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CHINA'S CONCEPT OF A POLAR SILK ROAD AND RUSSIAN GEOSTRATEGY IN THE ARCTIC

CHIŃSKA KONCEPCJA POLARNEGO JEDWABNEGO SZLAKU A ROSYJSKA GEOSTRATEGIA W ARKTYCE

Abstract

The article explains the relationship between the People's Republic of China and the Russian Federation in the context of their Arctic policies, focusing on China's concept of the Polar Silk Road (PSR) and Russia's geostrategy in the Arctic, with reference to the Northern Sea Route (NSR). The Arctic, rich in natural resources and strategic trade routes, is emerging as a key area of rivalry and cooperation between powers. As part of the Belt and Road Initiative, the NSR aims to shorten trade routes between Asia and Europe, diversify the supply of raw materials and increase China's influence in the region. Russia views the NSR as a foundation for sovereignty and economic security, seeking to maintain control of the route. Cooperation between states includes energy projects (e.g. Yamal LNG, Arctic LNG-2) and infrastructure development, bringing mutual benefits, but also reveals tensions arising from differences in approaches to NSR governance, interpretation of international law and competition for resources. The article identifies synergies and potential conflicts, pointing to the complexity of Sino-Russian relations in the Arctic and their significance for global geopolitics. The analysis is based on an interdisciplinary approach, combining geopolitics, economics, and international law, and it highlights the need for further research into the dynamics of this relationship in the context of the changing Arctic environment.

Keywords: Arctic, geostrategy, China, Russia, Polar Silk Road, North Sea Route.

Introduction

Melting ice caps and dynamic changes in international politics make the Arctic one of today's most important geostrategic regions. The area, which was once poorly accessible, is gaining new importance as a space of competition and cooperation among the major powers. The Northern Sea Route (NSR) and the Polar Silk Road (PSR) concept are key reference points in analysing the changing balance of power in the Arctic.

This article explains the relationship between the People's Republic of China and the Russian Federation in the context of their Arctic policies, focusing on the geopolitical and economic aspects of the PRC and Russian geostrategy in the Arctic.

The Arctic is rich in natural resources, with significant commercial potential and a strategic location of particular interest to the superpowers. The region contains around thirteen per cent of the world's undiscovered oil reserves and thirty per cent of natural gas. The opening of the Northern Sea Route, facilitated by the shrinking ice caps, offers the possibility of developing alternative trade routes to reduce transport times between Asia and Europe. Despite lacking direct access to the Arctic, China has integrated the Polar Silk Road concept into its broader Belt and Road Initiative. At the same time, Russia, the country with the longest coastline in the Arctic, treats the region as a key element of its geopolitical strategy, seeking to maintain control of the NSR as an area of its national security. These two approaches lead to cooperation and potential tensions between the two countries. They are also reflected in the official strategic documents of both countries.

The main research questions in the article concern the strategies of the PRC and Russia towards the Arctic and the impact of their policies on their relationship. The key questions are whether the Arctic region will become an area of cooperation in the changing geopolitical system or an arena of competition for influence and resources. The article focuses on identifying areas of cooperation, such as energy and transport projects, possible points of tension, such as differences in approaches to NSR governance, and the long-term implications of China's presence in the Arctic for Russia's position. The article uses literature analysis methods and critically evaluates academic sources and international reports. The interdisciplinary approach includes geopolitical, economic and legal analysis, allowing a broad spectrum of perspectives to be considered. The collated data and information have been analysed in a historical and contemporary context to thoroughly understand the mechanisms and dynamics of the relationship between Beijing and Moscow in the Arctic region. A comparative analysis of the two countries' strategies and an assessment of their interests in the Arctic is also an important part of the methodology.

China's Polar Silk Road concept

The Polar Silk Road (PSR) concept is a key element of China's Arctic strategy, part of the broader Belt and Road Initiative (OBOR),

which aims to globally integrate transport routes between Asian, European and North American markets. The development of the PSR is made possible by melting the Arctic ice cap, which opens up new shipping opportunities in the region. Including the PSR in the OBOR reflects China's ambition to establish a presence in the Arctic and fits into the broader context of China's diversification policy. Traditional sea lanes, such as the Suez Canal and the Strait of Malacca, are vulnerable to various geopolitical and environmental risks, and the PSR, as an alternative, enables China to increase the independence and efficiency of international shipping. These ambitions are based on a long-term strategy to strengthen China's position in a region previously dominated by Arctic states and Western powers (Sliwa et al., 2023; Kobzeva, 2021).
The main strategic objective of the PSR is to reduce transport times between Asia and Europe by up to a third compared to traditional routes, such as those through the Suez Canal. Such optimisation is important for China's export sector, reducing transport costs and strengthening the competitiveness of products in the global market. Shortening the shipping route is particularly attractive in the context of increasing rivalry with the West and growing constraints arising from geopolitical tensions. At the same time, the logistical efficiency of the PSR supports the stability of China's trade, which depends on the fast and cheap distribution of goods. The Arctic also allows for expanding transport options in the context of the geographical limitations of traditional sea lanes, making PSR a key element of China's global economic influence strategy (Rainwater, 2013; Sliwa et al., 2023).

China has long emphasised its aspirations to be a "state close to the Arctic", which is reflected in its declarations as a "responsible power". Permanent observer status in the Arctic Council, obtained by the People's Republic of China in 2013, has opened up new opportunities for cooperation with Arctic states and the development of numerous investments in the extraction of natural resources such as zinc and rare earth metals. This status enables China to actively participate in discussions on the future of the Arctic, which strengthens its ability to influence the region's regulation. The adopted narrative of 'responsible power' allows China to present its presence in the Arctic as being in line with global interests, limiting potential opposition from other international actors. In addition, investment in strategic raw materials supports the development of China's technological sectors, such as electronics, batteries, and advanced military technologies. Such activities legitimise China's regional presence while strengthening its economic

and technological influence (Hanusiak, 2019). Such a narrative and Beijing's long-term policy in the Arctic are reflected in a special document referred to as "China's Arctic Policy White Paper" (State Council Information Office of the People's Republic of China, 2018).

China's long-term ambitions under the PSR include securing a stable supply of energy resources such as oil and natural gas, crucial to its import-dependent economy. The Arctic, an area rich in natural deposits, allows China to diversify its import sources, making it more resilient to geopolitical changes and conflicts in traditional supply regions such as the Middle East. Cooperation with Russia in the exploration of raw materials and mining infrastructure development further supports Chinese efforts to strengthen energy security. Exploration of natural resources in the Arctic supports the domestic economy and strengthens Beijing's international influence, which is strategically beneficial for China in the context of its growing global ambitions (Rainwater, 2013).

Intensifying activities in the Arctic have numerous benefits, including increasing China's negotiating leverage with the US and the EU. Investments in infrastructure and PSR development further consolidate China's position as a global leader, while supporting its vision of a polycentric world. These actions are particularly relevant in the context of a changing balance of international power, where the Arctic is becoming an increasingly important area of competition and cooperation. An important element of the PSR concept is its fit with China's broader strategy of polycentrizing the global international order. The Chinese presence in the Arctic, implemented through the PSR, strengthens Beijing's position as one of the key actors shaping the balance of power in the region. China seeks to exploit the new opportunities the Arctic offers to strengthen its influence while increasing its independence from Western powers. Creating shipping routes in the Arctic is also seen as a tool to influence global trade arrangements, which play a key role in realising their vision of a polycentric world. The expansion of transport capacity in the region and the development of infrastructure once again highlight the strategic importance of the PSR to enable Beijing to pursue an effective foreign and economic policy (Soroka, 2022; Kobzeva, 2021).

The Polar Silk Road entails intensive development of the transport infrastructure necessary for the efficient operation of Arctic shipping, which fits in with the broader goals of China's Arctic strategy. A key aspect of this is investing in icebreaker technology and ships adapted

to the harsh climatic conditions in the Arctic. China has been consistently developing its Arctic fleet, enabling it not only to become more independent from Russian infrastructure but also to strengthen its position in the region. These investments are significant given Russian ports' technological and capacity limitations, which remain a barrier to optimal transport. The construction of modern vessels and the development of advanced technologies increase China's flexibility in route selection, effectively minimising the risks associated with Russia's dominance in supporting infrastructure (Mekhdiev et al., 2021; Gacek, 2018).

China's operational capabilities in the Arctic are supported by the advanced BeiDou satellite system, which significantly improves navigation and security in the Arctic region. The development of this technology allows precise positioning in harsh climatic conditions, which is crucial for efficient and safe navigation. The BeiDou system enables logistical optimisation, reducing China's dependence on US GPS while increasing its technological and navigational independence. Integrating the system with Arctic infrastructure projects, such as port and shipbuilding, strengthens the efficiency of transport along polar routes, which reflects China's broader ambitions for global technological and geopolitical influence. Also arguing for the strategic importance of this technology is its impact on reducing operational costs, an important element of China's policy to diversify trade routes (Śliwa et al., 2023; Hanusiak, 2019).

China's cooperation with Russia plays an important role in developing PSR infrastructure, particularly in modernising key ports such as Sabetta and Murmansk. These investments are crucial for both the Chinese and Russian Arctic strategies, particularly in the context of hydrocarbon exports. Projects such as Yamal LNG highlight the mutual benefits of this cooperation, but simultaneously reveal tensions related to differences in the two countries' objectives. While supporting the development of Russian infrastructure, China is simultaneously strengthening its investment position in the region, which could increase its influence at Russia's expense. Therefore, the modernisation of ports and the development of logistics infrastructure become both a factor supporting bilateral cooperation and a potential field of rivalry (Gacek, 2018; Hermann et al., 2022). Russia is a key partner for China within the PSR. Russian Arctic ports have served as a tool for an economy dependent on natural resources, particularly oil and gas, since Soviet times. While many of Russia's Arctic port range projects are being

implemented in the context of Sino-Russian cooperation, it should be noted that this infrastructure requires significant investment and modernisation. The ports mentioned, such as Murmansk, play a key role as transport hubs. Nevertheless, the development of this infrastructure highlights Russia's dependence on foreign investors, including China, which poses a challenge to maintaining its strategic autonomy (Faury et al., 2021).

However, the development of the NSR faces serious challenges related to infrastructure capacity constraints and logistical problems. The Russian Federation faces various financial and technological constraints and has been heavily dependent on Chinese support since the escalation of the war in Ukraine (from February 22 2022). An example is the Yamal LNG project, which both supports the development of the NSR and highlights China's growing role in financing and modernising the region. China is increasing its economic and strategic capabilities in the Arctic, but at the same time, it is making Russia dependent on its support, which may have long-term implications for the balance of power in the region (Mekhdiev et al., 2021; Moe, 2020).

Planned investments in transhipment terminals along the NSR are key to increasing this route's efficiency and port capacity and handling larger volumes of goods. Creating deep-water terminals is an important part of the infrastructure supporting the PSR, strengthening the NSR as a key international route. Cooperation in the construction of transhipment terminals benefits both countries, but at the same time, can lead to tensions due to differences in the pursuit of regional dominance. Logistical efficiency and the regional transport network affect the ability of both countries to effectively utilise the resources of the NSR, further highlighting the strategic importance of investing in Arctic infrastructure (Hermann et al., 2022; Moe, 2020).

Russian geostrategy in the Arctic

Russia's geostrategy in the Arctic focuses on maintaining control over key sea lanes and securing access to the region's rich natural resources. The Northern Sea Route is at the heart of Russia's geopolitical strategy in the Arctic and is one of the most important instruments for pursuing national interests. Russia bases its right to control the NSR on numerous historical, geographical and legal grounds, as reflected in successive Russian strategic documents delineating the country's strategy signed in 2008, 2013 and 2020, respectively (Administratsiya

Prezidenta Rossiyskoy Federatsii, 2008; Pravitel'stvo Rossiyskoy Federatsii, 2013; Prezident Rossiyskoy Federatsii, 2020).

According to their provisions, the NSR is recognised as a historically established national transport route under complete state control (Vylegzhanin et al., 2020). Historical arguments, supported by the USSR's 1964 diplomatic note, in which the Vilkitsky, Dmitry Laptev and Sannikov straits were defined as internal waters, are central to Russia's national security strategy. Such historical arguments are an important part of the Russian narrative, especially in the context of international discussions on the status of the NSR, demonstrating Moscow's determination to defend its sovereignty in the area. However, this interpretation of Russian law also highlights potential tensions in relations with international partners, particularly those promoting the principles of freedom of navigation (Lajeunesse et al., 2023).

The length of the NSR, estimated at two to three thousand miles, includes key ports, such as Sabetta, Dudinka and Igarka. These strategic centres are fundamental to the Russian economy as they enable the transportation of hydrocarbons, which account for as much as eighty-six per cent of the cargoes transported along this route in 2020 (Yermakov & Yermakova, 2021). Exports of natural gas, oil or liquefied natural gas (LNG) generate significant budget revenues and strengthen Russia's position as one of the world's key exporters of energy resources. These ports are a pillar of Russia's export strategy and have been adapted to handle high-tech vessels such as LNG carriers. However, the seasonality of shipping on the NSR still limits the full exploitation of the route's transport potential. Despite these difficulties, both logistical flexibility and avoiding congested traditional routes such as the Suez Canal provide a competitive advantage, especially in the changing conditions of global supply chains (Faury et al., 2021).

Russia regards control of the NSR as a key element of national sovereignty. Presidential guidelines demonstrate political determination to develop this route (Vylegzhanin et al., 2020; Gacek, 2018). Achieving these goals requires intensive investment in infrastructure and technological support, which necessitates international cooperation, particularly with China. Such investments support Russia's economic development and strengthen its negotiating position vis-à-vis other Arctic states and international partners. At the same time, the drive to strengthen control over the NSR indicates attempts to become independent from external influences, reflecting the broader context of Russian geopolitical ambitions (Konyshev et al., 2017). Differences in

interpretation regarding international legal norms related to NSR pose a significant challenge to the implementation of the Russian strategy and cooperation with other states, including China. By treating NSR as part of its sovereignty, Russia stands in potential opposition to concepts promoted by China, which emphasises the principle of freedom of navigation. These differences in approach are particularly relevant in the context of international regulations such as the United Nations Convention on the Law of the Sea (UNCLOS), which could lead to diplomatic disputes. Russia justifies its actions based on the need to protect the environment and the safety of shipping in the harsh Arctic environment, while China argues that the global nature of the region requires greater international accessibility. Such tensions may negatively affect the implementation of joint projects, such as Yamal LNG, and undermine the effectiveness of bilateral cooperation (Lajeunesse et al., 2023).

Russia is actively developing infrastructure to support the NSR, which includes modernising ports, expanding icebreaker technology and creating efficient logistics systems. Such measures are necessary to increase the route's capacity and improve economic efficiency. Ports such as Sabetta and Dudinka, which support exporting energy resources to key Asian and European markets, play a strategic role (Faury et al., 2021). The introduction of technologically advanced icebreakers, such as the Arktika vessels, enables shipping in harsh winter conditions, increasing the availability of NSR. However, financial and technological constraints, caused by Western sanctions, force Russia to work with international partners, primarily China. Projects such as Arctic LNG-2 illustrate the complementary needs of both countries, including capital, technology and resource access (Østhagen, 2019). Climate change is opening up new navigational opportunities on the NSR, further increasing its attractiveness as an alternative transport route (Yermakov & Yermakova, 2021). Russia sees this as an opportunity to strengthen its geopolitical position, using changing climatic conditions as an argument for managing shipping in the Arctic (Gacek, 2018). Reduced ice cover allows for a longer shipping season, benefiting Russian and Chinese NSR development plans.

Development of Russian military infrastructure in the Arctic

The development of Russian military infrastructure in the Arctic includes modernising existing military bases and constructing new facilities, such as the Nagurskaya base on Franz Josef Land. The example

of this base demonstrates Russia's focus on developing high-tech facilities to monitor and protect Arctic space in response to the increasing activity of other powers. The deployment of new radar and air defence systems strengthens Russia's ability to respond to potential threats, demonstrating a desire to maintain complete control over strategic areas of the region. Nonetheless, such an infrastructure expansion underscores the increase in geopolitical tensions in the Arctic, particularly with Western states that see these activities as part of the region's militarisation (Klimenko, 2016).

A key aspect of the Russian presence in the Arctic is the expansion of the flotilla of icebreakers, such as the 'Arktika' and 'Sibir'. These technologies provide the foundation for military and commercial operations in the Northern Sea Route. Icebreakers provide year-round navigation in extreme climatic conditions, essential for maintaining effective logistics in the region. Furthermore, enhanced by these vessels, Russia's operational independence in the Arctic underlines its ability to pursue its national strategic interests. However, the costs of developing an icebreaker fleet and its advanced technology require significant investment, which puts Russia in a difficult economic situation in the face of Western sanctions. It should also be noted that such actions could lead to an informal arms race in the region, with other Arctic and non-Arctic states attempting to respond to a strengthening Russian presence (Laruelle, 2015).

The deployment of anti-access (A2/AD) systems, including advanced air defence systems such as the S-400, and new radar systems in key Arctic locations, is a key element of Russia's strategy to protect national interests in the region. Such technologies enable Russia to effectively monitor airspace and protect strategic facilities such as military bases and energy infrastructure. The deployment of these systems also aims to counter the growing presence of NATO countries in the Arctic, which Moscow sees as a potential threat to its sovereignty. However, these measures are criticised by the international community, which sees them as escalating regional tensions. Russia argues that developing this infrastructure is a response to the need for security in the face of increasing international operations in the Arctic, but this position requires further analysis in the context of the balance of power in the region (Klimenko, 2016).

Military exercises, such as "Umka 2021", play an important role in testing the operability of equipment and infrastructure in extreme Arctic conditions. These manoeuvres are also used to demonstrate Russian

military capabilities, sending an unambiguous geopolitical message about the strength of the Russian presence in the region. Exercises usually involve the cooperation of different armed forces, reinforcing the comprehensiveness of Russia's defence efforts. However, the regular organisation of such manoeuvres may be perceived as a provocation by other states, further complicating the geopolitical situation in the Arctic. Such activities indicate the need for further analysis of the implications of military demonstrations of power in the region, especially in relations with Western states and China (Hanusiak, 2019; Sliwa et al., 2023).

The development of military infrastructure in the Arctic also reflects Russia's desire to maintain its dominant position in the region. Investments in military bases, icebreaker fleets, and advanced defence systems aim to protect Russian strategic interests and ensure its independence from other Arctic powers, including China. Despite Russian–Chinese cooperation in many areas, such as resource exploration and transport infrastructure, China's presence in the region can potentially affect Russian ambitions. Russia has consistently built up its defence capabilities to minimise the risk of simultaneous influence from other Arctic states and global players, making the region an arena for competition and cooperation (Laruelle, 2015; Lanteigne, 2010).

International criticism of Russian militarisation of the Arctic points to a potential threat to the region's stability. International organisations such as NATO express concern that the expansion of military infrastructure in the Arctic will escalate geopolitical tensions that could result in new conflicts. Russia defends its actions by explaining the need to protect sovereign interests and national security. However, analysing this position requires considering historical precedents and contemporary geopolitical developments that affect the dynamics of relations between Arctic states. Such an assessment allows for a better understanding of the multidimensional nature of the Russian military presence in the region and its implications for the future of the Arctic (Klimenko, 2016; Gacek, 2018).

Russian-Chinese cooperation in the Arctic

Energy is one of the most important areas of Russian-Chinese cooperation in the Arctic. Projects such as Yamal LNG, located on the Yamal Peninsula, exemplify the synergy of Chinese capital and Russian natural resources, enabling Russia to develop its natural gas exports to Asia and China to secure a stable supply of LNG. Chinese companies, which own a 29.9 per cent stake in the project, provide technology and

capital, enabling the high-tech project to be implemented in the extreme conditions of the Arctic. In the context of Western sanctions on Russia, Yamal LNG has become evidence of the strategic importance of Chinese investment to fill the gap created by the lack of support from Western partners (Conley & Melino, 2019; Dauylbayev et al., 2024).

Yamal LNG cooperation allows Russia to diversify its export markets, reducing its dependence on traditional customers in Western Europe, which is important in the face of geopolitical tensions with the West. For China, on the other hand, the project is crucial in the context of its energy hedging strategy, as it enables a regular supply of 4 million tonnes of LNG per year, supporting its booming economy. Chinese investment is also an important factor in technology transfer, including introducing specialised transport units and logistics solutions, which contribute to the efficiency of the project as a whole. Furthermore, projects such as Yamal LNG support infrastructural development in the region, strengthening ports such as Sabetta, and enabling year-round shipping on the Northern Seaway through advanced icebreakers (Kobzeva, 2021; Sørensen & Klimenko, 2017).

The Arctic LNG-2 project, considered a continuation of the success of Yamal LNG, is another step in strengthening energy relations between Russia and China. Chinese participation in this project strengthens their position in the Arctic market and supports the development of port infrastructure and gas liquefaction facilities, which are crucial for the sustainability and increased efficiency of the project. At the same time, the project demonstrates China's ever-growing interest in the Arctic as part of the strategic goals of the Polar Silk Road. For Russia, Arctic LNG-2 represents an opportunity to develop export potential further and reduce dependence on traditional European markets. Chinese investment involvement in Arctic LNG-2 also highlights the interdependence of the two countries in the pursuit of their strategic interests, especially in the face of further restrictions on Russian companies' access to Western technologies because of sanctions (Kobzeva, 2021; Hanusiak, 2019).

Cooperation in energy projects enables wide-ranging economic initiatives, such as the construction of specialised tankers adapted to transport LNG in the harsh climatic conditions of the Arctic. The development of infrastructure to support these projects, including ports such as Sabetta, allows for a significant increase in the logistical efficiency of the Northern Sea Route, which meets both Russian and Chinese interests. A key aspect of this cooperation is also the long-term

nature of such projects, which fit with both Russia's strategy to exploit Arctic resources and China's strategy to diversify energy sources and energy security (Dauylbayev et al., 2024; Sørensen & Klimenko, 2017).

Another area of active cooperation between Moscow and Beijing is the development of transport infrastructure in the Arctic. The People's Republic of China is actively involved in modernising Arctic ports, such as the Russian port of Sabetta, which has become one of the most important logistical points for LNG transport from projects such as Yamal LNG. These investments aim to support the export of energy resources and the development of alternative trade routes, which is particularly important in the context of reducing dependence on traditional routes such as the Suez Canal (Faury et al., 2021; Dauylbayev et al., 2024). Nevertheless, this cooperation presents challenges, especially in Russia's infrastructural constraints caused by Western economic sanctions. This opens the field to Chinese investors, who gain strategic influence in developing Arctic logistics (Surdel, 2019; Sliwa et al., 2023). However, the long-term success of such cooperation depends on the effective management of common interests and possible differences in the two countries' strategic visions. While seeking to maximise the potential of the NSR, Russia is keen to avoid overdependence on Chinese capital, as evidenced by its efforts to strengthen its technological capabilities in port construction and advanced ship handling (Faury et al., 2021; Liu et al., 2021).

Arctic shipping technologies, such as icebreakers, play a fundamental role in the region's transport development. As one of the leaders in icebreaker construction, Russia is providing advanced technology to enable year-round navigation on the challenging northern routes. At the same time, China is investing in developing its icebreaker construction capabilities, indicating its desire to reduce dependence on Russian technological infrastructure (Gacek, 2018; Liu et al., 2021). A notable example of Chinese efforts towards independence in Arctic shipping is the BeiDou navigation system, an alternative to the US GPS and Russian GLONASS (Sliwa et al., 2023; Surdel, 2019). It should be noted, however, that successfully exploiting the opportunities arising from melting Arctic ice will require further investment and the development of advanced technologies, which creates room for both cooperation and rivalry between the two countries (Železný, 2024; Rainwater, 2013).

Chinese investment in the Arctic region goes beyond cooperation with Russia, including infrastructure development in Greenland and

Iceland. Investments such as USD 2 billion in Greenland and USD 1.2 billion in Iceland between 2012 and 2017 are part of China's Polar Silk Road infrastructure diversification strategy (Surdel, 2019; Sliwa et al., 2023). Expanding ports and logistics centres in these countries allows China greater infrastructural independence and the development of its logistics points outside Russia. However, such activities may lead to tensions with Moscow, which may see them as an attempt to limit Russian dominance in the Arctic region, and with the United States, which feels concerned about Beijing's growing importance in the Arctic. Donald Trump's second presidential term and territorial claims to Greenland confirm this strategic concern for Washington (Surdel, 2019; Havnes, 2020).

Potential points of tension

Cooperation between China and Russia is not always free of tension. Differences in approaches to interpreting international law regarding the status of the NSR are a clear example of these difficulties. Russia treats the NSR as its internal shipping lane, while China promotes the principle of freedom of navigation, which fits in with its broader goal of internationalising the Arctic (Lajeunesse et al., 2023; Gacek, 2018). The long-term implications of these differences may affect the nature of further cooperation, particularly if Russia seeks to maintain complete control over the NSR, restricting the flow of Chinese investment and trade in the region. Examples include obligations to report planned NSR crossings and to disclose technical details of vessels, reinforcing Russia's control over this strategic route (Sliwa et al., 2023; Hanusiak, 2019). The preponderance of icebreakers, including nuclear-powered ones as key vessels supporting navigation in extreme Arctic conditions, allows Russia to maintain its dominant position in the region. With the largest fleet of icebreakers in the world, Russia strengthens its sovereignty over the NSR and reduces the independence of countries such as China, which depend on access to this infrastructure. However, such a strategy raises concerns about monopolisation of shipping, which could lead to accusations of non-compliance with the principles of the United Nations Convention on the Law of the Sea (UNCLOS). At the same time, the development of Chinese infrastructure outside of Russia indicates China's potential desire to reduce its dependence on Russian transport routes and increase its autonomy in the region. These tension points fit into the broader context of China's Polar Silk Road strategy and Russian

geopolitical ambitions, highlighting the dynamic and unpredictable nature of the Arctic's future (Wisniewska, 2021; Gacek, 2018).

Russia's approach to the NSR as an internal sea route conflicts with China's vision of freedom of navigation, one of the main aspects of potential tensions between the two countries. China relies on international maritime law norms, particularly those contained in UNCLOS, arguing that the NSR is globally important and should be accessible to all interested players. These differences are driven by China's desire to reduce transport costs and shorten delivery times for goods between Asia and Europe, significantly improving Chinese products' competitiveness in global markets (Wisniewska, 2021; Lajeunesse et al., 2023). China has consistently sought to legitimise its presence in the Arctic through diplomacy and infrastructure investment, which allows it to negotiate on equal terms with Russia. Such a strategy, pursued under the banner of a 'close Arctic state', is consistent with the long-term goal of diversifying China's trade routes. On the other hand, Russia is justifying its position with challenging environmental conditions and the need for nature conservation by introducing restrictions on shipping on the NSR, which in practice may prevent China from fully utilising the route (Havnes, 2020).

The introduction of regulations, such as the requirement to use Russian vessels on the NSR from 2026, further strengthens Russia's control over shipping. An exception is made for foreign-built vessels ordered before this date, but this condition limits the ability of countries such as China to use the route freely. These actions indicate Russia's desire to strengthen its maritime infrastructure in a way that precludes excessive involvement of foreign actors in the region, which at the same time may raise concerns about NSR monopolisation. While officially supporting environmental protection in the Arctic and declaring respect for regional rules, China undermines Russia's complete control over the NSR. Russia's Arctic protection policy, which includes sanitary, quarantine and navigation regulations, increases transport costs for foreign actors, creating pressure to negotiate more liberal rules. This, in turn, could lead to further disputes between Russia and China, especially in light of Chinese attempts to reduce dependence on Russian infrastructure (Wisniewska, 2021). While mutually beneficial, the China-Russia energy partnership reveals a structural dependency - Russia provides raw materials, and China provides capital. This structure could change if China gains more influence over key decisions on the use of NSR, which could raise Moscow's concerns about losing full control over

the region. Additional tensions may arise from Chinese investments in maritime technologies that allow them to reduce their dependence on Russian infrastructure (Kobzeva, 2021).

Access to natural resources

The Arctic is a region rich in undiscovered natural resources, which interests Russia and China. Figures from the US Geological Survey indicate that the area contains vast reserves of raw materials, including some 90 billion barrels of oil and 1.7 trillion cubic feet of natural gas, equivalent to 13% of the world's undiscovered oil deposits and 30% of its gas deposits. Such an abundance of raw materials puts the Arctic in the spotlight of world powers, who see it as important for energy security and gaining economic and geopolitical advantage (Gacek, 2018). Recent climate change, which is reducing the extent of the ice caps, is opening up new opportunities for access to these resources, but at the same time, it is intensifying competition among states for control over them. At the same time, the growing importance of the Arctic for global energy policy has also made the region crucial from the perspective of international efforts to reduce dependence on traditional raw material suppliers (Blunden, 2012).

Russia, with the longest coastline in the Arctic, has long regarded the region as a strategic area of its territorial sovereignty. With the Arctic's most significant raw material resources, Moscow has built a strong position in the region, making rivalry with China almost inevitable. The Russian government has consistently strengthened regulations on the exploitation of Arctic natural resources, restricting the activities of foreign companies, including Chinese companies. This resource management model reflects Russia's desire for complete control over the region's natural resources, which clashes with Chinese aspirations to increase its role as an investor and partner in exploiting the deposits. These restrictions can be seen as a manifestation of Russian caution in the face of increasing Chinese expansion, which safeguards Moscow's interests on the one hand but hinders the development of bilateral cooperation (Sliwa et al., 2023). Russia treats the Arctic as a key element of its economic and security strategy, which is manifested in numerous actions, such as laying claims to the continental shelf and militarising the region. A clear example is Russian territorial claims covering areas beyond the 200-mile economic zone to secure access to strategic deposits. Moreover, Moscow is intensively developing its military infrastructure, including defence systems such as the S-400 and

a fleet of icebreakers, which allows it to consolidate its presence in the region and protect its natural resources from external interference. Such a policy raises questions about its impact on the region's long-term stability and relations with China, which may see it as an attempt to limit its potential influence in the Arctic (Hanusiak, 2019; Gacek, 2018).

On the other hand, China, one of the world's largest importers of energy resources, sees the Arctic as a key element of its strategy to diversify supply and strengthen energy security. Beijing is investing in upstream projects, such as Arctic LNG-2, as part of a long-term plan to increase its regional influence. Against the backdrop of rising trade tensions with Western countries and the instability of traditional extractive regions, the Arctic appears to China as an alternative to stabilise supply and increase its negotiating position on the international stage. While emphasising its role as a responsible investment partner, China seeks to negotiate greater access to resources by offering capital and technology to Russia as a form of infrastructure support (Hanusiak, 2019).

By actively investing in infrastructure development in Arctic regions such as Greenland, China shows that its aspirations go beyond cooperation with Russia. Significant investments in Greenland's mining sector, targeting strategic resources such as rare earth metals and uranium, indicate that Beijing is seeking to build its independent sources of supply outside of Russia. Such a strategy could be seen as a potential threat by Moscow, suggesting that China may seek to reduce its dependence on cooperation with Russia, while challenging its dominance in the region. This raises questions about potential tensions in Russian-Chinese relations, particularly in the context of competition for influence in the Arctic. One of the key factors in tensions between Russia and China is the growing importance of rare earth metals and other rare strategic resources in the Arctic, such as uranium. These resources are crucial for high-tech industries, including electronics or renewable energy, which is of interest to China, which is actively investing in their exploitation. Russia, which has significant reserves of raw materials, is taking steps to restrict access to its resources for foreign companies, hindering Chinese expansion plans (Brady, 2010; Sliwa et al., 2023).

Summary

Based on the analysis, the Polar Silk Road and the Northern Sea Route play a central role in China's and Russia's strategies. Through the NSR, China seeks to diversify trade routes, reduce transport times and

secure access to strategic resources, which supports its long-standing goals related to global economic and technological influence. Conversely, Russia sees NSR as a cornerstone of its sovereignty and economic stability, using its unique geographic position to maintain control over key routes in the Arctic. While complementary in many aspects, the two strategies reveal profound differences in the two countries' priorities, potentially leading to further tensions and conflicts of interest in the future. Clear benefits for both countries have been noted in energy and infrastructure cooperation. Projects such as Yamal LNG and Arctic LNG-2 demonstrate the success of economic cooperation, with Russia supplying natural resources and China investing capital and technology. The complementary needs of both countries make it possible to carry out challenging projects in extreme Arctic conditions, strengthening their position in the region and the global energy market. However, the structural asymmetry of this cooperation, where China dominates the provision of capital and technology and Russia is the leading supplier of raw materials, points to potential problems that could threaten the balance of the bilateral relationship, especially in Moscow's increasing dependence on Beijing.

One of the main points of tension between China and Russia is the governance of the NSR, with Russia treating the route as an internal part of its sovereignty, which conflicts with the Chinese concept of freedom of navigation. These differences stem from differing strategic visions: Russia seeks to maintain control over the NSR, arguing for the need to protect the environment and the safety of navigation, while China, as a 'near Arctic state', seeks to increase its presence in the region by promoting the openness of trade routes. The future of the relationship between the two countries will depend on negotiations and how these differences are managed, which significantly impact the nature of Arctic cooperation. Access to the Arctic's rich natural resources is also an important aspect of rivalry. Russia, with the largest reserves in the region, seeks to limit the participation of foreign investors, including China, in the exploitation of strategic resources such as oil, natural gas and rare earth metals. China, in turn, guided by its energy security strategy, is investing capital and technology in Russian projects and Arctic infrastructure in Greenland and Iceland. Such actions demonstrate Beijing's desire to reduce its dependence on Russia, which could lead to further tensions between the two countries.

The findings of this analysis fit into the broader context of Arctic geopolitics research, revealing both areas of cooperation and rivalry

between Russia and China. The analysis confirms that the Arctic is becoming a space in which international relations are dynamically shaped, and that Russian-Chinese cooperation, while bringing important benefits, is also marked by challenges arising from differences in approaches to governing the region. The contribution of the presented research lies in its comprehensive approach to the analysis of this relationship, showing both the potential for synergies and possible points of tension that may affect the future of the Arctic. Further research should include a more detailed analysis of the role of other international actors, such as the US, the EU or the Nordic countries, which are also developing their strategies towards the Arctic and may influence the dynamics of Russian-Chinese relations. Furthermore, it is necessary to broaden the research to include technological and environmental aspects, including the impact of resource exploitation on the fragile Arctic ecosystem. Analysis of these issues requires an interdisciplinary approach, combining geopolitics, economics, environmental science and international law.

The Arctic remains an area of key geopolitical and economic importance, where the rivalry and cooperation between Russia and China reflect the complexity of international change in the 21st century. The analysis in this thesis reveals both the potential for cooperation and the challenges that may shape the region's future, as well as the relationship between the two countries. The findings of this thesis highlight the importance of the Arctic as a space redefining contemporary geopolitics. The research process indicates a growing interest in Arctic issues in scientific and political fields. Research to date has focused on the region's geopolitics and economics, with limited attention to the relationship between China and Russia in the context of the NSR and PSR. Thus, there is a need to explore this issue further, especially given the dynamic nature of Arctic changes that will affect the area's future.

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Streszczenie

Artykuł wyjaśnia relacje między Chińską Republiką Ludową a Federacją Rosyjską w kontekście ich polityk arktycznych, skupiając się na chińskiej koncepcji Polarnego Jedwabnego Szlaku (PSR) oraz rosyjskiej geostrategii w Arktyce, ze szczególnym uwzględnieniem Północnej Drogi Morskiej (NSR). Arktyka, bogata w zasoby naturalne i strategiczne szlaki handlowe, staje się kluczowym obszarem rywalizacji i współpracy mocarstw. PSR, jako element Inicjatywy Pasa i Szlaku, ma na celu skrócenie tras handlowych między Azją a Europą, dywersyfikację dostaw surowców oraz zwiększenie wpływów Chin w regionie. Rosja traktuje NSR jako fundament suwerenności i bezpieczeństwa gospodarczego, dążąc do utrzymania kontroli nad szlakiem. Współpraca między państwami obejmuje projekty energetyczne (np. Yamal LNG, Arctic LNG-2) i rozwój infrastruktury, przynosząc wzajemne korzyści, ale ujawnia także napięcia wynikające z różnic w podejściu do zarządzania NSR, interpretacji prawa międzynarodowego oraz konkurencji o zasoby. Artykuł identyfikuje zarówno synergie, jak i potencjalne konflikty, wskazując na złożoność relacji chińsko-rosyjskich w Arktyce oraz ich znaczenie dla globalnej geopolityki. Analiza opiera się na interdyscyplinarnym podejściu, łączącym geopolitykę, ekonomię i prawo międzynarodowe, i podkreśla potrzebę dalszych badań nad dynamiką tych relacji w kontekście zmieniającego się środowiska arktycznego.

Słowa kluczowe: Arktyka, geostrategia, Chiny, Rosja, Polarny Jedwabny Szlak, Północna Droga Morska.