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China's Polar Silk Road: Opportunities and Challenges for Nordic Arctic

Mustafa TÜTER*

Abstract

Recent global and environmental changes have marked the increasing significance of the Arctic region. With the adoption of the Polar Silk Road (PSR) policy framework by China, emerging opportunities and challenges for Nordic countries in the region have received wider attention.

This article mainly explores several plans and projects regarding the development and utilization of Arctic sea routes under the shadow of increasing global uncertainties. It suggests that sides can facilitate efforts toward convergent preferences in bilateral and multilateral contexts for achieving greater benefits from integrated projects within the framework of the PSR. Despite all significant evidence for the improvement of China-Nordic cooperation, obstacles need to be overcome by focusing on coordinated policies toward global governance, accommodating common interests, and promoting sustainable development.

Keywords: China, Polar Silk Road (PSR), China-Nordic cooperation, Arctic governance, sustainable development

1. Introduction

The Arctic region has been significantly affected by the impacts of climate change and globalization in the last few decades. The Arctic sea ice has been melting rapidly because of global warming. As a result of this environmental change, access to natural resources and the establishment of new maritime sea routes in the Arctic region has drawn global attention. Most importantly, the idea of the North-East Passage (NEP) has led many countries to consider how to utilize new commercial opportunities through the maritime route of the Nordic and Russian Arctic rather than traditional routes along the Suez Canal. On the other hand, China's growing interest in the Arctic region has become evident since 2013. China geographically defines itself as a "Near-Arctic State" which claims to be one of the continental states in the Arctic Circle. China improves its connections with changing regions especially by focusing on the impacts of the Arctic climate system, infrastructure development and finance, and resource exploration and exploitation activities. In addition to that, China's shipping companies are actively involved in pilot voyages via the Northern Sea Route. In order to incentivize the complementary nature of two major production and consumer markets of Asia and Europe, China demonstrates significant efforts to promote cooperation with Nordic countries. China's active engagement with the Arctic Council indicates its receiving attractiveness to the relevant Arctic countries as

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well as its determination to contribute to global governance. By recognizing China's globalized interest in the Arctic region, it can be understood how China's current foreign policy widens its scope in a search for obtaining a global role in world politics today.¹

Recent policy-related studies have reflected considerations upon China's primary interests in the Nordic countries.² Some of them especially emphasize the significance of economic interests while others point out long-term implications for the security environment. In an attempt to combine both benefits and costs of China's engagement with the Nordics, there are some rationalist evaluations of China-Nordic cooperation in terms of Nordic countries' bilateral relations with China.³ From an institutional perspective, China's growing role in the Arctic is examined through different aspects including its inclusion in the Arctic Council,⁴ impacts on the EU,⁵ and the investigation of new possibilities for emerging governance structures with an emphasis on China-Nordic sub-regional cooperation.⁶ Even some studies have begun to explore the long-term institutional implications not only for Europe but also for the East Asian reorganization. With the globalization of the Arctic region, the main focus of research has shifted towards the efforts for framing the Polar Silk Road in terms of its economic, social, and environmental impacts. However, after intensifying conflict and following the war in Ukraine, the changing geopolitical context has become prominently critical. Subsequently, the emergence of triangular relations among China, Russia, and the Nordic countries concerning the Polar Silk Road and trans-Arctic connectivity has drawn particular attention.⁹ Notwithstanding, China's modification of its BRI policy with a green development vision has

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¹ Marc Lantaigne and Ping Su, "China's Developing Arctic Policies: Myths and Misconceptions", *Journal of China and International Relations* 3, no. 1 (2015): 1-25.

² Jerker Hellström, "China's Political Priorities in the Nordic Countries: From Technology to Core Interests", (Oslo: Norwegian Institute of International Affairs, 2016).

³ Andreas B. Forsby, *Nordic-China Cooperation: Challenges and Opportunuties*, (Copenhagen: Nordic Council of Ministers, 2019).

⁴ Michael Kulth and Kennet Lynggaard, "Small State Strategies in Emerging Regional Governance Structures: Explaining the Danish Advocacy for China's Inclusion in the Arctic Council", *European Politics and Society* 19, no. 1 (2018): 103-119.

⁵ Thomas Christiansen and Richard Maher, "The Rise of China-Challenges and Opportunities for the European Union", *Asia Europe Journal* 15, no. 2 (2017): 121-131.

⁶ Weipeng Zhang and Yu Xiaofeng, "Institutional Approaches to Deepening China-Nordic Sub-Regional Cooperation", *China International Studies* 76, no. 3 (2019): 148-165.

⁷ Valeriy P. Zhuravel, "China, Republic of Korea and Japan in the Arctic: Politics, Economy, Security", *Arctic and North* 24, no. 3 (2016): 99-126.

⁸Yang Zheng, "China-Nordic Blue Economic Passage: Basis, Challenges and Paths", *China International Studies* 78, no. 5 (2019): 29-49.

⁹ Reinhard Biedermann, "Exploring Sino-Russian-Nordics Triangular Relations: Complex Balancing Along The Polar Silk Road", *Journal of Contemporary European Studies* (2021): 1-17.





also received wider attention with rising expectations for its commitment to global governance and sustainable development goals.¹⁰

While existing literature has been largely concentrated on China's strategic interests in the Arctic region and its bilateral relations with the Nordic countries, the emerging opportunities, as well as the challenges resulting from China's PSR, have received less attention. It is particularly important to recognize how China's new policy framework of the PSR contributes to its broader Arctic diplomacy and attempts to develop appropriate collaborative partnerships for global governance concerning sustainable development goals. After the Arctic sea routes were officially incorporated into the BRI, the Arctic region has gained a globalized character and the policy approaches of relevant countries have also been altered. Accordingly, the potential economic and commercial opportunities have been widened with accelerated efforts for improving the regional interconnection between Northern Europe and East Asia. This article mainly analyzes the evolution of China's Arctic policy with a focus on the development and utilization of the Arctic sea routes through specific plans and projects under the framework of PSR. But, it particularly identifies the emerging opportunities and challenges for improving broader cooperation with the Nordic countries under new changing international circumstances. Even though China's PSR faces considerable difficulties in its future development, it is suggested that China-Nordic cooperation can be facilitated through integrated projects of the PSR especially by focusing on the opportunities offered by green development promotion. In addition to the initial focus on maritime cooperation for the Arctic regional development, the commercial implications of the PSR can be extended into other fields that China has begun to offer as a potential collaborative partnership opportunity. Thus, by applying the international political economy perspective to China-Nordic cooperation, this research investigates the future possibilities of deepening interactions between the two sides. It aims to contribute to filling the gap in the existing literature by addressing the new commercial opportunities that are likely to provide greater mutual benefits for all stakeholders of the Arctic region as well as the global governance development.

As an empirical case study, this research conducts a policy-oriented approach to conclude the implementation of China's PSR in the Nordic Arctic. It is analyzed through

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¹⁰ Nengye Liu, "Will China Build a Green Belt and Road in the Arctic", *Review of European Comparative and International Law* 27, no. 1 (2018): 55-62.





remarkable academic works that have made theoretical and practical contributions. It pays particular attention to the official policy documents as well as speeches and statements made by state officials as reliable primary sources. The practical impact on policy development is based on suggestions identified with potential improvements towards the China-Nordic cooperation. The qualitative method is used throughout the research based on interpretations of official documents, newspapers, Western, Chinese, and Russian scholarly publications, and think tank policy reports.

This article is structured into three main parts. The first part explains the theoretical perspective of the research by making a distinction between the two different political economy approaches to foreign policy analysis of state-led developmentalism. The second part introduces the evolution of China's Arctic policy with particular attention to its new priorities and orientations. The new policy framework of the PSR is identified with its main components in which the China-Russia cooperation has gained a central place in the Arctic regional connectivity as a consequence of economic realignment between the two countries. The third part particularly focuses on the analysis of emerging opportunities and challenges for the Nordic Arctic which indicates that the implications of geopolitical shift tend to create risks for further cooperation between China and the Nordic countries while other opportunities suggest greater benefits for extended collaborations. In this part, the developmental, social, and environmental challenges are also examined to address the limitations as well as requirements for the future development of China-Nordic cooperation.

2. Theoretical Framework

China's growing economic interest in the Arctic region can be better explained from the perspective of the international political economy. Theoretically, the concept of a 'developmental state' is broadly used for examining the domestic politics of East Asian states. It is one of the central concepts to identify the economic and political systems of Japan, South Korea, Vietnam, and China. The developmental state is characterized by the guidance and support of interventionist government for social-economic development by making emphasis on industrial growth within the capitalist environment. 11 And it is based on the fundamental

¹¹ Chalmers Johnson, MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975, (Stanford: Stanford University Press, 1982).





idea that latecomers in the world economy require a centralized approach to industrialization and economic growth. 12

Until recently, studies on developmental state and state-led developmentalism mostly concentrated on domestic politics and they had less to contribute to the explanations of foreign policy linkages. 13 However, as East Asian states' engagements with the world economy considerably increased, the term 'economic diplomacy' appeared as a new form of analysis for their foreign policies. It can be broadly defined as "the process of international economic decision-making" which is associated with a country's national interest in terms of economic prosperity or political stability. 14 By definition economic diplomacy contains a practical understanding of foreign policy analysis in capturing the interaction between economic/commercial and political interests. In addition to that economic diplomacy is also understood as "the pursuit of economic security within an anarchic system" by incorporating the security dimension of foreign policy practice. 15 In this regard, to protect their national interests, governments pursue economic diplomacy by using different instruments that can be considered relatively more economic or political. In terms of diplomatic tools and purposes, economic diplomacy can be categorized into five different strands such as commercial diplomacy, financial diplomacy, trade diplomacy, inducements, and sanctions. Commercial diplomacy, for instance, involves certain cooperative efforts employed by government and business actors, such as trade promotion, investment promotion, or tourism promotion, to achieve economic purposes.¹⁶

Even though both share the same point of departure, which is a developmental state, there is another theoretical explanation to address the linkage between domestic politics and foreign policy. Based on the assumption that developmental states were transformed as they engage more with the world economy should be taken into account. By referring to their

¹² Alexander Gerschenkron, *Economic Backwardness in Historical Perspective*, (Cambridge: Harvard University Press, 1962).

¹³ Maaike Okana-Heijmans, "Japan's 'Green' Economic Diplomacy: Environmental and Energy Technology and Foreign Relations", *The Pacific Review* 25, no. 3 (2012): 339-364.

¹⁴ Nicholas Bayne and Stephen Woolcock, "What Is Economic Diplomacy?," in *The New Economic Diplomacy: Decision-Making and Negotiation in International Economic Relations*, ed. Nicholas Bayne and Stephen Woolcock, (Farnham and Burlington: Ashgate Publishing, 2011).

¹⁵ Maaike Okana-Heijmans, Conceptualizing Economic Diplomacy: The Crossroads of International Relations, Economics, IPE and Diplomatic Studies", *The Hague Journal of Diplomacy* 6, (2011): 7-36.

¹⁶ Aki Tonami, Asian Foreign Policy In A Changing Arctic: The Diplomacy of Economy and Science At New Frontiers, (New York: PalgraveMacmillan, 2016).



adaptive nature, pragmatic orientations of developmental states seek to generate capital resources and finance their economic modernization in a way that state-led liberalism or I prefer to use developmental pragmatism, takes the lead in managing their external economic relations.¹⁷ In this understanding of state-led developmentalism, states' economic engagements are embedded within a capitalist system, which is called "alliance capitalism".¹⁸ And this embeddedness for building collaborative partnerships takes place through their globalized networks. It refers to the inner transformation of state capitalism from states' full control over the globalization process to more collaborative, alliance-based, and open-globalized codevelopment models to utilize the contemporary globalization process. Within this contemporary context, state capitalism 2.0, as the term used by some scholars, represents a new hybrid form of capitalism.¹⁹

Concerning identifying the evolving nature of the "global network state developmental model", some studies conduct empirical quantitative research with a particular focus on Chinese globalizing corporate networks. These studies bring to the conclusion that foreign policies are not formulated and implemented by only governments but through a complex network of policy linkages. They demonstrate that network ties have already been formed between Chinese and international business actors with substantial transnational linkages and hybridized model of engagement. Ontrary to the arguments against increasing the expansion of Chinese state-owned oil companies on the global stage, they even illustrate that Chinese companies largely cooperate with their Western counterparts and participate the capitalist competition. And it is also important to see that transnational linkages of Chinese corporate networks do not represent a lower level of engagement with European companies than that with US companies.

Given the fact that China's economic interests are the driving force in its engagement with the Arctic region and that its bilateral relations with the Nordic countries present a unique

¹⁷ Mustafa Tüter, "Japan's New Model of Engagement with Belt and Road Initiative: Economic Statecraft, Developmental Pragmatism and Institutional Shaping", *Journal of Civilization Studies* 6, no. 1 (2021): 123-142.

¹⁸ Victoria Higgins, *Alliance Capitalism, Innovation and the Chinese State*, (New York: Palgrave-Macmillan, 2015).

¹⁹ Aldo Musacchio and Sergio G. Lazzarini, "Leviathan in Business: Varieties of State Capitalism and Their Implications for Economic Performance", Harvard Business School Working Paper, 30 May 2012.

²⁰ Nana' de Graaff, "China Inc. Goes Global: Transnational and National Networks of China's Globalizing Business Elite", *Review of International Political Economy* 27, no. 2 (2020): 208-233.

²¹ Nana' de Graaff and Bastiaan van Apeldoorn, "US Elite Power and the Rise of 'Statist' Chinese Elites in Global Markets", *International Politics* 54, (2017): 338-355.



commercial diplomatic logic, the latter theoretical approach fits better to this empirical research subject in explaining how China's policy of PSR is implemented towards Nordic Arctic. The geographical distance should also be taken into consideration, which makes a remarkable difference, for instance, if compared with China's economic diplomacy towards Southeast Asia, when making theoretically and empirically relevant accounts of foreign policy analysis. Nevertheless, it is worth noting that the former economic security-based approach could still be valid if the commercial diplomacy aspect is taken specifically for analyzing the research subject.

3. China's Evolving Policy Towards the Arctic Region

The relatively new phenomenon of the "globalization of the Arctic" broadly coincided with China's multidimensional and multi-faceted diplomatic approach toward the Arctic region. ²² China's overall Arctic policy as a way of engaging with the Arctic governance involves various connected policy issues ranging from regional development to traditional and non-traditional security, and from science and technology cooperation to the environment.²³ Additionally, it also presents how China institutionalizes its policies toward Arctic governance in a multilevel approach.²⁴ When the Arctic region was officially incorporated into the BRI, these issues were reformulated according to the needs of China's active engagement with the region. In this regard, due to the inner development of the BRI, the PSR framework mostly reflects the central concerns about infrastructure development and finance and energy-related projects. However, since China's connectivity cooperation with Russia was successfully reached, its leading role in Arctic shipping was also enhanced. Subsequently, China's policy concentration shifted more towards Nordic Arctic and the utilization of new shipping routes also became a relatively more important issue. China is the only country that is capable of sending ships across all three routes defined by the PSR. The effectiveness of international trade shipping is supported by investments in ports and energy supplies, which makes the Arctic sea routes more viable and cost-effective.

²² Ye Jiang, "China's Role in Arctic Affairs in the Context of Global Governance", *Strategic Analysis* 38, no. 6 (2014): 913-916.

²³ Pei Zhang and Jian Yang, "Changes in the Arctic and China's Participation in Arctic Governance," in *Asian Countries and the Arctic Future*, ed. Leiv Lunde, et. all. (Singapore: World Scientific, 2015): 217-235.

²⁴ Reinhard Biedermann, "The Polar Silk Road: China's Multilevel Arctic Strategy to Globalize the Far North", *Contemporary Chinese Political Economy and Strategic Relations: An International Journal* 6, no. 2 (2020): 571-615.



Under new global circumstances, for assessing future development and utilization of Arctic sea routes through the PSR, several factors need to be evaluated. ²⁵ First of all, it is directly determined by increasing international trade demand. It is important to maintain a sustainable cargo base, stable transit demand, and year-round operation. All those are affected by the improvement of navigational conditions on traditional routes, including monitoring, marine search, and rescue infrastructures, and practices for safety measures. It means that maintaining navigational safety and security in trans-Arctic shipping transportation is crucial. Second, the PSR's effectiveness is affected by the fluctuations in international oil and gas prices. With the impact of the Ukraine war global uncertainties about the energy market have arisen. And third, the development of renewable energy sources is required to support the efficient implementation of PSR. The last one can especially be a driving force for the future development of China-Nordic cooperation.

3.1. China's New Policy Framework of PSR: Priorities and Orientations

China's Arctic policy was generally oriented towards achieving four main ultimate goals: building a solid Chinese research capacity, accessing energy resources and minerals, ensuring access to the Arctic sea lanes, and being an active player in the evolving Arctic governance regime. ²⁶ Following those overall policy goals, China's PSR was first introduced by the Chinese government in the document for international cooperation on the Maritime Silk Road. ²⁷ The main component of China's Maritime Silk Road, the 21st Century Maritime Silk Road, was extended by two additional frameworks, and the PSR was particularly acknowledged in the White Paper on China's Arctic Policy in early 2018.

In its policy formulation, China promotes the PSR as an integral part of its Arctic policy and an extension of the BRI. Building international cooperation in the Arctic region through the development and utilization of major shipping routes and coastal areas has become China's policy priority. By concentrating on the development of the North-East Passage (NEP), which aims to connect the Russian Arctic with the Nordic Arctic, it supports infrastructure building while pursuing coordinated joint efforts towards trade and investment cooperation with relevant

²⁵ Jian Yang and Long Zhao, "Opportunities and Challenges of Jointly Building of the Polar Silk Road: China's Perspective", *Outlines of Global Transformations: Politics, Economics, Law* 12, no. 5 (2019): 141-142.

²⁶ Zhang Xia, China's Arctic Interests and Policy, (Shanghai: Current Affairs Publishing House, 2015).

²⁷ "Full Text: Vision for Maritime Cooperation Under the Belt and Road Initiative", *Xinhuanet*, 20 June 2017. http://english.www.gov.cn/archive/publications/2017/06/20/content_281475691873460.htm (16.07.2022).



countries in the Arctic region. Chinese companies have been actively involved to explore new commercial opportunities by navigating via NEP. This policy orientation is proposed by the construction of the "blue economic passage" which envisions connecting Europe via the Arctic Ocean. ²⁸ However, the blue economic passage does not only aim to establish maritime interconnection, but it also involves broader maritime cooperation with the Arctic countries such as the promotion of knowledge and technology transfer and green development. ²⁹

After the PSR framework was adopted by China, its Arctic policy was modified and identified with three primary goals: participating in Arctic governance, improving common interests, and promoting sustainable development.³⁰ However, the basic suspicions towards the PSR are shaped by certain concerns raised by the Nordic states, such as China's population size and its increasing interest in natural resources. Additionally, some of the countries are especially concerned with China's long-term strategic objectives, even the possibility to deploy military presence in the Arctic.³¹ In this sense, China's increased strategic cooperation with Russia has not been politically endorsed by the Nordic states in recent years. From another perspective, some scholarly debate also emphasizes that the Northern Sea Route (NSR) has become identical to the PSR after China's ambitious involvement in the region.³²

All relevant countries in the Arctic region have attempted to produce appropriate policy responses according to the new changes in the international environment. Given the opportunities and challenges they face, they must comprehend new development strategies in the utilization of Arctic shipping. By signaling their changing attitudes towards adaptation to new commercial opportunities, they already made modified policy decisions. While Iceland took the lead to focus on upcoming opportunities resulting from the new Arctic shipping routes, Sweden made a call for efficient and multilateral cooperation by putting reservations on the negative environmental impacts.³³ Finland, however, demonstrated its strong interest in the

²⁸ Ibid

²⁹ Yang and Zhao, "Opportunities and Challenges", 132.

³⁰ "Full Text: China's Arctic Policy", (Beijing: State Council Information Office of China), 26 January 2018. http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm (13.07.2022).

³¹ "China Unveils Vision for 'Polar Silk Road' Across Arctic", Reuters, 20 January 2018.

³² Nicolas Groffman, "Why China-Russia Relations Are Warming Up in the Arctic", *South China Morning Post*, 17 February 17 2018.

³³ "A Parliamentary Resolution on Iceland's Arctic Policy", (Reykjavik: Ministry of Foreign Affairs of Iceland), 28 March 2011. "Sweden's Strategy for the Arctic Region", (Sockholm: Ministry of Foreign Affairs of Sweden, 2011). Gudlaugur T. Thordarsson, "Iceland-China Relations Will Continue to Strenghten", *China Daily*, 6 September 2018.





development of the maritime industry and shipping.³⁴ On the other hand, Russian President Putin stated that the PSR will contribute to the improvement of the NEP and eventually become "a globally competitive transport artery" with a lesser cost of services, safety, and quality.³⁵ So, all relevant countries are mindful of the future significance of new shipping routes in the Arctic region and give priority to infrastructure development and investment for the utilization efforts.

For achieving convergence of different national interests and priorities of relevant countries, China follows a path through bilateral and multilateral cooperation in its growing participation in Arctic affairs. China advocates multilateral cooperation for building the PSR, especially emphasizing the need to develop a balanced approach between the development and protection of the Arctic region. In addition, the PSR is also perceived by China as a pragmatic platform for bilateral and multilateral cooperation not only among Arctic countries but also with non-Arctic countries. In practice, China conducted bilateral consultations on Arctic affairs and established regular dialogue mechanisms with all Arctic countries at the bilateral level. For instance, China and Iceland signed several bilateral agreements including the Framework Agreement on Arctic Cooperation. Furthermore, China, Japan, South Korea, and some other countries, as potential users and investors, joined in discussions on the Arctic shipping issues for establishing mutually beneficial cooperation. The provided in the Arctic shipping issues for establishing mutually beneficial cooperation.

Although China demonstrates its interest in the exploration of Arctic resources in the region, sharing scientific knowledge for the protection of the Arctic ecosystem also plays a significant role in its Arctic diplomacy. Since the Arctic region receives the most direct impact of climate change, the development and utilization of Arctic resources should require a perspective of sustainability concerning environmental risk, production safety risk, and ecological sensitivity assessments. Within the framework of PSR, China promotes contribution to scientific research to create a joint responsible action against global challenges. Moreover, when the operations of Arctic shipping routes are concerned, China pays considerable attention

³⁴ "Finland's Strategy for the Arctic Region Government Resolution", (Helsinki: Prime Minister's Office of Finland), 23 August 2013.

³⁵ Vladimir Putin, "Speech at the One Belt, One Road International Forum 2017", 14 May 2017.

³⁶ "Chinese Premier Wen Jiabao Pays Official Visit to Iceland", Embassy of the People's Republic of China in the Republic of Iceland, 25 April 2012.

³⁷ Mia Bennett, "China, Japan and South Korea Hold Their Own Arctic Dialogue", *Arctic Today*, 15 June 2017.



to navigation security. For instance, China conducts comprehensive studies and hydrographic surveys for playing an active role in formulating navigational rules for Arctic shipping.³⁸

China is committed to following the UN 2030 Sustainable Development Goals. It pursues a multilateral approach for making cooperation across various sectors, including the green economy, environment, health, and infrastructure. The desired coordination among Arctic states, non-Arctic states, and nonstate actors can only be achieved if the balance between economic development and environmental protection is maintained. The PSR prioritizes addressing this urgent necessity by enhancing technical standards and investment conditions. The PSR framework also aims to develop appropriate solutions for the elimination of digital gaps by creating effective transportation and communication systems and facilitating infrastructure and digital network construction.³⁹

One of the most promising aspects of the PSR for Nordic countries is represented by China's promotion of green technology solutions. The unique nature of the Arctic region under changing environmental circumstances requires well-planned green solutions. Given the past successful examples of collaborations between the Chinese and Nordic enterprises, there appears growing potential for improving cooperative efforts, especially in the developing parts of the Arctic region. However, the expected economic benefits from new shipping routes cannot be attained at the expanse of environmental costs. The PSR is designed to integrate economic development with green technology progress. In this regard, China's increasing technological innovation capacity provides some advantages to increasing the attractiveness of the PSR. Related to China's technological innovation capabilities, the PSR also focuses on clean energy cooperation with the Arctic countries. In the construction of Arctic infrastructure, creating sustainable energy systems is encouraged for achieving low-carbon development goals. 40

³⁸ Qiang Zhang, Zheng Wan and Shanshan Fu, "Toward Sustainable Arctic Shipping: Perspectives from China", *Sustainability* 12, (2020): 1-12.

³⁹ Yang and Zhao, "Opportunities and Challenges", 136.

⁴⁰ Lucia Mortensen, Anne Merrild Hansen and Alexander Shestakov, "How Three Key Factors Are Driving and Challenging Implementation of Renewable Energy Systems in Remote Arctic Communities", *Polar Geography* 40, no. 3 (2017): 163-185.



3.2. China - Russia Arctic Cooperation: Establishing Energy-Driven Regional Connectivity

In the last decades, China-Russia strategic cooperation has improved to a significant level. To deepen this strategic cooperation, both countries now move towards jointly advancing comprehensive social and economic development. In terms of the rising strategic value of the Arctic region, China and Russia share overlapping and complementary interests in deepening pragmatic cooperation. For the Russian side, the Arctic region offers new opportunities for further integration into the global economy and modernization of the energy industry. For the Chinese side, however, it is important to shape global governance mechanisms through establishing collaborative partnerships based on common interests which are enhanced by regional interconnectivity. On this rational foundation of mutually beneficial strategic partnership, China provides funds, technologies, and resources for Arctic development in exchange for getting Russia's political support in Arctic affairs. Russia is certainly the most important partner for China with its largest geography and population in the Arctic region. So, both countries are proceeding to deepen their strategic cooperation in participating in new plans for the Arctic sea routes, infrastructure investment, and energy projects within the context of BRI maritime cooperation in general and the PSR framework in particular.

At the political level, both the Chinese and Russian governments have reached an agreement to move further cooperation in the Arctic by organizing regular meetings. At the present stage, both governments are negotiating the Memorandum of Understanding on transportation in Polar Waters for establishing a legal basis for policy coordination. At the commercial level, the key aspect is to extend cooperation in infrastructure development. The Chinese companies have become increasingly attractive for the construction of Russia's Arctic energy and transportation infrastructure projects. The National Export-Import Bank of China and the China Development Bank have made a huge investment in the Yamal LNG project which is the largest energy and infrastructure complex in the Arctic. In addition, China and Russia also agreed to sustain their cooperation on the Arctic LNG 2 project which makes China-Russia Arctic cooperation more significant in the future.

⁴¹ "The Polar Silk Road Attracts the World's Attention", *People's Daily*, 28 January 2018.

⁴² "China Lenders Provide \$12 Bln Loan for Russia's Yamal LNG Project-Sources", *Reuters*, 29 April 2016.

⁴³ "NOVATEK and CNOOC Sign Share Purchase Agreement for Arctic LNG 2 Stake, *Novatek*, 7 June 2019.





Meanwhile, France's Total oil Corporation participated in the Yamal LNG project by holding a 20 percent stake and also received a 10 percent share in the Arctic LNG-2 project in March 2019. Moreover, France's Total declared that it will be a partner in Arctic LNG transshipment hubs by investing in terminals in Murmansk and Kamchatka. Even though the Yamal LNG project was designed for shipping to the East Asian markets, it can also be piped to Europe. It is expected that 70 percent of the Yamal LNG project will be transported to the East and 30 percent will be transported to the West. This potential energy resource supply is more likely to continue triggering future collaborations between energy consumers in East Asia and Europe for developing infrastructure projects and the NSR.

China and Russia also jointly develop new projects in port and railway infrastructure. For linking Central Russia to Arkhangelsk in the Arctic, China Poly Group Corporation signed an agreement with Russian Interregional JSC Belkomur in 2015. In the construction of the Belkomur railway line, the Arkhangelsk deep-water seaport was also attached to the project. Another significant port project was reported in Russia's Murmansk, which represents a major transportation hub within the Arctic Circle. This project promises that China will continue to play an active role in the development of the NSR from Northern Europe to East Asia through the Arctic. As of 2018, the NSR has become one of the priority areas and a \$10 billion investment was committed by China Development Bank and Russia's Vnesheconombank that would finance around 70 projects in the Arctic. 46

What is striking about the future China-Russia Arctic cooperation is that both countries are willing to build a "new growth pole" by improving their trade interdependence. Economic relations cannot be limited to energy cooperation between China and Russia. In this regard, trade diversification is necessary to deepen the pragmatic cooperation between the two countries. To achieve a more comprehensive structure in trade relations, China and Russia are intended to utilize the PSR framework. With new innovative practices that the PSR would offer, the infrastructure and energy development cooperation can contribute to stimulating their collaborative efforts into more "embedded" development models in multiple dimensions

⁴⁴ "France's Total Will Partner with Russia's Novatek on Arctic LNG Transshipment Hubs", *Arctic Today*, 19 April 2019.

⁴⁵ "Governor Orlov Confirms China as Key Arctic Partner", *The Barents Observer*, 28 December 2017.

⁴⁶ Atle Staalesen, "Chinese Money for Northern Sea Route", *The Barents Observer*, 12 June 2018.



including new investment models, profit sharing methods, and equity structures. ⁴⁷ This achievement is suitable for promoting China-Russia Arctic cooperation with sustainable development goals.

4. Opportunities and Challenges for the Nordic Arctic

With the development of the PSR framework, China's ideas turned into policy action. However, given the difficulties and challenges of its implementation, practices of cooperation between China and the Nordic countries have tended to be slowing down. Each of them has received a particular type of perception of China and experienced a different type of bilateral relationship. ⁴⁸ By putting it simply, China's relations with the Nordic countries can be characterized as broadly pragmatic (Denmark and Iceland), more mercantilist (Finland), or more normative (Sweden and Norway). ⁴⁹ After the Ukraine War, the geopolitical challenges have increased and the triangular relationship between China, Russia, and the Nordics has become dependent upon contingencies. Besides, developmental and social capacity gaps between China and Nordic countries entail some requirements which need to be taken seriously to improve further cooperation. On the other hand, environmental challenges produce increasing sensitivities about domestic public opinions influenced by particular interest groups.

4.1. Opportunities for China-Nordic Cooperation: Building Collaborative Partnerships Based on Commercial Interests

China's economic and diplomatic activities have become more evident in the Arctic region since China gained observer status in the Arctic Council in 2013. In this diplomatic achievement, China's primary supporters were Denmark and Iceland. The first commercial voyage undertaken by China Ocean Shipping Company (COSCO) from a Chinese port to Rotterdam via the NSR was a flagship operation to indicate China's involvement in the Arctic sea routes. This important event symbolized the real globalization of the Arctic. Since China released its Arctic policy in 2018, China-Nordic Arctic cooperation has been accelerated with several PSR plans and projects. China considers the Nordic countries as natural partners for the

⁴⁷ Yang and Zhao, "Opportunities and Challenges", 139.

⁴⁸ Bjornar Sverdrup-Thygeson and Jerker Hellström, "Introduction: Quintet Out of Tune? China's Bilateral Relations with the Nordic States," in *Dragon in the North: The Nordic Countries' Relations with China*, ed. Bjornar Sverdrup-Thygeson (Oslo: Norwegian Institute of International Affairs, 2016).

⁴⁹ "Sino-Nordic Relations: Opportunities and the Way Ahead", (Stockholm: ISDP, 2016), 10, https://isdp.eu/content/uploads/2016/11/2016-Sino-Nordic-Relations-Opportunities-and-the-Way-Ahead.pdf (28.07.2022).





blue economic passage and suggests a 5+1 framework to promote cooperation for achieving the goals of the PSR. ⁵⁰

By looking at China-Nordic relationships closely, it is possible to suggest that each country has followed different trajectories over the years. China has already signed an FTA with Iceland in 2013 and established a strategic partnership with Denmark. The relations with Finland have evolved into a so-called "new type of future-oriented partnership".⁵¹ In addition to the consensus on developing cooperation on maritime economy and global governance, the Nordic countries also offer China an opportunity to take support for its market economy status in the EU. As a matter of fact, all Nordic countries are founding members of the Asian Infrastructure Investment Bank (AIIB), which means they have already met the preconditions for participating in the BRI projects.

For improving regional development and cooperation, China develops projects to increase interconnectivity between land-based economies and marine economies. It initially requires enhancing infrastructure connectivity by implementing innovative solutions like the Arctic Corridor project and promoting digital connection in the region. By looking at leading international companies in the Nordic region, such as Danish Maersk, Swedish ABB, Norway's Statoil, Finnish Nokia, and Metso, it is more likely to expect greater engagements with Chinese companies in the future. ⁵²

In its relations with the Nordic countries, China prioritizes building global infrastructure networks by enhancing digital connectivity. One of the current significant examples of multilateral cooperation in telecommunication has taken place among Chinese, Finnish, Russian, Japanese, and Norwegian partners in building a 10.500-kilometer fiber-optic maritime cable link across the Arctic Circle. In another recent example, the most notable Chinese companies, like Alibaba, JD Group, Huawei, SF Express, and China International E-Commerce C. Ltd, have collaborated with their Estonian counterparts to create a new transit hub of Chinese commodities from e-platforms.

⁵⁰Yang Zheng, "China-Nordic Blue Economic Passage: Basis, Challenges and Paths", *China International Studies* 78, no. 5 (2019): 29-49.

⁵¹ Ibid, 32

⁵² Camilla T. N. Sorensen, "Belt, Road, and Circle: The Arctic and Northern Europe in China's Belt and Road Initiative," in *China's Belt and Road Initiative: Changing the Rules of Globalization*, ed. Wenxian Zhang, et. all. (Geneva: Palgrave, 2018), 106.

⁵³ Elizabeth Buchanan, "Sea Cables in a Thawing Arctic", *The Interpreter*, 1 February 2018.





China also advocates advancing clean energy cooperation with the Nordic countries for taking advantage of the protection and efficient use of Arctic resources. One of the successful examples was made with Iceland in greater cooperation on geothermal energy. Later on, Sino Petroleum Corp (Sinopec) and Iceland's Arctic Green Energy Corporation (AGEC) developed geothermal projects in 40 Chinese cities. Chinese companies have also demonstrated their willingness to invest in potential port projects in the Nordic Arctic such as Finnafjordur and Dryness in the Northeast of Iceland.⁵⁴ China and Sweden made their first joint Arctic project on a satellite receiving station in 2016. The China Remote Sensing Satellite North Polar Ground Station (CNPGS) provides China the capability to access data in the Arctic region. Since Sweden is not a NATO member, China can operate space projects, even for military purposes, in this entirely Chinese-owned station.⁵⁵

China and the Nordic countries are jointly demonstrating efforts to build collaborative partnerships for the realization of the Arctic corridor. ⁵⁶ Finland and Norway have already proposed the Arctic Corridor, which is a comprehensive transportation program connecting the city of Rovaniemi in North Finland with the Norwegian port of Kirkeness. ⁵⁷ The outcome at the end of the program will strengthen the international utilization of the NSR. The program includes several projects such as the rebuilding of the Kirkeness deep-water port and the construction of a railway, a logistic hub in Rovaniemi, and an air logistic hub in Helsinki. The Helsinki air logistic hub is also linked to the Baltic Tunnel, which means that there will be a well-connected Arctic Corridor from Kirkeness to central Europe through the Helsinki-Tallinn tunnel. For China, the Arctic Corridor offers great opportunities for improving cooperation under the framework of PSR. In order to facilitate connectivity between East Asian and European markets, it plays a significant role to integrate the Baltic region and central European market. Chinese companies showed wider interest to invest in costly infrastructure building projects in the Arctic corridor.

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James Kynge, "Chinese Purchases of Overseas Ports Top \$20bn in Past Year", Financial Times, 15 July 2018.
"Kiruna North Pole Ground Station (CNPGS)", Global Security, 2021. https://www.globalsecurity.org/space/world/china/kiruna.htm (13.06.2022).

⁵⁶ Henry Tillman, Jian Yang and Egill Thor Nielsson, "The Polar Silk Road: China's New Frontier of International Cooperation", *China Quarterly of International Strategic Studies* 4, no. 3 (2018): 358.

⁵⁷ "The Arctic Railway: Rovaniemi-Kirkeness", The Arctic Corridor. https://arcticcorridor.fi/wp-content/uploads/jkrautatie4scr2eng.pdf (6.9.2022)



Norway has been one of the largest trading partners of China in Northern Europe. The two countries are intended to complete free trade negotiations successfully. ⁵⁸ Within the framework of PSR, Norway's shipping groups are particularly willing to make collaboration with their Chinese counterparts. ⁵⁹ Due to the key strategic location and appropriate feasible conditions of Kirkeness, future cooperation between China and Norway will be concentrated on relevant transportation and infrastructure building projects. The expected economic benefits are significant for both countries as ships can move cargoes from China as well as oil and gas from the Russian Arctic through the NSR to Kirkeness.

Norway's strategic vision for the Arctic Corridor has been rearticulated officially during their visit to Shanghai in April 2018. It is understood that Norway is well prepared and determined for the opening up to the NSR.⁶⁰ In reality, the Arctic Corridor cannot be regarded as just a plan, but it has been partially experienced before. In 2010, the first non-Russian flagged commercial vessel sailed directly from Kirkenes through the NSR and the Bering Strait to Lianyungang of China.

In Finland, Rovaniemi has a central place for improving relations with China in several different fields such as energy, mining, tourism, information, and communication technology (ICT), and clean technology. The most important infrastructure project, a maritime fiber cable project, that links Europe to Asia via the NSR has been planned to pass through Rovaniemi. Another important project of Helsinki-Tallinn Transport Link has been planned to connect Finland to Estonia under the Gulf of Finland. Once finished, it would become the world's longest undersea rail tunnel. Moreover, it is expected that Helsinki will be the air hub of the Arctic Corridor. It is important to notice that air travel from China to Finland has grown significantly in the last decade. On the other hand, China is projected to be the 8th most popular destination country for the Finish.⁶¹

⁵⁸ "China Says Free Trade Talks with Norway Should be Accelerated", Reuters, 2 August 2018.

⁵⁹ Liang Youchang and Zhang Shuhui, "Norway's Arctic Town Envisions Gateway on Polar Silk Road with Link to China", *Xinhua*, 10 March 2018.

⁶⁰ Atle Staalesen, "Barents Town Envisions Arctic Hub with Link to China", *The Barents Observer*, 6 February 2018

⁶¹ Hu Tao, "Finnair Flying High with China's Ongoing Growth, Development", *China Daily*, 15 June 2018.





4.2. Geopolitical Challenges

The development of Arctic sea routes cannot be regarded separately from global and regional geopolitics. The US's role as an Arctic coastal state produces some uncertainties about the future development of the PSR. The US plays a core membership role in Arctic affairs and has its policy to shape the sea route development of the region. The US-Russia geopolitical tensions have a significant impact on Arctic cooperation in different dimensions. Especially after the Ukraine crisis occurred, the US and its European allies decided to implement sanctions against Russia. Particularly, the restrictions on technology export for deep sea and Arctic resource development as well as the sanctions against Russian oil companies and banks created obstacles to facilitating the efforts for Arctic regional development. The US standpoint at Arctic Council presents accusations against both Russia and China by calling their military and civilian presence in the Arctic provocative and aggressive. Specifically, the US is worried about Russia's increasing military build-up and its regulation over the NSR. On the other hand, the US also expresses its concerns related to China's possible deployment of submarines to the region as a deterrent against nuclear attacks. 62 Moreover, the US has also disagreements with Canada over Northwest Passage (NWP) in terms of conflicting sovereignty claims.⁶³ Canada does not accept the US claims over NWP as legitimate so this additional conflict poses more uncertainty about the future international cooperation on the PSR. It is also important to note that the United Nations Law of the Seas (UNCLOS) is applied to Arctic affairs. However, the only Arctic state which is not a party to the UNCLOS is the US itself.

The basic strategic challenge for the Nordic states in the changing nature of the Arctic region is to confront Russia's geopolitical influence. The security dimension of the triangular relationship between China-Russia and Nordic states has become critical after the Ukrainian War.⁶⁴ The Nordic countries are worried about the revisionist attempts of Russia and concerned with China's possible increasing support for Russia's revisionism. On the other hand, an intensified collaboration between China and the Nordics is perceived as at least problematic for Russia. Russia envisions a more comprehensive plan for the Arctic region than just being a transit territory for the PSR. There are some deep underlying concerns on the Russian side that

⁶² Simon Johnson, "Pompeo: Russia is 'Agressive' in Arctic, China's Work There Also Needs Watching", *Reuters*, 6 May 2019.

^{63 &}quot;Mike Pompeo Rejects Canada's Claims to Northwest Passage as 'Illegitimate'", The Guardian, 7 May 2019.

⁶⁴ Biedermann, "Exploring Sino-Russian-Nordics Triangular Relations", 13.



China would organize a coalition with the Nordics demanding internationalization of the NSR.65 While Russia prioritizes ensuring its own Arctic sovereignty rights, China and other non-Arctic states support the idea of an Arctic as a 'global commons'.

Despite all evidence for the improvement of China-Nordic cooperation, one of the consequences of global geopolitical competition appeared when Norway, Sweden, Denmark, and Finland decided to exclude Huawei from the construction of the 5G networks in 2019. As a diplomatic backlash against China's intensified involvement in Arctic affairs, the cooperative motivations were overwhelmed by economic security interests. And after that China's public perception in the Nordic countries tended to become worsened.⁶⁶ Additionally, the political elites in the Nordic countries have become relatively cautious about future PSR projects while remaining to be friendly with China.

4.3. Developmental and Social Challenges

What makes the PSR distinctive from other routes in the BRI reflects its high potential for technology cooperation. China attempts to engage with developed countries differently by recognizing their demands. The Nordic countries are attractive to Chinese investors mainly because of few regulatory difficulties and relatively easy access to technology acquisitions. On the other hand, the Nordic countries expect more infrastructure building, technology investment, and capital investment from China with an open economy perspective.⁶⁷ At the EU Summit in 2017, Denmark, Sweden, and Finland, supported by the Baltic countries and Netherlands, stood against Germany's proposal to strengthen regulations on foreign investment.⁶⁸ But after the new EU regulation framework was accepted, these countries have begun to prepare national legislation to implement this policy.

Besides the concerns about Chinese investments in strategic assets across Europe, the PSR more broadly is a new experience for China in cooperation with the developed Arctic economies. In this regard, it requires new procedures and decision-making on matters related to diverse and complicated issues such as social development goals, social justice, ecological

⁶⁵ Anna Ryzhova, "On the Prospects for China Cooperation with the Arctic Countries", IOP Conference Series: Earth and Environmental Science, 2020.

⁶⁶ Andreas B. Forsby, Nordic-China Cooperation: Challenges and Opportunuties, (Copenhagen: Nordic Council of Ministers, 2019).

⁶⁷ Ole Hedeman, "Chinese Imvestment in Denmark-Promising Growth Potential for SMEs", Danish-Chinese Business Forum Newsletter 3, 2015.

⁶⁸ Jim Brunsden, "EU Plan to Curb Chinese Takeovers Risks 'Trade War", Financial Times, 17 Sptember 2017.



balance, climate response, and social resource allocation. It is important to notice that most of the Nordic countries still take the lead in technological innovation even if China overtook Iceland and Norway in 2018.⁶⁹ In this context, the need to successfully mind the capacity gaps between the participants will become crucial for the future development of the PSR.

For example, the Arctic region is preoccupied with the social impacts of rapid economic development. As a result of ice melting, easy access to resources and economic development will be improved, but increased commercial activities potentially endanger the traditional way of life for indigenous populations. The issues related to the transformation of indigenous communities cover a wide range of topics from changing migration patterns to land uses, and from identity to social cohesion. As the UN Sustainable Development Goals indicate, rapid developmental changes need to be compensated by social precautions for local development needs such as education, health, language, and culture for fostering the idea of sustainable human development.

The PSR is also predisposed to economic and technological uncertainties. Although the economic capacity of shipping transportation through the NEP has grown significantly, the fluctuations in transit voyages connecting East Asia and Europe still exist. For example, COSCO Shipping announced 14 transit voyages along the NSR in 2019, which is around twice the number in 2018.⁷² However, in terms of the overall number of ships passed through the NSR it is estimated that the numbers are decreasing especially when compared to those in 2013.⁷³ Additionally, as the major part of the NEP, the NSR has experienced considerable capacity growth by Russia's simplifying application procedures for navigation permits and the commercialization process. On the other hand, those new procedures pursued by Russia make other relevant states concerned about Russia's claims over exclusive rights over the NSR even if they help to increase the attractiveness of the NSR for foreign shipping companies.

⁶⁹ In the 2021 global innovation index rankings, Nordic countries have high positions with Sweden as the 2rd, Finland the 7th, Denmark the 9th, Iceland the 17th, Norway the 20th, while China ranks the 12th. https://www.globalinnovationindex.org/analysis-indicator (23.06.2022).

⁷⁰ Kathrin Stephen, "Societal Impacts of a Rapidly Changing Arctic", *Current Climate Change Reports* 4, (2018): 223-237.

⁷¹ Joan Nymand Larsen and Gail Fondahl, *Arctic Human Development Report: Regional Processes and Global Linkages*, (Copenhagen: Nordic Council of Ministers, 2015).

⁷² Malte Humpert, "Chinese Shipping Company COSCO to Send Record Number of Ships Through Arctic", *High North News*, 12 June 2019.

⁷³ Biedermann, "The Polar Silk Road: China's Multilevel Arctic Strategy", 595.





4.4. Environmental Challenges

The potential challenges of global environmental politics are also quite influential for the development of PSR. Different interest groups play significant roles in creating collective responses against global challenges regarding climate, environment, and ecology. They are effective in shaping public opinion in different countries at the domestic level as well as influencing politics at the global level. Although China is carefully committed itself to sustainable development goals within the framework of PSR by declaring that environmental protection is the main focus of all projects implemented, its practices face serious criticism from some NGOs. China tends to consider the positions represented by those interest groups as environmental radicalism, however, it does not help to disregard their influence on the development of PSR.⁷⁴ Some NGOs, like Greenpeace, insist on the idea of prohibition for any sort of development project sensitive to environmental issues. It is noteworthy that Greenpeace puts a considerable measure of effort into agenda-setting toward the future of the Arctic ecosystem in recent years. Many companies are under pressure because of such activism of NGOs on environmental issues in the Arctic. The most notable example was the protest made by the members of Greenpeace against Gazprom in 2013.⁷⁵ This protest generated obstructions to exploration activities and raised tensions with Russian companies and government agencies.

Climate change threatens the Arctic region in terms of several risks such as the destruction of food chains of regional species, barriers to the migration and reproduction of birds and animals, combining with human activities producing pollution. The existing environmental challenges are becoming increasingly critical to the extent that China's economic activities in the Arctic would be restricted by rigid standards. Those restrictions would create costly effects for Chinese enterprises and lead the exploration and exploitation of Arctic natural resources more difficult. The Chinese enterprises need to be mindful that the PSR partners, especially the Nordic countries, give priority to environmental protection over economic gains.

 $^{^{74}\,\}mathrm{Yang}$ and Zhao, "Opportunities and Challenges", 140.

⁷⁵ John Vidal, "Russian Military Storm Greenpeace Arctic Oil Protest Ship", *The Guardian*, 19 Sptember 2013.



5. Conclusion

China's evolving Arctic policy is primarily driven by economic/commercial interests. China demonstrates its commitment to the development of the Arctic region not only by mobilizing its investment and commercial resources but also participating in global governance mechanisms. China's PSR as a new policy framework intends to stimulate the development and utilization of Arctic sea routes by concentrating on the NEP. China's continuing involvement in the Nordic Arctic reveals its aspirations for further cooperation with the relevant countries for improving interregional connectivity. This new policy orientation is proposed by the construction of the "blue economic passage" which envisions connecting Europe via the Arctic Ocean. By integrating the Arctic Corridor into the BRI-related projects, it attempts to enrich the NEP with new commercial opportunities as well as energy-oriented regional connectivity. At the same time, the PSR also involves broader maritime cooperation with the Arctic countries such as the promotion of knowledge and technology transfer and green development. The PSR is designed to integrate economic development with green technology progress in promoting sustainable development goals. In this regard, it presents a high potential to create a convergence of interests among different stakeholders in ensuring their economic and energy interests. The PSR framework is more likely to help to secure and diversify the global energy supply for the Arctic countries, including the Nordic countries, in the following years.

In order to accelerate the improvement of the NSR, the Russian Arctic needs to be successfully integrated with Nordic Arctic. China has gained competitive advantages in the Arctic region with its successful diplomatic moves toward Russia in establishing energy-driven regional connectivity cooperation, most notably with the Yamal LNG project. Their relations have been economically realigned and politically improved. It is reasonable to expect that China will continue to take advantage of this strategic gain in seeking to integrate the whole Arctic region in the medium to long-term planning. By offering feasible integrated connectivity projects to the Nordic countries, it recognizes the complementary aspects of international trade as well as the need to contribute to the requirements of infrastructure development. To deepen collaborative economic partnerships with the Nordic countries, China advocates its use of positive inducements through trade and investment promotion. Moreover, China has also obtained sufficient experience from Southeast Asia in terms of how to transfer its resources in infrastructure development and finance into diplomatic efforts for building more effective



regional governance mechanisms. Most recently, the achievement of the RCEP agreement demonstrates how China is capable of contributing to regional governance by establishing convergence of trade connectivity.

China's efforts to construct blue economic passage along different regions and support the Arctic corridor through feasible strategic locations are largely considered promising projects by the Nordic countries. Such projects offered by China are receiving attractions from all Nordic countries as well as global companies mainly because they help to reduce the costly effects of globalization while increasing to gain additional benefits. Given the past successful examples of collaborations between the Chinese and Nordic enterprises, there appears growing potential for improving cooperative efforts, especially in the developing parts of the Arctic region. The most promising aspect of the PSR for Nordic countries is represented by China's promotion of green technology solutions. The PSR as a long-term interregional development and connectivity initiative involves a set of integrated projects to build strategic partnerships toward international cooperation.

However, related geopolitical, developmental, social, and environmental risks and challenges require more coordinated efforts among stakeholders for further cooperation. In a geopolitical context, Russia has positioned itself strongly in the Arctic region by using military power. Russia takes political risks in considering gaining long-term strategic benefits. Although destabilizing effects of the Ukraine War set some limitations on the efforts to improve regional development and trade connectivity in the Arctic, the geopolitical context is not the only determinant to shape the future direction of regional governance. While Russia is financially dependent on China for its aspirational Arctic plans, China increasingly pursues an inclusive policy for getting five Nordic countries into a 5+1 framework to negotiate projects under the PSR. It is reasonable to expect much closer ties between China and the Nordic countries in the coming years even if Russia's aggression in Ukraine creates constraints on the current triangular relationship. The Nordic countries cannot easily sacrifice their expected benefits from the PSR mainly because they relied on international trade as smaller European countries as well as their energy imperative. Moreover, they are well aware of the increasing strategic value of the Arctic region not only because it is crucial for regional connectivity but also because it provides opportunities to access third markets. On the other hand, for overcoming developmental and social challenges China should take developmental capacity gaps seriously and make rational



calculations about the future economic and technological uncertainties. Because China-Nordic Arctic cooperation represents a relatively new experience, China needs to adopt flexible implementations by learning from an experiment. For environmental challenges, however, the most convenient way to ease the possible tensions resulting from environmental concerns is to make strict regulations and standards which lead the Chinese companies to undertake more social responsibilities.

Finally, China has successfully adapted to the Arctic governance system so far, but emerging new challenges implies the need for more flexible responses in the implementation of the PSR. By leveraging the NSR, China's PSR may potentially bring significant contributions to the development of global governance. First, it creates new opportunities to build more coordinated attempts to accommodate common interests among the Arctic countries at the strategic level. Second, shortened maritime routes for trade help to reduce greenhouse emissions that are associated with marine transportation. Third, it envisions developing hybrid power sources, including LNG, which can be used for multiple purposes with green transportation solutions. Fourth, it helps to reduce costs emanated from the safety and security risks in other traditional routes such as the Cape of Good Hope and the Suez Canal. Fifth, it promotes renewable energy development through technology innovation. China's Arctic diplomacy is more likely to maintain a multilateral approach based on the principle of sustainable development, mutual consultation among stakeholders, and a multi-dimensional participation model for long-term projects. China does not only promote coordination and dialogue at multilateral platforms but it also advances bilateral dialogues on the PSR with other countries. It means that China's multilateral approach gives special importance to high-level trilateral dialogues on Arctic issues among multiple actors such as China, Japan, and the Republic of Korea.

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