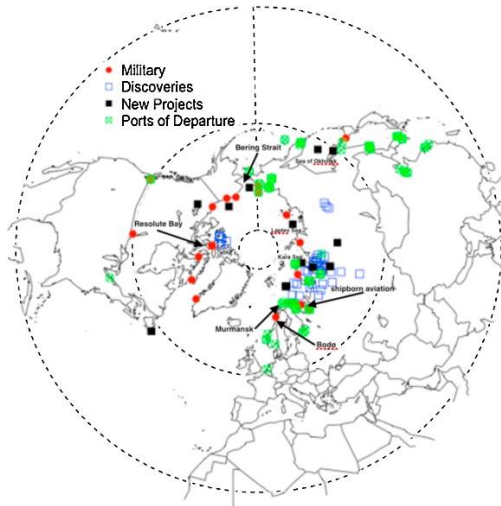
Alfred Thayer Mahan's 'theory of sea power' (1914) which emphasized the decisive influence of sea power on international politics, or the British geopolitician Halford John Mackinder's "land power theory", which considered the heartland of Eurasia to be the most important strategic area in international politics, After Ratzel, Karl Haushofer's enhanced version of the "state organism theory" in the service of Nazi Germany's aggressive expansion. "The 'national organism theory' and the 'living space theory', as well as "the rimland theory" by Nicholas John Spykman in the United States after the WW 2. Most of geopolitical theory above are focused and emphasized the significant role of the expansion of state power in geopolitics.

Almost all schools of geopolitics have had some influence in Arctic affairs. However, the most directly influenced the Arctic geopolitical school of thought was undoubtedly Alexander De Seversky's 'air power theory'. After the end of World War II, Seversky, a pioneer and inventor of aviation, published his famous geopolitical 'air power theory' (AirPower: KeytoSurvival). He mapped the azimuthal equidistance projection of the world with the North Pole as the central point and pointed out that the shortest spatial distance between Eurasia and North America was through the skies over the Arctic Ocean. Thus, any great power that gains complete air control in the decisive region of the Arctic could gain the control of the Eurasian and North American continents, and even further the global military superiority, and thus the world domination. It was under the influence of this geopolitical theory of "air power" that, during the post-World War II and the Cold War period, the US and Russia (Soviet Union) turned the Arctic region into the forefront of their struggle for world hegemony, making it a battleground for an arms race. Throughout the Cold War, the Arctic was the site of intense rivalry between the two superpowers. As a result, geopolitical doctrines and power politics dominating the Arctic affairs. With the termination of the Cold War, the power struggle between the United States and the Soviet Union in the Arctic became a 'thing of the past', but the influence of geopolitical theory and power politics in the arctic region did not end its influences there. With the deepening of globalization in the post-Cold War era and the impact of climate change, the Arctic region is undergoing profound changes and has led to increasingly strong economic and geopolitical ties to other regions. In the context of these transformations, the Arctic States, and in particular the US and Russia, under the influence of geopolitical doctrines and power politics, have once again intensified their competition for the region by means of delimiting islands, declaring

sovereignty and strengthening their military presence in arctic region.

After all, the post-Cold War international environment is very different from that of the Cold War. The influence of geopolitical doctrine and power politics in Arctic affairs has declined considerably since the End of the Cold War, as evidenced by the following reasons: i) the decline of the Arctic sectoral theory, which was closely linked to geopolitics and power politics. The increasing authority of the United Nations Convention on the Law of the Sea in dealing with Arctic affairs; ii) the widespread repudiation of the show of power in the Arctic region, with not only Russia's flagging actions being criticized by many, but also certain unilateral actions by Canada. iii) non-traditional security issues in the Arctic region have come to the fore, and traditional power politics based on geopolitical theories are no longer effective in addressing issues such as climate change, the Arctic environment, ecological balance, species conservation, etc.; iv) With the end of the Cold War, small and medium-sized states in the Arctic - Norway, Denmark, Iceland, Sweden and Finland - have become more influential in Arctic affairs, they are preferring to resolve disputes through peaceful cooperation. A new type of approach to Arctic affairs - regional governance through international mechanisms is becoming increasingly important and influential. (Lassi Heininen, 2011)

Elina Brutschin and Samuel R. Schubert in their research paper (Icy waters, hot tempers, and high stakes) pointed out that Geopolitics and Geo-economics of the Arctic, they make a good argument for this (E. Brutschin, S.R. Schubert, 2016) "*We propose that states will apply geo-economic modus operandi in times of tight global markets, while geopolitical logic will prevail in times of global power competition. Economic interest in the Arctic is driven by the prospects of energy markets, and more specifically by the prices of oil. We intend to view geopolitical logic through military presence and territorial claims, and to systematically trace geo-economic logic by looking at the attempts to control resources as well as shipping routes.*" As they analyzed, with the changing exploitation of Arctic resources and the demise of bipolar confrontation under international regimes, the centre of Arctic geopolitics is gradually shifting from a traditional geopolitical perspective to a geo-economic one, and such a shift is better adapted to the current issues and challenges arising in Arctic development.



Map2: Arctic geoeconomic space as of August 2015

2. Russia and the United States in the Arctic geopolitical game

2.1 Before the cold war

A large part of Russia's territory lies in the north of the Arctic Circle and the Arctic is a natural defense barrier and resource reserve for Russia. As early as 1525, the Tsarist Russian diplomat Medgrasimov proposed the creation of a "North-East Passage" from Russia to China. And from Peter the Great to Ekaterina II, Russia continued to explore the Arctic region. In 1728-1741, the Tsarist naval explorer Vitus Jonassen Bering crossed the Arctic Circle and opened up the Arctic route from Russian Siberia to Alaska in North America, after which Russia began mapping the Arctic route. ("Arctic policy of Russia", 2021) As a country straddling the Eurasian continent, Russia has always attached great importance to trade links with Asia. To this end, from the second half of the 19th century, Russia gradually pushed its trade network towards East Asia from both land and sea. On the one hand, Russia is actively promoting the construction of the Siberian Railway to make Vladivostok a transit hub for land and sea transport with China and other East Asian countries to promote the connection with the railway network in northeast China; On the other hand, since 1877

Russia has been exploring a maritime trade route between Russia and China based on the Arctic shipping lanes. Despite the constraints of poor navigation technology, lack of supply ports and weak ice-breaking capabilities, Russia has never given up exploring and building the Arctic shipping lanes. To this day, Russia remains a major power in Arctic research and has substantially developed the Northeast Arctic Seaway. (Mulherin D N, 1996)

In 1867, the United States acquired the state of Alaska from Russia, thus gaining the status of an Arctic state. At that time, Russia and Canada are truly Arctic powers in terms of territory and population, and have a very active attitude towards Arctic affairs. In contrast, the US has been seen as a 'reluctant participant' (Rob Hurbert, 2009) or a 'weak' (Guo Peiqing, 2014) party in the Arctic. In the US global strategy, (Lassi Heininen et al, 2020)the Arctic region is hardly on a par with the Asia-Pacific, Middle East, Europe or even Africa.

During WWII, Britain and the US opened an Arctic route in September 1941 for the delivery of strategic supplies to the Soviet Union, starting in Iceland and ending at the Soviet ports of Murmansk and Arkhangelsk in the north. In May 1945, the Allies sent thirty-seven convoys and 37 individually sailing ships to the Soviet Union, a total of 743 transports, only 85 of which were lost. The strategic supplies provided by the Allies were of great use to the Soviet Union and boosted morale and public confidence.

From the WW2, It can be seen that the natural geographical features of the Arctic provided a natural barrier to submarine warfare and was the ideal underwater ballistic missile launch site. As a result, the US and Soviet Union have established a strong network of highly sensitive radars and an early warning interception system consisting of interceptor missiles, fighter groups and reconnaissance satellites along the Arctic Ocean to closely monitor each other's movements.

2.2 The Cold War Period

During the Cold War, the international situation in the Arctic was heavily influenced by the all-out conflict between the US and the Soviet Union. The Arctic became one of the strategic frontiers of global confrontation between the US and the Soviet Union. Each side adopted an Arctic strategy that emphasised confrontation. Although no "hot war" broke out between the two sides in the Arctic during this period. While in the late period of Cold War, a détente emerged between the two players in the region, the overall tone of the international

situation in the region remained dominated by conflict and confrontation, with a "nuclear peace" between the US and the Soviet Union maintaining "peace" in the Arctic. (Nowak Magdalena, 2014) In the context of the 'nuclear pacification', the geostrategic position of the Arctic has increased even more than during the previous World War II era.

In the pre-Cold War period, both the United States and the Soviet Union inherited their respective World War II gains in the Arctic. The United States deepened its military relations with other countries through various bilateral defense agreements and strengthened its presence in the Arctic. The Soviet Union maintained its hold on part of the former Finnish territory and accelerated the development of the Northern Fleet, based primarily in Murmansk. Both sides have made significant efforts to develop long-range strategic bombers capable of carrying nuclear weapons to enemy countries, and have established a number of air bases along the Arctic Ocean for strategic bombers to land and take off, as well as establishing a number of early warning lines. ("cold war", 2021

)

In the mid-Cold War (1960s to early 1980s) period, There had a new escalation in nuclear military between the US and the Soviet Union. Long-range ballistic missiles on both sides went through a process from fixed land-based launches to more flexible deep-well, naval, airborne, submarine and space-based launches. When land-based launches dominated, numerous land-based missile sites were deployed near the Arctic, making it the most densely populated area of strategic nuclear weapons in the world. Subsequently, both sides sought to diversify their launch systems and expand to multi-dimensional launch vectors on land, sea, air and space to increase launch flexibility in the quest for a secondary nuclear counter-attack capability. As many important naval and air bases on both sides are located near the Arctic, and as strategic missiles follow to some extent the flight patterns of the Earth's great circle, and more importantly, the Arctic Ocean ice cap provides good concealment and attack sites for nuclear ballistic missile submarines and nuclear attack submarines, both sides conduct submarine combat duty cruises in the Arctic Ocean. This all greatly enhances the geostrategic position of the Arctic region. (Nowak Magdalena, 2014)

During the latter stage of the Cold War, especially after the rise of Mikhail Gorbachev, the ice of confrontation in the Arctic was broken with the overall easing of US-Soviet relations. Although Gorbachev shrank all Soviet strategic nuclear submarines to the Arctic

Ocean, his Murmansk speech in 1987 also marked the arrival of a new Arctic cooperation opportunity. (Nowak Magdalena, 2014) Prior to this, Arctic cooperation was limited to non-traditional security areas, such as international rescue and scientific research, and there was little official and bilateral cooperation between the United States and the Soviet Union. After the Murmansk speech, the Soviet Union became more open to the Arctic. The conditions were created for the arrival of substantial multivariate and multidisciplinary cooperation in the Arctic, which further strengthened the economic and strategic position of the region.

2.3 Post-cold war period

Since the end of the Cold War, the international situation in the Arctic has generally eased. The cooperative effect of Gorbachev's Murmansk speech was put into practice after the collapse of the Soviet Union, and intra- and extra-regional cooperation around the region has been strengthened. The general tone of the international situation in the region is one of cooperation and confrontation, with cooperation prevailing to some extent, but with some problems.

(i) There are many possibilities for potential conflict. As more extra-territorial entities have become involved in the Arctic, the Arctic issue has shown stronger traction. The geopolitical landscape centered on the Arctic has changed significantly from a bipolar confrontation in the Cold War to a multi-level verticality in the post-Cold War era, with Canada and Europe playing an increased role in the Arctic, extra-territorial countries and international organizations becoming constructors of the new Arctic geopolitical landscape. This has exacerbated the complexity of the contradictions in the Arctic geopolitical landscape, bringing more attention to the geostrategic value of the Arctic and raising its geostrategic status from multiple perspectives.

(ii) The focus of Arctic issues has gradually shifted from military security to non-traditional security issues centered in the environment. After the Cold War, various environmental protection mechanisms and organizations were created and the Arctic region was included in a number of global environmental protection treaties. Arctic governments have also gradually increased their efforts to protect and manage the environment in their own Arctic regions.

(iii) The Arctic geopolitical pattern has become more complex after the cold war. The

Arctic geopolitical pattern can be divided into four levels: international, regional, national and local. The international context involves Arctic states, non-Arctic states and relevant international organizations. There is a strong 'regionalism' among the Arctic states which seeks to establish exclusive Arctic governance models that they dominate. However, the resource potential of the Arctic has attracted more and more extraterritorial entities to the Arctic, whose benefits are inevitably in conflict with the Arctic states. Meanwhile, although there is a common interest among extraterritorial entities to engage in the Arctic, the differences in the cost-income ratio and exposure to environmental changes in the Arctic, make it difficult to harmonize their positions. Regionally, the conflicts between the coastal and non-coastal states of the Arctic Ocean are evident, and are further complicated by the fact that the eight Arctic states form a quadrilateral pattern of Russia, the United States, Canada and Europe, with disputes between the eight states bilaterally, and that many of them are members of several international organizations (NATO, EU, etc.). At the national and local level, the 'Arctic Wave' of recent years has prompted many Arctic states to upgrade the development of their own Arctic regions to a national strategy, tightening the relationship between Arctic regions and the southern core. Moreover, the Arctic's indigenous populations have become a 'fourth world' voice in the Arctic geopolitical structure, adding to more complexity to the Arctic geopolitical ecology. .

After the Dissolution of the Soviet Union. Russia is no longer a Great power as America. The thawing of the Arctic has provided a unique opportunity for a struggling Russia, a recovering power in the midst of a slow recovery period, complicated by geopolitical and socio-economic factors and a difficult economic situation at home. In the west, the double expansion of NATO and the EU to the east has left Russia with only its 'blood brother' Belarus as its strategic space, while the crisis in Ukraine, which emerged in 2014, has been a constant source of tension. Russia has been facing Western sanctions due to its national culture and geopolitical considerations. This is compounded by the difficulties of economic reform in Russia and the Unreasonable structure of the economy. At the beginning of his fourth term as president, Vladimir Putin made a loud slogan that Russia would be among the top 5 countries in the world with regard to economic output. As the below table shows that the current economic situation in Russia is not optimistic, with Russia's GDP ranking 11th in the world in 2017, not even as high as South Korea's. ("Russian financial crisis" 2021)

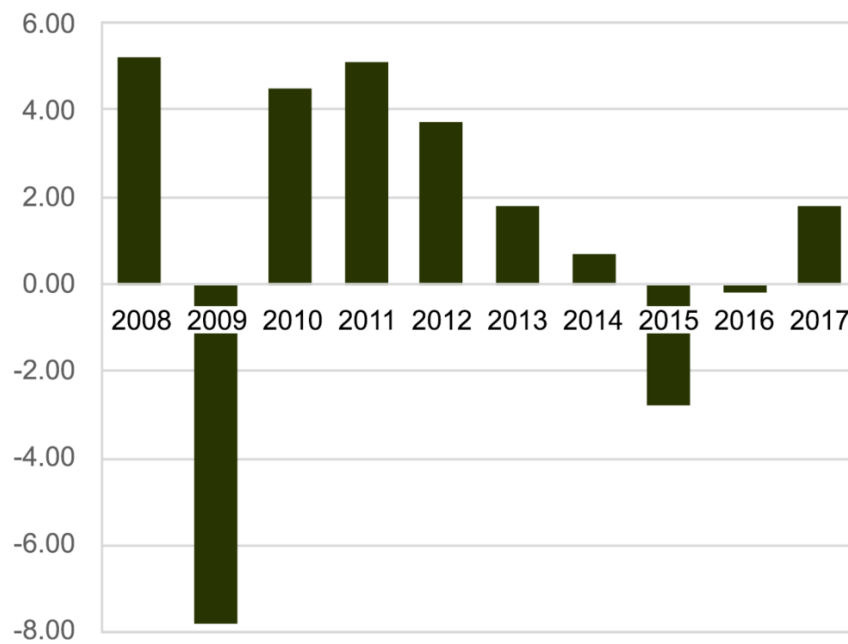


Table2: Annual percentage GDP growth rate of Russia, 2008–2017

On the other hand, Russia is under strong geo-strategic pressure from the West, with the Ukraine festering, the chaotic Islamic world to the south, the war in Syria still going on, while in the Far East Japan and the US are besieging the Russian’s east part. Japan and Russia are also at loggerheads over the Kuril Islands. During the Cold War period, Russia (the former Soviet Union) explored the Arctic region but more for military purposes and could not be called a full-scale development and use of the Arctic, due to the conditions at the time. This has been followed up and modified in a variety of ways, with Russia demonstrating the combat readiness of its Arctic forces, the launch of its new nuclear-powered icebreakers and the active engagement of other countries in international cooperation to minimize the influence of the West, particularly the US. These displays of equipment and the expansion of Russia’s comprehensive Arctic capabilities are the result of years of Russian management. Russia’s Arctic strategy is highly forward-looking and proactive, and its Arctic policy may subsequently shift to the level of international cooperation and development and governance, all of which are influenced by Russian geo-cultural and geopolitical considerations.

In the case of the Arctic, for Russia, which relies on the cold Arctic Ocean sea route, has had a challenging time and has always pursued an outlet strategy, its Arctic strategy should take a proactive and strategic approach, the essence of Russia’s Arctic strategy is to pursue a fundamentally geopolitical grand strategy. (“Arctic Policy of Russia”, 2021)If

Russia controls the Arctic region, it can greatly ease the pressure brought by the loss of its traditional sphere of influence in Europe. And at the same time Russia can use its long coastline to control the Arctic Ocean to dominate a new corridor for the world's economic development. And to intimidate Europe and America from both the east and the west directions, thus reversing Russia's disadvantaged position in the geopolitical competition with the West. The North is the hope for Russia's survival and recovery.

The US geostrategic culture is different from that of Russia which has not developed from a brutal geopolitical struggle. The United States is a nation of immigrants, founded only a few hundred years ago, but today it is the world's only superpower. Looking back at the history of the United States its unique geopolitical position played an important role, as the American scholar Kissinger said in his book "The Great Diplomacy" (1994), "The United States is located in a continental vacuum, bordered by weak countries, and isolated from the tiger powers by two great oceans "It is thanks to its extremely superior geolocal factors that the United States has developed a unique geo-strategic culture. (Moran K, & Farrell, J. 2011) Americans inherently possess a sense of superiority, and Americans see themselves as fundamentally different from those countries on the Old World. With the US becoming the world's sole superpower, the US has accentuated the existence of an order in geopolitics around the world, i.e. the US tries to dominate the geopolitical competition in different regions of the world, and thus build a regional and world order that is conducive to US national interests and global supremacy.(Jan Nijman, 2009) This is particularly true in the Arctic region, where successive Russian rulers since Tsar Alexander II would have bemoaned his foolish decision to sell Alaska to the United States for a paltry US\$7.42 million.("Alaska Purchase", n d) This decision also made the United States one of the eight Arctic States and gave it the basis for its future involvement in the Arctic, as a hegemonic in Arctic for it's exercising in global hegemony. To compensate for the lack of sufficient attention in the Arctic region earlier, and to abstract Russia to take the lead in the Arctic region, the US has incorporated its Arctic policy into its global strategy, citation from Rob Huebert that *In January 2009 the US released its new Arctic policy. Arctic Region Policy signals that the US is beginning to understand that the Arctic is changing in a manner that concerns its vital national interests. Thus their new policy also emphasizes the priority the US places on security by maintaining a strong military presence in the Arctic. All of these actions are already having an impact on their Arctic neighbors including Canada. This will*

continue to be the case as American activity increase in the region. (2009) And later in 2013, the US Obama administration launched the National Security Strategy for the Arctic Region, formally integrating its Arctic policy into US global warfare.

For Russia, the north is precisely where Russia's national renaissance lies, and the gradually freezing Arctic Ocean is finally providing a direction for Russia's "dream of access to the sea". For the United States, the unique geographical position of two oceans separated by a continent allows Americans to live in a sense of superiority of geopolitical status. The hegemony of the United States, which has emerged as a superpower in two world wars, is the fundamental starting point of its international policy, which is expressed in its Arctic policy in terms of maintaining a rational "order" in the Arctic, competing geopolitically with Russia, and safeguarding American interests in the Arctic region in particular.

3. The Arctic geopolitical changes under the Russia-American relation

3.1 The international system and regional security of the Arctic

During the cold war, the Arctic region became the front line of military confrontation between these two great power. And since the end of the Cold War, relations between the major powers have eased and intergovernmental regional cooperation mechanisms have been formed and developed in the Arctic, which has eased the security situation in the Arctic to some extent. However, with the current trends of globalisation and climate change, Arctic states are increasingly strengthening their military in the Arctic. (Alec Luhn, 2020) This military capacity building, originally intended to defend sovereignty and sovereign rights, safeguard strategic transport routes, respond to contingencies and ensure the safety of citizens, is often seen by other states as a threat to initiate arms competition, leading to security dilemmas. (Huebert R, 2019) As a result, the security situation in the Arctic has undergone an evolutionary process of "militarisation-demilitarisation-re-militarisation".

Arctic security mechanisms have long been missing due to the structural conflicts between Russia and the United States in the field of strategic Arctic security, but the construction of security mechanisms has been a major attention for Arctic states and some extraterritorial Arctic stakeholders. At the Arctic level, deepening institutional cooperation in the field of non-traditional and civil security forms the foundation stone of trust in Arctic security building and a corresponding consensus in the security discourse of Arctic states that maintaining Arctic security and cooperation will bring more rewards. It is also worth considering the legitimacy, capacity and willingness of multilateral regional security structures (e.g. NATO, OSCE, etc.) that could (partially) cover the Arctic in terms of geographical scope to intervene in Arctic security matters. Also the Arctic regional governance mechanism, represented by the Arctic Council, has been gradually formed and developed. The disputes over territorial sovereignty and maritime delimitation have been largely resolved through negotiations and consultations among Arctic states. However, to date, the Arctic region still lacks an effective multilateral security mechanism capable of covering the entire region. The underlying reason for this is that the political legacy of the two opposing camps and ideological differences that have developed since the Cold War have not been completely eliminated in the Arctic.

Even after the cold war period. Russia and the United States, as the dominant forces in Arctic affairs, have both global and regional identities, and inevitably replace their Arctic regional identities with global ones when dealing with Arctic issues, which makes the Russian-US Arctic relationship permeate the global strategic relationship. Both countries have tried to avoid security issues in the creation of the Arctic regional mechanism. For Russia, the Arctic in the context of global warming will become a strategic base for its defence and security and resources; Russia seeks to develop and consolidate its Arctic geopolitical advantage, avoiding as much as possible the constraints of any security mechanism. The Arctic is also an issue of deterrence and freedom of navigation for the United States. From the outset, the United States has insisted on keeping security issues off the agenda of the Arctic Council and has been cautious about expanding the Council's agenda. The agenda for Arctic regional cooperation has not been security-oriented from the outset, and security interests as the core interests of Arctic states are often difficult to coordinate or compromise under the 'consensus' (Declaration on the Establishment of the Arctic Council, 1996) decision-making mechanism used in existing Arctic regional governance mechanisms.

As a result, regional cooperation on security-related issues has not been able to be mobilized, nor have the parties found an alternative path to avoid a repeat of the Cold War in Arctic region. In conclusion, The US and Russia's Arctic policy based on their relations make it is very hard to establish a complete and stable security mechanism in Arctic region

However, the development of security mechanisms in the Arctic includes indigenous peoples as permanent participants. As extraterritorial countries, international intergovernmental organizations and NGOs act as observers (e.g. Germany, Poland, the UK and China), these actors are more interested in the Arctic issues of cooperation in functional areas such as climate change, environmental protection, economics potential and scientific research. The inclusion of military security issues in the Arctic Council's agenda or the establishment of an Arctic Security Council-like arrangement would undoubtedly weaken regional cooperation under the existing framework. Further, the establishment of an Arctic Security Council-like mechanism could lead to a breakdown in communication and consultation mechanisms, as happened in the NATO-Russia Council after the Ukraine crisis. This also suggests that in the event of a security incident the Arctic Security Council would be a more effective mechanism than the NATO-Russia Council. This also suggests that in the event of a security conflict, security mechanisms designed to deal with traditional security matters are often not as effective as they should be, and that it is the low political level of cooperation that retains the last channel of communication and dialogue for the parties to the conflict. Nevertheless, existing mechanisms are attempting to explore and promote the establishment of security confidence measures such as coordinated search and rescue, exchange of fleet visits and joint exercises, starting with cooperation at lower military levels and in normative security areas. It will coordinate air and sea emergency search and rescue operations conducted in the Arctic Ocean waters. (Timothy William James Smith, 2019)

A subordinate military level of cooperation of a similar nature is the establishment of the Arctic Coast Guard Forum. This is a non-treaty based framework, starting with cross-regional jurisdiction and coordination to improve the safety of navigation in the Arctic Ocean and to encourage information sharing and joint exercises between its members. In essence, the Forum remains operationally oriented, and although it does not address overlapping continental shelf claims or maritime delimitation disputes in the Arctic, it does create a platform for parties to discuss Arctic security issues at an operational level.

The current stage of the Arctic regional security regime is in transition from the conflict format of the Cold War to the current institutional security cooperation in a limited number of areas. Despite the lack of effective regional arms control arrangements and security confidence measures in the Arctic. A series of agreements and arrangements have enabled the formation and development of Arctic governance and a corresponding consensus in the Arctic security discourse that maintaining Arctic security and cooperation will bring greater rewards, making it possible to shift Arctic geopolitical relations towards 'stability' at the traditional security level. In the absence of an overarching Arctic security regime, Arctic geopolitical relations maybe can still move towards 'stability'.

In the absence of an overall Arctic security regime and the conflict between Russia-US, the future development trend and main path for the construction of an Arctic security mechanism is to strengthen confidence-building measures for security in the Arctic region by opening up, developing and deepening institutional cooperation at lower military levels and in non-traditional security areas with the cooperative framework of the Arctic Council. Specifically, through the Arctic states' agreements on cooperation in civil security, such as cooperation on searching and rescuing by coast guards, oil spill disposal and Crisis resilience capacity building. A system of institutional integration in this area will be established, leading to a discourse and consensus that will promote security and stability in the Arctic.

From the agreements already reached on search and rescue and coast guard cooperation, Arctic cooperation may later expand and cover all aspects of civil security, including strengthening border control in Arctic countries, preventing smuggling, human trafficking, transnational crime and terrorist activities, strengthening civil nuclear safety and radiation prevention in the Arctic, and enhancing response capabilities to coastal erosion and sudden disasters caused by extreme weather. However, it may be difficult to achieve military transparency, arms control and nuclear disarmament in a short period of time. (Huebert R, 2019)

3.2 Conflicts and cooperation with the Participation of other players

For the environmental problem in Arctic region, the cooperation from US, Russia with other Arctic states are processing well since the cold war. The whole tendency of the

environmental cooperation in Arctic is basically active.

In September 1989, at the initiative of the Finnish government, representatives of eight Arctic countries (USA, USSR, Canada, Norway, Sweden, Denmark, Finland and Iceland) participated in the first "Arctic Environmental Protection Council" to discuss the protection of the Arctic environment through international cooperation. ("Arctic Environmental Protection Strategy", 2021)

In June 1991, in Rovaniemi, Finland, these eight countries signed the Declaration on the Protection of the Arctic Environment, with the Finnish government playing an active mediating role. ("Arctic Environmental Protection Strategy", 2021) The signing of the Rovaniemi Declaration marked the beginning of a series of actions to protect the Arctic environment: the Arctic Environmental Protection Strategy. The strategy states that Arctic environmental issues require extensive cooperation and recommends that member states share data on all types of pollution in the Arctic, control the flow of pollutants and work together to take further measures to reduce the adverse effects of environmental pollution in the Arctic. The Declaration recommends that regular meetings be held to assess the progress of the plan and to exchange information. The work function of the Arctic Environmental Protection Strategy is achieved through the establishment of four working groups: the Arctic Monitoring and Assessment Working Group (AMAP), the Protection of the Arctic Marine Environment Working Group (PAME), the Conservation of Arctic Flora and Fauna Working Group (CAFF) and the Emergency Prevention, Preparedness and Response Working Group (EPPR). 14, Declaration on the Protection of the Arctic Environment) on 16 September 1996, eight Arctic States met in Ottawa, Canada, to announce the establishment of the Arctic Council. ("Arctic Environmental Protection Strategy", 2021)

In addition to the Arctic States, the Arctic Council has permanent observers, including international organisations, non-governmental organisations and six non-Arctic States; on 15 May 2013, China, India, Italy, Japan, South Korea and Singapore also became observers to the Council. ("Arctic Council", 2021) In other words, the Arctic cooperation is not only a matter for the Arctic States, but also for the Arctic Council and the various international cooperation mechanisms that are increasingly being developed. Of course Russia and the United States still have a large share of voice and involvement in Arctic affairs, but moreover, Russian-American relations and policies in the Arctic are being influenced by other players

as well.

Also based on each benefits from different position, there definitely will be conflicts between participants in the Arctic region.

Countries around the Arctic Ocean are currently considering how to extend the continental shelf of the Arctic Ocean beyond 200 nautical miles. Russia, Norway, the United States, Canada, Denmark and other Arctic countries are arguing over how to divide the Arctic based on the continental shelf at the bottom of the Arctic Ocean. Russia claims that the Lomonosov Ridge at the bottom of the Arctic Ocean is part of its continental shelf. In response, Canada and Denmark argue that the Lomonosov Ridge is a natural extension of their respective territories. Russia submitted its claim to the UN in 2001, but the document was quickly returned and the UN asked for further evidence, which the Russians stonewalled. This is a key piece of evidence for the Russian claim to a larger exclusive economic zone in the Arctic Ocean.

Meanwhile, the United States and Russia disagree on the boundary of the exclusive economic zone in the Bering Sea. Russia and Canada are at odds over sovereignty over the part of the Arctic Ocean that runs from the coast to the Arctic. Canada and Denmark have disagreements over the boundary between Greenland and northeastern Canada, and they also disagree over Hans Island in the Arctic Ocean. The United States and Canada have significant differences over the delineation of the Beaufort Sea. The United States does not believe that the extension of the territorial boundary between Alaska and Canada's Yukon Territory into the Arctic Ocean constitutes a direct territorial sea boundary between the two countries to the Arctic. (“Territory Claims in Arctic”, 2021)

The Arctic states are increasing their military presence in the Arctic to assert their sovereignty in the region. In June 2010, Russian Prime Minister Vladimir Putin said that Russia would increase its military presence in the Arctic to protect its interests. (Alexandre piffero spohr et al, 2013) In July of the same year, Russian Defence Minister Anatoly Serdyukov announced that Russia would form two special brigades to be stationed in the northern regions of Murmansk and Arkhangelsk to protect Russian interests in the Arctic. (Alexandre piffero spohr et al, 2013) In March 2011, the Russian military announced that Russia would form a special mobile infantry brigade of up to 8,000 troops to protect its oil and gas resources in the Arctic, which would be stationed at the northernmost tip of Russia's

Kola Peninsula, near the borders of Norway and Finland, in He claimed that these troops will be stationed in Pechanga. In October 2010, Russian Navy Commander-in-Chief Vysosky said that the Russian Northern Fleet and Pacific Fleet, based in the Arctic, would gradually add new ships to their combat capabilities, in accordance with the Basic Principles of Russian Maritime Policy signed by Dmitry Medvedev. (Alexandre piffero spohr et al, 2013) Russia still has 10 nuclear strategic missile submarines, including six Delta IVs and four Delta IIIs. In June 2010, the fourth-generation cruise missile-equipped multipurpose nuclear submarine, the North Dvinsk, was launched, and the latest generation of the Type 955 “The Yuriy Dolgoruky, the first boat of the North Wind God class, is undergoing sea trials. The Russian Navy has submitted a package of proposals to the Russian Prime Minister for the security of the Northern Sea Route, including measures for the temporary stationing of naval vessels in ports along the route, Vysosky said. In addition, with the improvement of the reconnaissance system, the coastal surveillance system and the development of the naval and air force stationing system in the Arctic, the Russian army will provide escort services for some of the routes. (Alexandre piffero spohr et al, 2013)

The US has increased its military presence in the Arctic, with military exercises in the Arctic in 2007 and the USS Helena and USS Annapolis attack nuclear submarines participating in military exercises in the Arctic in 2009. ("Exercise Ice 2019", 2021) The US has also sent submarines to the Arctic seabed to gather intelligence and explore potential Arctic shipping lanes. In October 2007, the US Navy, Coast Guard and Marine Corps jointly released the 21st Century Maritime Power Cooperation Strategy. (Ronald O'Rourke et al., 2021) This maritime strategy identifies the preservation of freedom of navigation rights in the Arctic as a top priority, and the preservation of freedom of navigation and flight rights in the Arctic is consistent with similar powers exercised by the US Navy in other parts of the world, including straits of strategic importance The report notes that.

In January 2009, US President George W. Bush signed National Security Presidential Directive 66/Homeland Security Presidential Directive 25 (NSPD-66/HSPD-25). (“Arctic policy of the United States”, 2021) The Directive clarifies that national security and interests requiring that policy regarding the Arctic region be prioritized, and that the United States is an Arctic zone state with extensive and unquestionable interests in the Arctic. The Directive recognizes that while the Arctic is rich in resources, it is also highly vulnerable. The Departments of State, Homeland Security, and Defense should jointly study and develop U.S.

policy in the Arctic and put in place more detailed measures and capabilities to protect U.S. interests in the Arctic borderlands: enhance situational awareness in Arctic waters; ensure that U.S. military forces have access to Arctic air and sea to exercise their global mobility; highlight the U.S. presence in sovereign Arctic waters and encourage all parties to The U.S. Navy's interest in the Arctic is to enhance situational awareness in the Arctic; ensure that U.S. military forces can use the Arctic air and sea to exercise global mobility; highlight the U.S. presence in the Arctic's sovereign waters and encourage the peaceful resolution of disputes; work with other Arctic nations to address issues arising from the high volume of ship traffic; establish a crisis response mechanism that includes joint search and rescue, joint camps and logistical support to respond to unexpected and dangerous situations in the region; and assess the feasibility of using the Arctic Summer Passage as a strategic shipping route. Many of these initiatives mean that the US Navy must be prepared for further involvement in the Arctic in the future.

Among the Arctic States, Canada was the first to formally claim sovereignty over the Arctic. (“Arctic policy of Canada”, 2021) Since 1925, the Canadian government has claimed to define Canadian territory by the fan principle - extending the easternmost and westernmost boundaries of the country to the North Pole, with the waters, islands, etc. covered by the resulting fan being Canadian territory. In 2009, the Government of Canada developed the Northern Strategy, which focuses on strengthening sovereignty over its Arctic region, promoting economic and social development, protecting the environment and strengthening local government administration. In August 2010, Canadian Foreign Minister Cannon issued an Arctic Foreign Policy Statement, emphasizing Canada's sovereignty over its Arctic region, continuing to advance the Northern Strategy and increasing its investment in these areas. Cannon said that Canada is a major Arctic power and plays an important role in the world's Arctic affairs. Canada is willing to engage with the United States and Denmark to resolve the remaining border disputes and to work with all Arctic Council members to explore sustainable development of the Arctic region. In recent years, Canada's Arctic policy has been characterized by a combination of economic and military building, domestic and foreign affairs, and a comprehensive and solid push northward. Canada has taken a series of measures to safeguard its Arctic sovereignty and strengthen northern construction, including: spending heavily on airport upgrades in Churchill, Manitoba; establishing a world-class high-latitude Arctic research station in Cambridge Bay, Nunavut; and establishing a whale

sanctuary in Tuktoyatuk, Northwest Territories.(Petra Dolata-Kreutzkampfi, 2009)

The dispute between Canada and Denmark over Hans Island is long overdue. Hans Island, located in the Niles Strait between Canada and Greenland, is only 1.3 square kilometers in size and only 1, 000 kilometers from the North Pole, and has been the subject of a dispute between Canada and Denmark for over 20 years. Since 1984, Denmark has visited the island five times to plant flags to assert its sovereignty. In 2003, Denmark planted its flag on the small Arctic island of Hans, which quickly led to a deterioration in relations between the two countries. 2005 saw Canada plant the Canadian flag on Hans. On 29 November 2012, Canada and Denmark signed a new demarcation agreement to replace the one signed by Canada and Denmark in 1973. While the new agreement more precisely defines the boundary between the two countries in the Arctic Ocean, it does not resolve the territorial issue of the disputed Hans Island. The negotiations on this issue will continue. (Petra Dolata-Kreutzkampfi, 2009)

In its draft defense bill for 2010-2014, the Danish Parliament plans to strengthen the military presence in Danish Greenland, including the formation of an Arctic force and the establishment of an Arctic regional military command. The Danish move will further strengthen the Cold War-era US military bases, radar stations and early warning systems in Greenland. Not to be outdone, Norway has also held military exercises and set the scene for an intensified war over Arctic territory and resources.(Alexandre piffero spohr, 2019)

In an attempt to resolve disputes over maritime delimitation, island ownership and jurisdiction over shipping lanes, states are playing each other over the Arctic, while trying to compromise with each other, and the trend towards external protectionism is on the rise. In May 2008, the five Arctic coastal states - the United States, Russia, Canada, Denmark and Norway-held a ministerial meeting in Greenland. The declaration adopted at the meeting clearly proposed to rely on existing international law, mainly the law of the sea, to resolve disputes over the Arctic, agreed to start negotiations on the division of the Arctic on the basis of existing international conventions, agreed to provide evidence through scientific research to determine the sovereignty of the Arctic, and decided not to adopt any new document similar to the Antarctic Treaty for this purpose. (“Territorial claims in the Arctic”,2021)

The current conflicts arising from the Arctic States’ emphasis on their claims to territorial sovereignty over the Arctic mainly revolve around issues of maritime delimitation,

island ownership and jurisdiction over shipping lanes, but are essentially related to the vast mineral and hydrocarbon resources that lie beneath the Arctic Ocean floor. The Arctic continental shelf is a potential treasure trove for the next decade, so there is a very attractive prospect of developing the Arctic continental shelf. 2009, the US Geological Survey in its first Arctic resource assessment report stated that there are at least 90 billion barrels of oil reserves under the Arctic seabed, which represents about 13% of the world's unproven oil resources. Some experts believe that the Arctic may contain 1/5 of the world's hydrocarbon resources. Russia claims that the area of the Arctic owned by Russia could hold twice as much oil as Saudi Arabia's proven reserves. (Dmitri trenin & Pavel k. baev, 2010)

As a non-Arctic country that claims to be a 'near-Arctic country' ('China's Arctic Policy', 2021), China has a great interest in the Arctic region, where changes in atmospheric circulation have a significant impact on the climate, ecosystems and socio-economic activities of East Asian countries (Ye Yanhua, 2018), and as a result, China's involvement in the Arctic has gradually intensified and deepened; since the 2018 since the intensification of the US-China trade dispute in 2018, the Trump administration has been working not only in the Arctic, driven by the notions of 'America First' and 'Make America Great Again'. The Trump administration has not only tried to create trade friction with China at the bilateral level, but has also tried to encircle China on several fronts ("US Arctic Policy" , 2021), with the competition now extending to the Arctic. The article by David Auerswald, a professor of security studies at the National War College, largely reflects the US government's position on China's Arctic involvement, arguing that China's actions in the Arctic put US security and economic interests at risk and that the US sees China "weakening" the Arctic governance order. The US sees China as 'weakening' the Arctic governance order and investing in Iceland and Greenland to 'control' the Arctic shipping lanes and even to 'divide' the NATO alliance. (2019)

In May this year, Russia will take over the rotating chairmanship of the Arctic Council for the period 2021 to 2023. In particular, Russian experts note that this represents a new opportunity for China and will promote deeper practical cooperation between Russia and China in the Arctic. (Nurlan Aliyev, 2021) And the US Army recently released a new Arctic strategy entitled "Taking Back Arctic Dominance". The US Army is considering establishing an operational training center in Alaska as part of its new Arctic strategy to "reclaim Arctic dominance" and control Arctic interests, according to James Mc Conville, Chief of the US

Army. Following the announcement of a new Arctic strategy by the US Air Force last year, the US Army chose to announce its plans for development in the Arctic in recent days. It is no coincidence that the Army and Air Force have announced their new Arctic strategies one after the other; behind it is a game of wrestling between the US military and China, a strategic rival in the Arctic. (“Arctic Policy of US”, 2021)

This shows that the great power rivalry has expanded into the Arctic. As non-Arctic states become more involved, the United States and Russia will intensify their military activities and energy development in the Arctic. On the other hand, a multi-polar system of balances will help to prevent a repolarization of Arctic affairs and allow for better attention and development under an increasingly sophisticated monitoring system. Also Promoting the Arctic environment cooperation in the worldwide rage.

3.3 The Arctic Rim Super Complex

The increasing trend towards the securitization of the Arctic region (Ronald O’Rourke et al, 2021), in the political, economic, military and environmental spheres, has profoundly affected the Arctic and near-Arctic states in the circumpolar region and is gradually spilling over to the globe. Arctic security has been incorporated into the national security system by some countries and is an important element of their national security strategy. Along with the return of the US and NATO to the Arctic, the US-Russian global game has been projected onto the Arctic region, and “Arctic-exceptionalism” has been challenged, with US-Russian-European security interactions in the Arctic becoming more frequent and showing a strong trend towards regionalization.

The regional security complex is an important theory of the Copenhagen School of regional security studies, which focuses on security issues that are inseparable from actors in the process of securitization or de-securitization. (“Regional security complex theory”, 2021)The regional security complex is based on a “security cluster” consisting of different actors, different levels and different areas of security interaction. In contrast to traditional area studies, regional security complex theory defines ‘security’ as the particular politics above all politics, and ‘securitization’ as the process of constructing general politics as a security issue. “It defines the ‘state’ as a ‘territorial-political-social’ combination, Describes the “security cluster” as a complete model consisting of four interacting levels: national,

regional, interregional and global . The four core structural variables of “anarchic structures”, “borders”, “polarity” and “social constructs” are proposed. According to the differences in the kernel structure variables, various types of regional security complexes, such as structureless, covered, standard, centralized, great power and super complexes, are classified, and three prospects for the development of regional security complexes are proposed: maintaining the status quo, internal change and external change.

The “Arctic Rim Super Complex” is a supra-regional (inter-regional) super-complex based on political, economic, military and environmental security in the Arctic region, consisting of the North American, Russia and other Arctic Participants Rim security complexes and their “inner ring” of the Arctic region. A cross-cutting “security cluster” at the inter-regional level. Concerns about the Russian military threat, the development and improvement of Arctic cooperation mechanisms and the recognition of security and environmental dependence have provided the impetus for the regionalization of the “Arctic Rim Super Complex”. The US, Russia and the other Arctic states are the three “polar” characters within the super-complex. The global rivalry between the US and Russia spills over into their “social constructs” in the Arctic, which has a significant impact on the security dynamics of the super-complex at the domestic and regional, supra-regional and global levels. “In the near term, the return of the US and NATO will further intensify the security interactions between the US, Russia, Other Participants within the super-complex, further contributing to the formation of the super-complex. In the medium term, as the US upgrades the Arctic to a key area of its national security strategy and completes the corresponding Arctic military deployment, a US-style “unipolar” structure may emerge within the super-complex instead of a US-Russia- Other Participants “multipolar” structure, And the capacity and intensity of interaction with the security complex in the surrounding area will continue to grow. The capacity and intensity of interaction with the neighbouring security complex will continue to increase. In the long term, as Arctic security interactions become more frequent, the existing Arctic governance and cooperation mechanisms will gradually develop into the basis for regional security mechanisms, and the “Arctic Rim Super Complex” will enter a phase of mutually coordinated security mechanisms.

4. Future Arctic geopolitics development under the Russia-US relation

4.1 Arctic energy development

The Arctic energy issue has led to a debate about whether the Arctic is an area of competition and conflict between Arctic states for energy or an area of cooperation based on common interests, which has also been described as a “resource nationalism versus cooperation model”. (Pavel Devyatkin, 2018) Ensuring energy security, both in terms of the security of energy sources and the stability of energy corridors and markets

It is clear that of the two countries, Russia and the United States, it is Russia that has the greater advantage in the development of energy in the Arctic. Although the US is also actively involved in Arctic energy development, the main area of US energy development is not in the Arctic. As well as the fact that energy development in the Arctic is largely influenced by climate extremes, combined with our discussion in Chapter 1, Subsection 2. The conclusion that can be drawn is that in matters of energy development in the Arctic, Russia is prefer the cooperation in the resources development than US. As to see the Russia-Norway Joint Development Case

In terms of actual development progress, after the signing of the Russian-Norwegian Maritime Agreement, Russia and Norway had carried out some cooperation projects and their bilateral relations did not show a major rift, but the EU imposed economic sanctions on Russia due to the “Ukraine crisis”, and Norway, as a member state of the EU, had to implement the sanctions, so the cooperation between the two sides was less effective. In 2012-2016, Norway conducted the 22nd and 23rd rounds of domestic tenders for the exploitation of oil and gas resources. 269 production licenses were issued to 196 companies (including duplicate bids) in five years (A Radin, 2019) and 126 development blocks were designated in the Barents Sea. Not be enough to make the Barents Sea a major energy supply

base for Norway. Due to the abundance of hydrocarbon resources in Russia itself and the high cost of developing the Barents Sea's hydrocarbon resources, the Russian side has now suspended the Barents Sea's exploitation licences, a practice that will continue until 2020 (A Sergunin, V Konyshev, 2017)

As the joint development cases mentioned above cover a very limited area of sea compared to the vast Arctic waters. However, the existing joint development cases have developed some common features that are likely to be taken into account in future joint development cases in the Arctic.

The choice of a joint venture model by the Arctic nations is the result of a combination of factors such as the bilateral relations of the participating countries, their respective energy development capabilities and the ease of harmonizing the domestic laws of the participating countries. The supranational model has limited scope for application, as even if the bilateral relations between the participating countries are good, it would be difficult to fully harmonize the conflicting domestic legislation of the two parties or to create a new legal regime in the CDA that would allow the relevant authorities of the participating countries to transfer their powers to a supranational body. This is not a highly profitable solution for the Arctic nations, which have a strong domestic energy management system and legal regime, and for the Arctic region, which is dominated by transboundary resource development, and therefore the 'joint venture model' is more in line with the interests of the Arctic nations.

In the Arctic co-development cases mentioned above, the government's rights are primarily to authorize development licenses. As the joint development process of the Arctic nations are all based on a 'joint venture model', the government retains the power to grant licenses. However, the exercise of this power is subject to certain restrictions, such as the need to communicate with the other government in advance and the inability to revoke or change existing licenses without the consent of the other government. At the same time, both governments have the right to monitor the development of transboundary oil and gas resources and to appoint members of advisory bodies, arbitral tribunals or mediation committees. The governments' obligations are mainly related to information exchange and disclosure, including the exchange of information during the field characterization stage (i.e. determining whether a field is a transboundary oil and gas resource and the full exchange of views during the dispute resolution process.

In terms of the rights and obligations of the companies, their legitimate exploration and development rights are protected by the Joint Development Agreement and their licences cannot be revoked by the governments of either party without cause; the obligations of the companies are manifold, and in addition to complying with the domestic laws of both countries and even the relevant EU laws, they have to cooperate with the inspection and supervision of both governments. In addition, under the latest of the three joint development agreements, the companies are required to enter into a “joint exploitation agreement” and appoint a “joint operator” for the development of the specific oil and gas field. This commercial operation model is being used in the development of the Frigidaire field and has so far been shown to be both government-friendly and in line with business practices.

The Arctic nations’ joint development cases all provide for dispute resolution mechanisms, and there are also significant similarities in these dispute resolution mechanisms. The first step in dispute resolution for the participating states is to attempt to reach a solution through bilateral consultations or advisory bodies, and if the parties fail to agree on a solution, a compulsory dispute resolution process will be initiated, i.e. an ‘independent expert opinion’ to resolve disputes over the proportion of resource ownership between the parties, and a ‘compulsory arbitration or mediation’ to resolve other disputes between the parties. “Compulsory arbitration or mediation” to resolve other disputes between the parties.

“The US Department of Energy has announced the reestablishment of its Arctic Energy Office, headquartered at the University of Alaska Fairbanks. The Arctic Energy Office (AEO) serves as the principal advisor to the Under Secretary on all domestic Arctic issues, including energy, science, and national security and leads the Department’s domestic energy Administration priorities as well as cross-cutting opportunities and priorities on the Arctic region, strategic analysis, assessment of equities and energy resources in Alaska, cutting edge initiatives, and innovative activities including microgrids and integrated energy systems.

The Office will have three primary areas of focus: Energy, Science, and National Security. While it will not provide funding opportunity announcements, it will coordinate and streamline existing research, development and deployment activities in the Arctic. This includes work by the Office of Science to measure solar radiation, work by Fossil Energy on

modular gasification applications in challenging environments, work by the Office of Electricity on deployment of microgrid technologies in Alaska, and work by Energy Efficiency and Renewable Energy on next generation river power systems. The Office will build on this work to define a focused research agenda based on these activities.”(George Roe et al, 2021)

To see the threat by Russia develop its resources in Arctic, US also don't wanna be one step behind. As the establishment of AEO, US also may seek more cooperation with Canada or Europe in Resources area. But will US, America make a great cooperation in Arctic ? It is not hard to forecast that the possibility is quite low. Although they may have a great work with other players, but in the relationship between each other, it's more competition than cooperation.

4.2 New arctic route

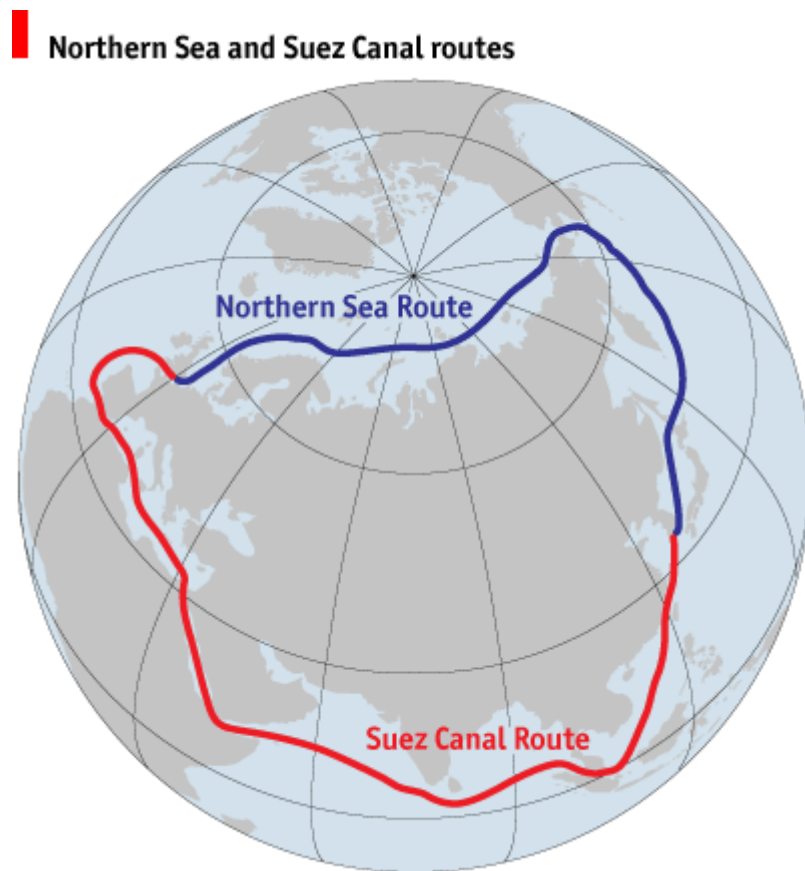
The Arctic shipping lane, once known as the “fabled shipping lane”, which is covered in thick ice for most of the year, has been thawed by the Arctic glaciers due to global warming. Two German cargo ships have managed to cross the waters through Russian Siberia and the adjacent Arctic Ocean for the first time, as the new commercial route, which greatly shortens the voyage between Europe and Asia, is expected to bring enormous commercial benefits. The Arctic Sea Route is now made up of two shipping lanes, the Northwest Passage off the coast of Canada and the Northeast Passage off the coast of Siberia. It starts in Western Europe in the west, crosses the waters adjacent to Siberia and the Arctic Ocean, and bypasses the Bering Strait to reach ports in China, Japan and Korea.(“Northwest Passage”, 2021)

The Northwest Passage and Northeast Passage in the Arctic Ocean are potentially the shortest routes links to Asia, Europe and the United States. The Arctic route has a major advantage over other routes in terms of range etc. Typically, there are three main routes from Europe to the Pacific Ocean, via the Suez Canal, the Panama Canal and the Cape of Good Hope in Africa. Overall, the Arctic route from North East Asia to Europe or the East Coast of North America is more than 40% shorter than the Suez or Panama Canal. For example, the maritime distance between Hamburg, Germany and Yokohama, Japan is only 6, 900 miles, compared to 11, 430 miles via the Suez Canal. Although the Arctic route has problems

with sea ice, it still results in shorter voyages, lower costs and a corresponding reduction in energy consumption in shipping. (“Northwest Passage”, 2021)

In recent years, traditional routes such as the Suez and Panama Canals have become congested and are subject to security risks such as terrorist attacks and piracy, whereas the Arctic route is not. Also like 2021 Suez Canal obstruction. This made Russia want to make NSR to be an alternative for the Suez Canal. As we can see from the map 3, NSR surely has advantages in the shipping distance. But Can NSR be the alternative of Suez?

However, the harsh climatic conditions along the NSR, its remoteness and the environmental sensitivities surrounding the Arctic will hinder the expanded use of the route. In addition, thinner sea ice poses its own problems and has the potential to make passage of ships more problematic. Therefore Searching and rescuing infrastructure must be put in place to deal with accidents, including oil spills, in these cold and unstable waters. (The Economist, 2014)



Map3: Northern Sea and Suez Canal routes

Source: <http://www.eiu.com/industry/article/591780243/the-northern-sea-route-rivalling-suez/2014-05-02>

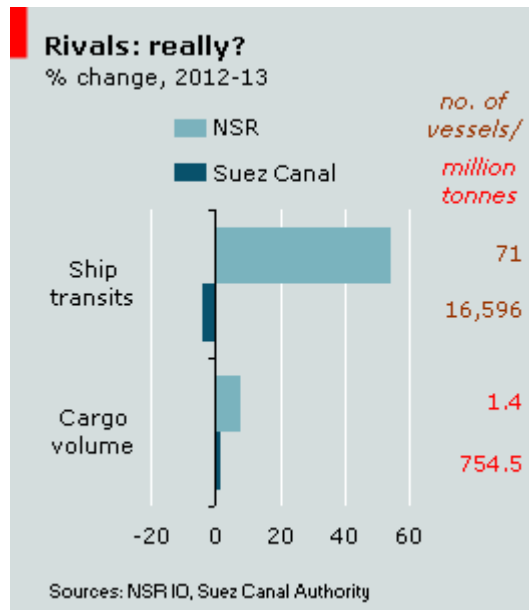


Table 3: Northern Sea and Suez Canal routes Compare and contrast

Source: <http://www.eiu.com/industry/article/591780243/the-northern-sea-route-rivalling-suez/2014-05-02>

While the NSR’s role in energy transport between Europe and Asia will certainly grow, it will do so at a slower and smaller rate than its promoters claim. But still Russia has now made the Arctic shipping lane an important transportation route for Arctic energy. After developing and operating it has become a top priority for the Russian government under Putin. Specifically, the development of the Arctic shipping lanes can be divided into an agenda of operation and management, as well as the building of a shipping force. 2014, after Western sanctions against Russia, Russia began to seek cooperation with Northeast Asian countries, and in 2017 the leaders of China and Russia proposed to build a Silk Road on Ice, combining the development of the Arctic shipping lanes with the Belt and Road Initiative.(Blanchard & Colin Flint, 2017) In May 2018, Vladimir Putin signed a presidential decree on “Tasks and goals for the strategic development of the Russian Federation up to 2024”, stating that the cargo capacity of the Northern Sea Route should be increased to 80 million tons by 2024 and that Russia’s seaports, including those in the Far East, Northwest

and Northwest regions, should be improved.(Janis Kluge and Michael Paul, 2020) In October 2019, the head of the Russian Hydrometeorological Service, Igor Shumakov, stated that Russia would increase the capacity of the Arctic shipping lanes by 2020. In October 2019, Igor Shumakov, head of the Russian Hydrometeorological Service, said that Russia would install dozens of automatic weather stations in the Northern Sea Route by 2020 to improve the safety of navigation in the Arctic Sea Route.(Pavel Devyatkin, 2019) Meanwhile, in order to reduce the transportation costs of the Northern Sea Route and increase its competitiveness with the Suez Canal, the Russian Ministry of Far Eastern and Arctic Development is studying the establishment of a state-owned container ship transport company, which would assume any risks that may arise from the use of the Arctic Sea Route to transport cargo.(Yereth Rosen, 2016)The promotion of the Arctic Sea Route has been a key factor in the development of the Arctic Sea Route. (Yereth Rosen, 2016) The building of an Arctic shipping force, with icebreakers at its core, is another key agenda in the process of developing the Arctic shipping lanes. *The Russian Transport Strategy for Russia to 2030*, published in 2008, states that Russia aims to develop the Arctic shipping lanes by commissioning nuclear icebreakers, improving ports along the Arctic shipping lanes and establishing ship monitoring systems.(Власти ДФО пропонує США, 2019)Russia has the world's largest fleet of icebreakers, with 44 icebreakers in service and five nuclear-powered icebreakers, and Putin has stated that by 2035 Russia will have nine icebreakers.

4.3 The new arctic international regime

Currently, the return of the United States to the Arctic has pushed the Arctic into the traditional geopolitical game, but it is widely believed that a large-scale conflict in the Arctic is unlikely to erupt. Arctic states have shown a preference for a stable political environment, and a political order centred on Arctic states is supported by the UN Law of the Sea and Arctic Council mechanisms. (Andreas Østhagen, 2019) The existing multilateral and bilateral mechanisms of cooperation and governance in the Arctic are driving the Arctic rim super complex towards a phase of security mechanisms.

In terms of the near-term outlook, although the US is gradually attaching importance to the Arctic region and is constantly raising its status in US national security and military strategy, the US and NATO have also not yet completed their military deployment in the Arctic, and for the time being the Arctic is not comparable to the core US strategic regions

such as the Middle East and the Asia-Pacific. As a result, The Arctic Rim Super Complex is still in its formative stages and will not undergo dramatic changes. The return of the US and NATO will lead to a further securitization of the political, military and environmental spheres in the Arctic, and the competing 'social constructs' of the US and Russia will intensify and provide a strong regionalization impetus for the formation of the Arctic Rim Super Complex.

In the political sphere, while the agenda for securitisation of the Arctic in the political sphere revolves around recognition of 'sovereignty' and 'jurisdiction' over the Arctic shipping lanes and 'sovereignty' over the outer continental shelf, the political sphere has been progressively de-securitised institutionally under the coordination of the United Nations. The political sphere is becoming mechanically de-securitised under the coordination of the United Nations Convention on the Law of the Sea and the Commission on the Limits of the Continental Shelf.

However, with the gradual return of the US, First, the scope of the Arctic region was delineated, and for the first time the line at 66.56083 degrees north latitude was adopted as the "geographic criterion" for the Arctic region, and the possession of territory and exclusive economic zones north of the line was adopted as the "eligibility criterion" for Arctic states, making it clear that the United States only recognizes the eight Arctic states as "Arctic states". The U.S. policy position of only recognising the eight Arctic Council states as "Arctic states" and rejecting the status claims of other states is clear. ("Arctic Policy of US", 2021)

Second, it defines the scope of Arctic security, making clear that US Arctic security policy covers both traditional and non-traditional security aspects. On the one hand, it elevates the "militarisation of the Arctic" as a new challenge to US national security, arguing that the intensification of Arctic military activities by relevant states seriously endangers Arctic peace and stability and threatens the interests of US allies and partners. On the other hand, it confronts the contradiction between the increase in Arctic shipping and the lack of maritime patrol and search and rescue capabilities in coastal states. It highlights the protection of Arctic ecosystems and the possibility of discovering new highly sensitive species.

Third, an Arctic security authority was identified, with the Bureau of European and Eurasian Affairs of the U.S. Department of State serving as the lead agency for the development and implementation of Arctic security policy, coordinating the Bureau of

Maritime, International Environmental and Scientific Affairs, the Bureau of Political-Military Affairs, embassies and other relevant departments to promote U.S. national security interests in the Arctic. At the same time, a new Deputy Assistant Secretary of State for Arctic Affairs has been created under the Bureau of Maritime, International Environmental and Scientific Affairs to specifically develop and coordinate Arctic foreign policy, develop international cooperation in the Arctic, and provide data and information on Arctic commercial shipping, environmental science, and climate change.

it is clear from the legislative level of Congress that there are security risks in the Arctic, and that the “militarisation of the Arctic” and “strategic competition between major powers” are the main sources of risk, in essence confirming the basic judgement of the US’s several Arctic strategy documents on the geopolitical situation in the region and consolidating The bill is a confirmation of the US’s’s fundamental judgement of the geopolitical situation in the region, and a consolidation of the basic direction of US Arctic policy from “cooperation and protection” to “great power competition”. The bill reflects a high level of bipartisan consensus in the US Congress on the Arctic issue and basically sets the tone of the Biden administration’s Arctic policy, indicating that the US Arctic policy has moved from the “outline” to the “detail” stage, from specifying China as a “competitor” to identifying China as a “competitor”. This indicates that US Arctic policy has moved from the “outline” to the “detail” stage, from identifying China as a “competitor” to determining how to compete with China. At the same time, it will also have a profound impact on the security policies and positions of US allies and partners in the Arctic region, such as Canada, Denmark, Iceland, Sweden, Norway and Finland, towards China, with spillover effects on the overall situation in the region.

the domestic legislation unilaterally “circles” the Arctic region and the scope of Arctic states, establishes a “US-led, eight-nation governance system”, emphasises the main position of Arctic states in maintaining regional security and stability, and encourages bilateral and multilateral cooperation in the region. In particular, the bill proposes for the first time to develop multilateral governance mechanisms for the management of Arctic shipping lanes and the transit of Arctic waters by non-Arctic states, discusses the resumption of the “Arctic Chiefs of Defence Staff Meeting” and promotes the construction of an Arctic security cooperation mechanism, marking a major step forward in the construction of a regional security governance mechanism by the US. On the other hand, it reflects the U.S. intention

to engage in “closed-door governance” in the Arctic, prohibiting extra-territorial countries from demanding a “voice” and “vote” on Arctic security issues, directly targeting China. This is a direct response to China’s claim to be a “near-Arctic state” and prevents China from exerting influence on the construction and operation of the Arctic security governance system.

the foreign ministry is explicitly responsible for security policy, and a two-tier mechanism has been established whereby the Assistant Secretary of State takes the lead in formulating Arctic security policy and the Deputy Assistant Secretary of State is specifically responsible for the diplomatic voice. On the one hand, this reflects the Biden administration’s policy idea of “returning foreign affairs to the professionals”, corrects the Trump-era policy tendency of emphasising the military over diplomacy, puts an end to the diplomatic chaos of the president’s tweets seeking to buy Greenland and the secretary of state’s indiscriminate accusations, and promotes the return of US Arctic affairs from “disorder” to “order”. “It is a return to “order”. On the other hand, it shows that the focus of future US administration in the Arctic is still to make up for the shortcomings of diplomatic presence and engagement, focusing on security cooperation with European Arctic states such as Norway, Denmark and Iceland, and using US foreign aid funds as leverage.

The US approach has challenged the “Arctic exceptionalism” and the traditional geopolitical game may return to the Arctic with the return of the US. It is clear that the strategic rivalry between US and Russia has been fully projected by the US onto the Arctic, and that the geopolitical game between the US and Russia in the Arctic could become an important agenda in the securitization of the Arctic political sphere.

In the military sphere, NATO and Russia are expected to increase their military frictions. In the United States, the United States and NATO continue to increase military investment in the Arctic region, the U.S. Second Fleet has been restored, icebreakers are also under construction, other NATO countries also continue to strengthen the Arctic military deployment, and Russia’s Arctic military activities tit-for-tat. The current security dynamics in the Arctic are highly susceptible to the spillover effects of global and regional security, and the competitive dynamics between the two sides in Eastern Europe, the Black Sea and the Middle East have inevitably affected the ‘social construction’ of the Arctic. The Norwegian Sea and the Barents Sea are likely to become the frontiers of military games

between the US and Russia in the Arctic, and frequent military interactions are likely to increase the risk of military friction. The military tug-of-war between the US and Russia will continue under the ice of the Arctic, and the “chasing” and “hunting” of strategic and attack nuclear submarines on both sides will increase the risk of military conflict.

The competition for international airspace in the Arctic will become a new area of military friction between the US and Russia. After the withdrawal of the US from the INF Treaty, the US and Russian medium-range missiles have invariably increased the tension in the Arctic region, and the deployment of missile defense systems and increased intensity and frequency of combat patrols in international airspace in the Arctic will become the norm for both countries. In the environmental field, the US shirking its governance responsibilities may trigger new security issues. The Trump administration believes that the Arctic problems are not caused by environmental changes and does not acknowledge the environmental problems that exist in the Arctic, nor does it fulfil its responsibility for environmental governance. The US is a superpower and the current provider of global “public goods”. (Marina v. N. Whitman, 2017) The United States initiated and established the Arctic Council and other Arctic environmental governance mechanisms, and has an absolute voice in Arctic affairs, In this context, the US’ decision to withdraw could lead to a “broken window” effect due to the distribution of governance responsibilities, which could result in a “tragedy of the commons” for Arctic governance. But with Biden in office, U.S. Arctic policy on climate change is likely to follow Obama's lead, similar to the progressive former president's focus on climate change. (Henry Lee, 2020)

In the near future, with the return of the US and NATO, it is highly likely to intensify the dynamics of securitization in the Arctic political, military and environmental spheres, and US-Russian security interactions will become more intense, providing a stronger impetus for regionalization of the circumpolar super-complex on a supra-regional level.

In the long term, the US will no longer consider the Arctic as a national security issue, but will give it the connotation of global governance, and the circumpolar Arctic super-complex will open the stage of security mechanism and, on the basis of the existing Arctic governance mechanism, form an Arctic security governance mechanism led by Arctic states with the participation of extra-territorial states. As the other players are being more and more ambitious in the arctic region. At that time, the circumpolar Arctic super-complex will be

able to truly move from the stage of chaos and disorder to the stage of transition to a security mechanism. However, this security mechanism may be different from the collective security mechanism like NATO, but a mutually coordinated security mechanism, i.e. building a security cooperation platform to communicate and coordinate on security issues. A number of international organisations for Arctic governance and cooperation have now been formed in the Arctic, led by the Arctic Council, which form the foundation of the Arctic super-complex security mechanism.

Security mechanisms to achieve de-securitization in the political sphere. Within the political sphere, the main reliance on the UN Convention on the Law of the Sea and its Commission on the Limits of the Continental Shelf (CLCS) has been used to achieve the de-securitization of the political sphere, such as territorial disputes and sovereignty claims. Since the entry into force of UNCLOS in 1994, Arctic states such as Russia, Norway, Canada and Denmark have abandoned their previous principles of claiming sovereignty over the Arctic and have instead based their sovereignty claims over the Arctic on UNCLOS, “in accordance with” the law of the sea, bringing what was once a political dispute between states and a diplomatic “war of words” to the fore. This has transformed what was once a political and diplomatic “war of words” between states into a scientific investigation of the Arctic Ocean continental shelf to avoid further escalation of diplomatic or military incidents between Arctic states due to “overlapping” sovereignty claims. Although the United Nations does not currently have a document or law specifically addressing Arctic delimitation, the applicability of UNCLOS in the Arctic is recognized by both Arctic and non-Arctic states. The United States is the only Arctic state that has not signed UNCLOS, and therefore the United States does not follow the same principles as the other Arctic states in dealing with Arctic territory. Some officials and scholars in the United States are calling for the Government to sign UNCLOS in order to promote the legitimacy of the United States’ territorial and sovereignty claims in the Arctic. Even if the US does not sign, the UNCLOS and the Commission on the Limits of the Continental Shelf have become the only mechanisms currently in place to resolve the issue of overlapping sovereignty claims of Arctic states in the Arctic Ocean, and will be an important mechanism in the future to achieve the resolution of territorial disputes by Arctic states and avoid the securitization of political issues.

Conclusion

After the Cold War confrontation, the Arctic became the frontier of strategic confrontation between the US-led NATO countries and the Soviet Union, with the ice of the Arctic Ocean providing a natural place for concealment and attack. Both the US and the Soviet Union have been developing strategic nuclear strike capabilities such as long-range strategic bombing and ballistic missiles that place each other within the range of nuclear weapons deterrence and attack, and the nuclear deterrence they exert on each other maintains the balance of military power in the Arctic. The number of land-based missile ranges deployed in the Arctic made it the most densely deployed area of strategic nuclear weapons in the world at the time. (Robert Cowley, 2006) In this context, the military deployments of the two countries were more of a strategic deterrent to each other's southern core, and the Arctic, as a defence depth or strategic buffer zone, had the potential to become a frontier of conflict.

The Russian-American Arctic relationship from 1867 to the end of the Cold War was a projection of the regularity of Russian-American global relations in the Arctic. The two countries, which were rapidly expanding in terms of land and sea power respectively, went through a rotation of cooperation-confrontation-cooperation-confrontation, and the Russian-US Arctic relationship as a regional dimension reflected the global dimension of the two countries' relations.

The relationship between Russia and the United States in the Arctic, as a regional dimension, reflects the global dimension of cooperation or conflict between the two countries. In the late Cold War, the Soviet Union was in decline and struggled to maintain its high military expenditures. The Soviet Union realised that to end the confrontation with the US and improve the economic development of the North, it had to first give signals of détente. In 1987, Mikhail Gorbachev, the former General Secretary of the Communist Party of the Soviet Union (CPC), gave the Murmansk Speech, a six-point initiative to build peaceful cooperation in the Arctic, aimed at transforming the Arctic, which had been highly militarised since the Cold War, into a low-dispute peace zone. The first is the establishment of a nuclear-free zone in northern Europe, with the Soviet Union unilaterally partially dismantling its nuclear armaments at military bases in the Kola Peninsula, Leningrad and the Baltic Sea; the second is a consensus between NATO and the Warsaw Pact to limit

military activities in the Arctic Ocean and its offshore waters (including the Baltic Sea, the North Sea, the Norwegian Sea and the Greenland Sea) and to establish the second consensus between NATO and the Warsaw Pact to limit military activities in the Arctic Ocean and its adjacent seas (including the Baltic, North, Norwegian and Greenland Seas) and to establish mutual confidence measures. Other initiatives include: cooperation in Arctic resource development, cooperation in scientific research, joint regional environmental protection initiatives and the opening of the Northern Sea Route to international shipping. The initiative covers strategic security, sustainable development, environmental protection, scientific research and other areas of cooperation, and basically sets the main direction for future Arctic cooperation. In response, the United States initiated scientific research cooperation and local exchanges with the Soviet Union (Russia). The negotiations on the delimitation of maritime boundaries in the Chukchi and Bering Seas gave a concrete impetus to a new era of cooperation between the Soviet Union (Russia) and the United States in Arctic relations. The two governments signed a delimitation agreement in Washington on 1 June 1990. (M.Gorbachev, The Speech in Murmansk at the Ceremonial Meeting on the Occasion of the Presentation of the Order of Lenin and the Gold Star Medal to the City of Murmansk, October 1, 1987)

The agreement was approved by the US Congress in September 1991, but has not yet been ratified by the Supreme Soviet or the Russian State Duma. The agreement was subsequently ratified by the US Congress in September 1991, but has still not been ratified by the Supreme Soviet of the former Soviet Union or the Russian State Duma. However, Russia's main legislation on navigation in Hokkaido, in particular the Amendments to the Rules of Navigation for Merchant Vessels in Hokkaido Waters approved by the Russian State Duma in 2012 and the Rules of Navigation in Hokkaido Waters, which came into force in 2013 . Explicitly refers to the "maritime border with the United States from the east" when defining the eastern part of Hokkaido. This wording could be interpreted as an implicit acceptance by Russia of the existing submission. (Novosti Press Agency, pp.23 -31)

In the post-Cold War period, the détente in relations between Russia and the US was projected onto the Arctic.

This is manifested in the phase of cooperation between Russia and the USA in Arctic relations. This is due to a dramatic change in the relative power and international status of

the United States and Russia, as the United States became the only superpower in the post-Cold War period. On the other hand, with the deepening of Arctic governance and regional cooperation, the Arctic relationship is no longer a completely passive projection of the relationship between the two powers at the global level; creating a peaceful, stable and cooperative Arctic environment is a win-win situation for both sides, and the return of strategic competition in the Arctic Ocean is a gradual and substantial consensus, which no country will allow. For Russia in particular, the denuclearisation and demilitarisation of the Arctic, as set out in the Murmansk Initiative, reflects Russia's concerns about US strategic deterrence in the direction of the Arctic Ocean, thus opening up regional cooperation in the Arctic, reducing the intention and need for strategic deployment by its adversaries and helping to remove strategic pressure in the direction of the Arctic Ocean. The change in the contrast in national power is also reflected in the Russian-US Arctic relationship, where the US is more important to Russia than Russia is to the US, especially in areas involving substantial economic cooperation in resource development, technology, financing and markets. This difference will have a continued influence on the development of Russian-American Arctic relations for a long time.

There are two main areas of Arctic development analyzed here. The exploitation of resources and the establishment of security institutions. Firstly, it can be assumed that in the establishment of a security regime in the Arctic, despite the contradictions and conflicts between Russia and the US on traditional geopolitical issues, there is a wide range of common interests in promoting the process of de-securing the Arctic environment, and the chances of military risks to each other are relatively small, but the possibility of an escalation of military risks in the Arctic cannot be ruled out. A continued military escalation between Russia and the US in the Arctic would be very detrimental to the exploitation and protection of natural resources in the Arctic and to the establishment of a stable security regime in the Arctic. In May 2021, Russia will become President of the Arctic Council, and if Russia can take advantage of this opportunity to work with the US in the next few years to establish an Arctic security regime and review China's Arctic Belt and Road policy, then the Arctic will tend to develop in a stable and harmonious way, with trade and energy development at the centre. A stable and harmonious "circumpolar super-complex" centred on trade and energy development. Other players such as China, the EU and Canada would be better placed to play a role in security institutional oversight and cooperation and development of technology.

Summary

Despite its extreme and uninhabitable climate, the Arctic is an important area for the development of commercial routes due to its unique geographical location. The Arctic continent is also rich in natural resources, which has led various countries to seek a share in the development of the Arctic region. The Arctic has naturally become one of the world's most popular geopolitical hotspots. The Arctic has undoubtedly become the world's new energy treasure trove. Oil, gas, coal and hydro energy will remain the energy base for the foreseeable future, until new sources of energy such as nuclear, solar and wind power become large enough to support modern industry and life. The Arctic's rich oil, gas, coal and hydro energy resources are therefore of great importance to the world's current and future economic development and social progress. The Arctic will become a major global energy centre. In times of global market tensions, nations will pursue a geopolitical approach, and in times of global power competition, geopolitical logic will prevail. We intend to follow this geo-economic logic systematically, observing it through the military presences and territorial claims, as well as attempts to control resources and shipping routes. I expect that in the post-Cold War era, geopolitical instruments will prevail, particularly at a time when the price of oil is rising and geopolitical instruments will be used to advance economic gains.

Historically, after the Second World War, the Arctic gradually became a secondary front in the military confrontation between the Soviet Union and the United States. The natural geographical features of the Arctic provided a natural barrier to submarine warfare and was an ideal launch site for underwater ballistic missiles. As a result, the US and Soviet Union established a strong network of highly sensitive radars and an early warning interception system consisting of interceptor missiles, fighter groups and reconnaissance satellites along the Arctic Ocean to closely monitor each other's movements. Within the Cold War, the international scenario in the Arctic was significantly affected by the all-out confrontation between the United States and the Soviet Union. Caught between the two blocs, the Arctic became the strategic frontline of a global confrontation between the United States and the Soviet Union, with each side's centre of power within striking distance of the other's strategic weapons and each side having a confrontation-focused Arctic strategy. Although no 'hot war' broke out between the two sides in the Arctic during this period, and relations between the two sides in the region eased in the latter stages of the Cold War, The international situation

in the Arctic has generally been dominated by conflict and opposition, with 'peace' being maintained by a 'nuclear peace' between the United States and the Soviet Union. After the end of the Cold War, the international scenario in the Arctic has generally tended to be peaceful. The cooperative effect of Gorbachev's Murmansk speech was put into practice after the collapse of the Soviet Union and intra- and inter-regional cooperation was strengthened. The general tone of the international picture in the region is between cooperation and confrontation, with cooperation prevailing to some extent, but also with some problems.

Post-Cold War agreements on civil security cooperation through Arctic states (e.g. search and rescue cooperation, oil spill response, coastguard emergency capacity building), will create a system of institutional integration in this area, leading to a discourse and consensus on promoting security and stability in the Arctic. Judging from the agreements already reached on search and rescue and coastguard cooperation, Arctic cooperation may later be expanded to cover all aspects of civil security, including strengthening border control in Arctic countries, preventing smuggling, human trafficking, transnational crime and terrorist activities, enhancing civil nuclear safety and radiation prevention in the Arctic, and improving response capabilities to sudden disasters caused by coastal erosion and extreme weather. In the long term, as Arctic security interactions become more frequent, the existing Arctic governance and cooperation mechanisms will gradually develop into the basis for a regional security mechanism, and the "Arctic Rim Super Complex" will enter a phase of mutually coordinated security mechanisms." The " Arctic Rim Super Complex " is a supra-regional (trans-regional) super-complex based on political, economic, military and environmental security in the Arctic, consisting of a circular security complex of US, Russia and other participants and its "inner ring" in the Arctic region. A trans-regional 'security cluster'. Concerns about the Russian military threat, the development and refinement of Arctic cooperation mechanisms, and the recognition of security and environmental dependencies provide the impetus for the regionalisation of the 'Arctic rim super complex'. In the near term, the return of the US and NATO will further strengthen security interactions between the US, Europe and Russia in the super-complex and further contribute to its formation. In the medium term, as the US elevates the Arctic as a key region in its national security strategy and completes its corresponding Arctic military deployment, a US-style 'unipolar' structure is likely to emerge within the super-complex, rather than a US-Russian-other Participants 'multipolar' structure, and the capacity and intensity of interaction with the

regional security complex will continue to increase. The capacity and intensity of interaction with the security complex will continue to increase. From the analysis of the northern sea route and arctic resources development. It shows Although Russia is always take the main part of the arctic domain. But these years, US has been reset the arctic policy to make sure taking the leading part in Arctic as it does in other regions. From the Russia – US relation like this(more competition than cooperation) T it can be argued that in the establishment of an Arctic security regime, despite the contradictions and conflicts between Russia and the US over traditional geopolitical issues, there is a broad common interest in promoting the de-securitisation of the Arctic environment, and the chances of military risks to each other are relatively low, but the possibility of an escalation of military risks in the Arctic cannot be ruled out. If the military escalation between Russia and the United States continues in the Arctic, it will have a huge negative impact on the development and protection of the Arctic's natural resources and the establishment of a stable security system in the Arctic. In May 2021, Russia will assume the chairmanship of the Arctic Council. If Russia can cooperate with the United States to build a security system in the Arctic and review China's "One Belt, One Road" policy in the Arctic, the Arctic will tend to develop in a stable and harmonious way, especially in terms of trade and energy development. A stable and harmonious “Arctic rim super-complex” centred on trade and energy development. Other participants, such as China, the EU and Canada, will be better placed to play a role in security institutional oversight and cooperation as well as technological development.

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