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## The Rivalry Over the Arctic Strategic Resources and Russia's Role

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Submitted 01/10/21, 1st revision 18/10/21, 2nd revision 21/11/21, accepted 30/11/21

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**Abstract:**

**Purpose:** Climate changes have made previously inaccessible Arctic resources (oil, natural gas, and many metal ores, including nickel, zinc, lead and diamonds) available for extraction. With this change, the region has become an area of economic and geopolitical rivalry, where the five Arctic states (Canada, Denmark, Iceland, Norway, Russia, USA) compete with each other and external powers (e.g., China) for control over the territory and its strategic resources. The paper looks into whether those resources warrant the rivalry, and analyses methods and instruments used to establish the said control.

**Design/Methodology/Approach:** The paper focuses on the Russian activities in the region and approaches them from the realistic perspective on international relations. The offensive realism of John J. Mearsheimer is considered as particularly important to the problem under the study. It posits that states strive to maximise their relative power in order to survive in the anarchic, self-help international system.

**Findings:** In absence of legally-binding, universally-accepted territorial division of the Arctic and a great power able to prevent them to do so, Russian authorities have been gradually building up the country's presence in the region. As a result, Russia's control over part the Arctic and its strategic resources has become a *fait accompli*. It increased the country's power and security, and strengthened position in future political negotiations on the Arctic issues.

**Practical Implications:** The results of the research may contribute to the analysis of the economic and political situation in the Arctic and help companies to draft investment strategies toward the region.

**Originality/Value:** The paper is a case study in geopolitical consequences of the climate changes and analysis of situation in the one of the most important regions of the world. It presents the state-of-affairs of energy investments in the region. It also contributes to the knowledge on economic methods and instruments of establishing control over the Arctic (a planned follow-up study will focus on military tools and activities).

**Keywords:** Arctic, energy resources, the Russian Federation.

**Paper Type:** Research study.

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## **1. Introduction**

A global temperature increase of 2-degrees C observed in recent decades has led to the melting of 10% of polar ice caps (compared with the 1970s levels) (For a more detailed discussion, see: Przybylak, 2007). It opened up Arctic hydrocarbon and mineral deposits for exploration and extraction, as well as made new fishing grounds accessible. All those resources are significant, as the region is estimated to hold approximately 29% of global natural gas reserves and approximately 10% of crude oil (Kijewski, 2009). The climate changes are also increasing the prospects for the development of the so-called North-West Passage, a sea route through the Arctic that will be 5000 nautical miles shorter than those passing through the Suez Canal, the Panama Canal, Cape of Good Hope and Cape Horn. Such developments would undoubtedly affect shipping worldwide (Young, 2011).

All the changes open new opportunities, but also make the Arctic an area of geopolitical and economic rivalry. One of the main players and contenders in this rivalry is the Russian Federation. As the country has a great-power ambition and is highly dependent on energy revenues from depleting West Siberian deposits, it looks for new sources of geopolitical, economic and financial power. And the changing Arctic offers to become such a new base of strategic resources for the Russian Federation.

However, harnessing the region's potential will require significant investments and the use of specialised technologies, which the country currently does not have. This forces Russia to either cooperate with other players or develop new capacities (in combination with the refocusing of the existing ones). Given the diverging interests, trends in international relations, and the political and economic sanctions imposed on the Russian Federation, the former seems unlikely at this time (Aleksandrov, 2017).

The situation in the Arctic region is analysed from the realistic perspective on international relations. The offensive realism of John J. Mearsheimer is of particular relevance to the problem. It posits that countries - great powers in particular - while attempting to survive in the anarchic, self-help international system will strive to maximise their relative power, challenge the existing order and try to establish one in which themselves are hegemons, at least at a regional level.

Such approach applies to the situation and behaviour of Russia, which had lost its status as one of the two superpowers, and has been seeking to increase its power and security by engaging in the rivalry over Arctic territory and resources, undermining existing, US-led liberal international order and attempting to build a new one divided into spheres of influence dominated by regional hegemons. The article addresses the question of the Arctic's relevance in the global competition for power and security, and the state of affairs in the geopolitical rivalry over the region, with a particular focus on Russia's policy.

## **2. Arctic Energy Resources as a Source of State Power**

Hans J. Morgenthau in his seminal book on international relations has identified nine elements of a state's power: geography, natural resources, industrial capacity, military preparedness, population, national character, national morale, the quality of diplomacy and government (Morgenthau and Thompson, 2004). Energy resources, such as oil and natural gas, fall into the category of 'natural resources', but from a state's power perspective it would be erroneous to consider them as just another natural resource.

Firstly, energy resources are necessary to utilise a country's military power, in other words: without oil and other energy resources, all the tanks, jets, ships and other weapons are immobile and non-operational, and thus useless. Secondly, access and control over energy resources (or lack thereof) indirectly affect the military budget. Namely, if a country has oil or gas deposits, and can sell them internationally, then it has more financial resources, which it can invest in the military procurements and the development of new weapon systems. As a side benefit, it also increases the country's relative power by depriving its competitors of money, which they could have otherwise used to buy military equipment. Thirdly, such export of energy resources and energy dependencies can be used as a tool of diplomacy and statecraft, to force and/or encourage other countries to behave in a specific manner and to adopt the desired policy. Lastly, energy resources are essential not only for the military but also for a country's economy, society and government.

Lack of energy, which is currently derived mostly from energy resources, would force factories to halt production, make it impossible to move goods and people, and services providers (including government agencies, healthcare institutions and law enforcement) wouldn't be able to carry out their work, resulting in internal decay and social unrest. In sum, energy and energy resources affect, in one way or the other, all aspects and dimensions of a modern state: its military and economic potential, national morale and quality of government. Thus, they became vital for the country's power and survival, forcing states to compete for control over available deposits.

Against this backdrop, the interest of great powers in the Arctic and its energy assets is obvious, particularly considering it is one of the few places in the world with large hydrocarbon reserves of uncertain legal status and undecided ownership. And the energy potential of the region is significant. According to the U.S. Geological Survey's 2008 assessment, the region's undiscovered energy reserves are approximated at 90 billion barrels of oil and 47 trillion cubic metres of natural gas, of which over half is located in just three regions: West Siberian Basin, Arctic Alaska and East Barents Basin (U.S. Geological Survey, 2008). Those represent 16% and 30% of the world's undiscovered conventional oil and gas reserves, respectively (U.S. Geological Survey, 2012).

Accessing the Arctic resources and getting them to the market is, however, a difficult task and will require overcoming multiple obstacles. At the forefront are technical challenges. The equipment and infrastructure deployed in the region must be able to resist very low temperatures and harsh/volatile weather conditions. As most of the deposits are located offshore, drilling platforms and transport vessels need to withstand collisions with floating icebergs and waves, which are getting increasingly stronger due to the melting ice caps and rising sea levels. Extracting onshore deposits won't be easy either.

Seasonal temperature changes cause permafrost to thaw and change hard ground into mud, which cannot support heavy drilling and transport machinery. Next are environmental considerations. Numerous protected areas established in the region and various other biodiversity conservation programs constrain the ability to explore and extract the deposits. Energy companies working in the region will also have to take extra precautions to prevent the second Deepwater Horizon oil spill, especially since the containment and clean-up processes in the Arctic would be harder than in the Gulf of Mexico, and environmental consequences – more severe. Thirdly, energy activities in the region will be impacted by financial factors, as the energy projects must be economically viable.

The extraction of the region's resources will require considerable investments in exploration (discovery and assessment of deposits), development of those green fields and connecting them to world energy markets, and maintenance/upkeep of the infrastructure. Previously indicated highly specialised equipment and safeguards taken for environmental reasons only add to those costs. Together, those economic factors affect (limit) the number of actors able to operate in the region, render production costs high and curb demand, make production viable and the Arctic energy resources competitive only in high-price scenarios, discourage the extraction for small-to-medium deposits and incentivise the development of large fields (economies of scale). The last set of challenges is the legal problem of delimitation of the Arctic.

### **3. Russia's Policy in the Arctic**

As demonstrated, the Arctic and its strategic resources (territory and energy resources) offer multiple benefits. It can significantly increase a state's relative power, improve its ability to shape a favourable international system and protect itself from foreign adversaries. As with any finite resources, conflict and rivalry to control the region have been inevitable. One of the most active actors in this competition has been Russia. The country has the longest Arctic coastline (approx. 6200km), and the region remains the largest contributor to Russia's GDP (20%) and exports (22%), mainly thanks to its extraction industry (Flake, 2015).

Russia's focus on the Arctic is reflected in various documents, i.e., Strategy for Developing the Russian Arctic Zone and Ensuring National Security through 2035;

in the state programme Socioeconomic Development of the Arctic Zone of the Russian Federation for 2021–2024; and the Basic Principles of Russian Federation State Policy in the Arctic to 2035. In addition, the Arctic is also mentioned in the Military Doctrine of the Russian Federation; the Maritime Doctrine of the Russian Federation until 2020; and the National Security Strategy of the Russian Federation to 2020.

The aforementioned documents state that the Russian Federation must play a leading role in the Arctic. This goal has been reflected in Prime Minister Dmitry Medvedev's decree from 2015, which establishes the State Commission for Arctic Development, headed by then Dmitry Rogozin. It aims to organise and coordinate the activities of the ministries and the Security Council of the Russian Federation concerning the region. The main issue that the Commission has focused on is the creation of the State Consortium of the NSR.

In both international fora and strategic documents, the Russian Federation emphasizes the importance of the Arctic in economic, social and security terms. Officially, Russian authorities emphasise their respect for international law and the need for a multilateral agreement on the Arctic. They present a cooperative and conciliatory image of the country. E.g., at the Arctic Forum held in Arkhangelsk in 2017, the President of the Russian Federation, Vladimir Putin, stated that the Arctic region could become a territory of dialogue, peace and cooperation, and that: "We have excellent examples of cooperation in the development of this region. This is a great prospect for Russia and the United States. For the whole world. I hope that we will enter into partnership and improve Russian-American relations for the benefit of our people and the whole world" (Jágerský, 2016).

In this spirit of multilateralism and respect for international law, the Russian authorities were the first to submit a claim to the UN Commission on the Limits of the Continental Shelf, on December 20, 2001. They claimed jurisdiction over the external boundary of the continental shelf in the Arctic, which also included the North Pole. This claim was justified by the argument that the bottom of the Arctic Ocean and the Siberian shelf are one, because the Lomonosov Ridge, which passes through the North Pole and the Mendeleev Ridge, is an extension of the Eurasian continent. This would have extended Russia's jurisdiction by approximately 1.2 million km<sup>2</sup>. The Commission did not make a conclusive decision, arguing that the Russian side did not provide indisputable scientific evidence on which to determine whether the Lomonosov Ridge is indisputably part of the Eurasian continental shelf.

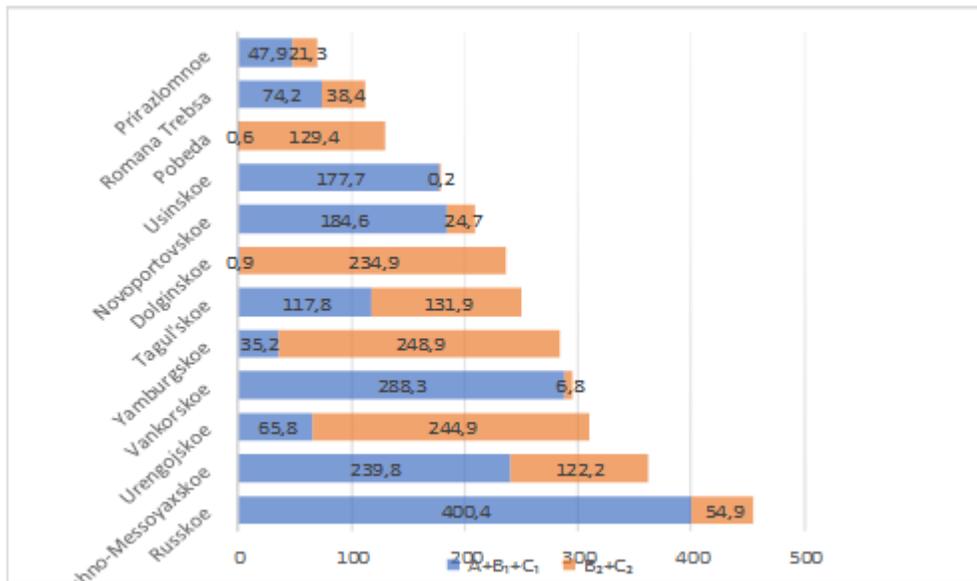
However, if the Commission had accepted the claim and arguments, the Russian Federation would have been able to exploit the region's resources entirely on its own. Hence the other Arctic States, concerned by Russia's actions, have protested and argued against this claim (Toszek, 2011). On the other hand, the Russian authorities also undertake unilateral actions. Some of them have a form of 'political stunts', e.g., placing a capsule with the Russian flag at the bottom of the Arctic

Ocean by the research vessel 'Akademik Fyodorov' in 2007, and they demonstrate the country's return to this strategic region after the collapse of the USSR. Such activities do not add scientific validity to the abovementioned Russian interpretation of the continental shelf but have only symbolic significance (Symonides 2008). The other kind of unilateral action is more substantial. It entails establishing a military and economic presence in the region and make the Russian control over (some of) the region's strategic resources fait accompli.

#### 4. Energy Activities in the Arctic

Russian authorities have been striving to establish the country's position in the Arctic not only through military presence but also via energy investments in the region. They've granted over 117 exploration licenses that cover an area of more than 1,8 mln km<sup>2</sup>, the largest share (over 94% of the area) going to two state-controlled companies: Rosneft and Gazprom (Kosowska, 2016). Such approach has been necessary to achieve a goal outlined in the National Security Strategy, where the region's resources and extraction industry were identified as the main future contributors to and sources of funding for the national economy (Хлопов, 2014).

**Figure 1.** Reserves of Russia's Arctic Oil Fields at the end of 2019 (in MMT)



**Source:** Министерство природных ресурсов и экологии Российской Федерации 2020.

Russia, and before it the USSR, has a long experience in the exploration and extraction of energy resources north of the Arctic Circle. First deposits were discovered in the 1960s and their development has started soon after. Although both oil and natural gas fields are located in the region (Figure 1 and Table 1 respectively), the latter are far more abundant and significant for Russia's

international position. The country aims to have 20% share in the global LNG market by 2035 (from a current 8%) and Arctic is supposed to, according to the Long-Term Program on the Development and Production of LNG, play a key role in this pursuit, as over 50% of Russia's total gas reserves at the end of 2019 were located there (Распоряжение Правительства РФ № 640-р Об утверждении долгосрочной программы развития производства сжиженного природного газа в РФ 2021).

The first of the regional projects has been Yamal LNG on the east coast of Yamal Peninsula by the Kara Sea in the Ob Bay, which was spearheaded by the company Novatek. The liquefaction plant commenced its operations in 2017 and has been supplied from the Yuzhno-Tambejskoe field, with approximately 1,200 billion cubic metres (BCM) of gas reserves and peak level production expected at 27 BCM/per year. The plant is going to consist of four trains, the fourth one commissioned in June 2021, and will be able to produce approx. 17 million metric tonnes (MMT) of LNG per year. The project has cost over 27 billion USD and was mainly funded by Chinese stakeholders. The extracted gas is exported to both European and Asian consumers, via the NSR. Besides the liquefaction plant, the investment has also included building a seaport, airport, power plant and railway connection.

**Table 1.** Reserves of Russia's Arctic Gas Fields at the end of 2019 (in BCM)

Name of the Field	Reserves (in BCM)	
	A+B <sub>1</sub> +C <sub>1</sub>	B <sub>2</sub> +C <sub>2</sub>
Urengojское	5 428,50	890,80
Tambejskoe	1 885,90	3 599,00
Shtokmanovskoe	3 939,40	0,00
Bovanenkovskoe	3 512,70	141,00
Jamburgskoe	2 031,90	1 232,70
Malyginskoe	640,60	1 561,90
Salmanovskoe	692,80	1 340,60
Zapoljarnoe	1 925,90	38,80
Leningradskoe	738,40	1 161,80
Kruzenshternskoe	939,00	362,90
Yuzhno-Tambejskoe	964,20	283,3
Pescovoe	195,30	472,10
Kamennomyskoe-more	0,00	555,00
Medvezh'e	533,20	11,80
Ledovoe	91,70	330,40
Severo-Kamennomyskoe	366,30	19,70
Severo-Urengojское	340,30	29,30
Rusanovskoe	205,70	150,70
Semakovskoe	322,00	0,00
Harasavjejskoe	83,30	215,80
Jurharovskoe	234,90	5,10

*Source:* Министерство природных ресурсов и экологии Российской Федерации 2020.

Novatek is also developing a sister project to Yamal LNG, namely Arctic LNG 2. The natural gas for liquefaction will come from the Utrennego field, which has 461 BCM of gas reserves and nearly 20 MMT of LNG per year will be produced from three planned LNG trains. The final investment decision for the project was made back in 2019, nearly all the equipment for its construction has been contracted, the project is 40% completed and the production from the first train is expected to start in 2023. Arctic LNG 2 is planned to cost around 25 billion USD, Chinese and Japanese companies have invested in it and the whole production for the coming 20 years has been already contracted by the partners participating in the project.

Another Russian gas company which heavily involved in the Arctic is Gazprom. It has over 20 trillion cubic metres (TCM) of gas reserves on the Yamal Peninsula and the Kara Sea alone and identifies the region as the main source of Russian gas for the coming 100 years. The main field in the region is Bovanenkovskoe with reserves estimated at 3,6 TCM. They are extracted in three gas production facilities, the first of which came online in 2012. At full capacity, the field will provide around 115 BCM per year. The costs are estimated at 43 billion USD. In contrast to the Novatek investments, the natural gas extracted from the Bovanenkovskoe and other Gazprom-controlled Arctic fields won't be exported as LNG but rather through pipelines. Therefore, the company have invested in transport infrastructure connecting the developed fields with the existing Unified Gas Supply System (UGSS) of Russia, for Bovanenkovskoe field this connection being 1,200km-long Bovanenkovo-Uxta 1 and 2 gas pipelines.

Zapoljarnoe field in the Yamal-Nenets Autonomous Okrug is another important Gazprom gas field in the Arctic. It is, in fact, currently the crucial one, as it provides the largest amount of gas among all the Russian gas fields. Its design capacity is 130 BCM per year and the production commenced in 2004.

Russia has been developing not only onshore Arctic gas deposits but also offshore fields, Kamennomysskoe field in the Ob Bay being the prime example . It has over 555 BCM of gas reserves and the production is expected to start in 2025. The extracted gas (15 BCM/year) will be then transported via pipelines to the onshore gas treatment and further down to the UGSS. The development of a special ice-resistant platform, which has been under construction since 2020, builds the company's capacity to operate offshore in low temperatures and heavy storms.

Russia has been extracting in the Arctic not only gas but also oil. Two fields are particularly significant. The first one is Prirazlomnoe field in the Pechora Sea, south of Novaya Zemlya with nearly 70 MMT of oil reserves and annual production levels at 3,14 MMT (2019). The oil production has started in 2013 and all the operations (drilling, extraction, storage, treatment, and offloading) are carried out on a single stationary platform, which can withstand extreme weather conditions and large amounts of ice. The oil extracted from the field has been marketed as a new crude blend named ARCO (Arctic Oil). The second important Arctic oil field is

Vankorskoe located in Western Siberia, although for tax purposes classified as an East Siberian oil field. Its reserves have been estimated at the end of 2019 at 300 MMT, it's been operational since 2009 and has been producing between 21.5 and 25 MMT of oil a year. The overall costs of development exceeded 35 billion USD. The project has been significant, as it has been the main source of oil for the Eastern Siberia–Pacific Ocean (ESPO) pipeline, which has opened for Russia the possibility to export oil to China and other Asia-Pacific countries (Mareš and Laryš, 2012).

Russia's steps to unlock and fully utilise the energy potential of the Arctic include also the construction of multiple icebreakers and Arctic-rated LNG carriers. The investments will allow to raise cargo volumes going through the NSR and make hydrocarbons the main goods transported this route, not to mention the increased access to and trade with countries of the Asia-Pacific region (Sukhankin, 2021). With international sanctions, Russian authorities and companies have been also heavily investing in domestic technologies and production capacities, to make the country independent from foreign suppliers.

## **5. Conclusions**

The research indicates that the Arctic has substantial amounts of strategic resources, the most important of which are territory and energy deposits. They can significantly contribute to a country's relative power and improve its standing in the international system. With climate changes increasing access to the region, the inevitable competition between the Arctic States (mainly the 'Arctic Five') and external powers for those resources has started. It has been waged via legal and diplomatic means on various international fora. As such multilateral efforts were unsuccessful, some countries have started developing Arctic potential through unilateral actions and making their presence in the region and control over its strategic resources irreversible, a *fait accompli*. Russia has been one of the most decisive and active actors in this respect. Russian companies have been actively developing on- and offshore energy resources north of the Arctic Circle.

The investments have allowed Russia to offset declining production from depleting old Soviet West Siberian fields, allowed to enter international LNG markets and built new connections with Asian-Pacific partners, who as investors in energy projects and consumers of extracted resources became dependant on Russia. All of the operations carried out by Russia act as a self-reinforcing mechanism – the country has established energy bridgeheads in the Arctic, which increased its power and in the process developed new capacities, which in the future can be used to further expand the country's presence in the region

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