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# Opportunities and Challenges of Jointly Building of the Polar Silk Road: China's Perspective

**Jian YANG**

PhD in Politics, Vice President, Senior Fellow, Professor  
Shanghai Institutes for International Studies, 15, Lane 195, Tianlin Road, Xuhui District,  
Shanghai, China  
E-mail: yangjian@siis.org.cn

**Long ZHAO**

PhD in Politics, Assistant Director  
Institute for Global Governance Studies;  
Associate Research Fellow, Associate Professor  
Shanghai Institutes for International Studies, 15, Lane 195, Tianlin Road, Xuhui District,  
Shanghai, China  
E-mail: zhaolong@siis.org.cn

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**ABSTRACT.** *Dramatic changes, mainly caused by global warming and globalization in recent decades, have been evident in the Arctic. The peace and stability of the Arctic, scientific research in the region, potential business opportunities and international governance have sparked widespread attention and debates around the globe. The joint establishment of the Polar Silk Road (PSR) is tantamount to international co-operation initiative between Russia, China and the related Arctic countries, which is intended to achieve common development and joint governance of the Arctic through knowledge accumulation, helps to promote interconnectivity and sustainable development in the region. As a part of China's Arctic policy and cooperation between Eurasian Economic Union (EAEU) and the Belt and Road Initiative (BRI), China focuses on*

*the coordination of national interests and strategies of relevant states regarding development of Arctic sea routes and infrastructure, prioritizes knowledge accumulation and scientific research as the guiding principle for cooperation, promotes green technology solutions and humanistic concerns, and recognizes the PSR cooperation as a new growth pole for China-Russia pragmatic co-operation. However, due to fragile natural environment and political, economic and social sensitivities of the Arctic, significant interference of global and regional geopolitics, potential challenges of global environmental politics, Acknowledgement and capacity gaps between participants, economic and technological uncertainties are major challenges for feasibility and efficiency of co-operation, requiring more in-depth scientific research, comprehensive assessments and*

*regular coordination and communication between all stakeholders.*

**KEY WORDS:** *The Polar Silk Road, China-Russia Arctic cooperation, Foreign Policy, International Relations*

Over the past few decades, climate change and globalization have dramatically transformed the Arctic. As a result of global warming, the Arctic sea ice has been melting rapidly, potentially easing access to natural resources and opening up new maritime routes in the region. According to latest research, even if global temperature rises by less than 2 degrees Celsius above pre-industrial levels, the Arctic could see a sea ice-free summer at least once a decade<sup>1</sup>. These changes have increased global attention on potential usage, research, and peace and stability in the region. Among all new commercial opportunities, utilization of the Northeast Passage (NEP) – a maritime route along the Norwegian and Russian Arctic which 37 percent shorter<sup>2</sup> than traditional routes through the Suez Canal – is one of the most dynamic topic.

China is defining itself as an important stakeholder in Arctic affairs and geographically a “Near-Arctic State”, one of the continental States that are closest to the Arctic Circle<sup>3</sup>, which reflects the fact that China has many interlinks with the changing region. For instance, sitting downstream from the Arctic’s climate system, northern China’s climate, biological and environmental systems are directly affected

by changes in the Arctic, Chinese experts have been active in the research projects of several groups under the Arctic Council, China’s funds, markets and proficiency relating to infrastructure construction and resource exploitation are highly valued by some Arctic countries. In particular, Chinese shipping companies are pioneering on pilot voyages via Northern Sea Route – constitutes major part of NEP – to connect two major production and consumer markets of Asia and Europe. With developing practices of cooperation, the significance of the newly proposed idea of the PSR to the Arctic region in political, economic and social patterns, its priorities and difficulties of cooperation, and responsibilities of governments, enterprises and citizens in construction of the PSR have become emerging topics of international debate and discussion.

## 1. China’s conception of jointly building the PSR

The idea of joint establishment of the PSR was first appeared in the Chinese government’s document on the international cooperation on the Maritime Silk Road<sup>4</sup>, which gradually developed during the practice of the Belt and Road initiative, and was fully explained in the White Paper on China’s Arctic Policy published by Information office of State Department in early 2018. The idea at beginning has been expressed in mixed definition, including the Ice Silk Road<sup>5</sup>, Silk Road on

1 Global Warming of 1.5 °C. IPCC. Special Report. Available at: <https://www.ipcc.ch/sr15/>, accessed 12.12.2019.

2 Albert Buixadé Farré, Scott R. Stephenson, Linling Chen and others (2014) Commercial Arctic Shipping through the Northeast Passage: Routes, Resources, Governance, Technology, and Infrastructure. *Polar Geography*, vol. 37, no 4, pp. 298–324. Available at: <https://www.tandfonline.com/doi/abs/10.1080/1088937X.2014.965769>, accessed 12.12.2019.

3 China’s Arctic Policy (2018). *State Council Information Office of China*, January 26, 2018. Available at: <http://www.scio.gov.cn/zfbps/32832/Document/1618243/1618243.htm>, accessed 12.12.2019.

4 Full Text: Vision for Maritime Cooperation under the Belt and Road Initiative (2017). *Xinhuanet*, June 20, 2017. Available at: [http://www.xinhuanet.com/english/2017-06/20/c\\_136380414.htm](http://www.xinhuanet.com/english/2017-06/20/c_136380414.htm), accessed 12.12.2019.

5 Xi’s Visit Witnesses Stronger China-Russia Ties (2017). *China Plus*, July 5, 2017. Available at: <http://chinaplus.cri.cn/news/politics/11/20170705/7787.html>, accessed 12.12.2019

Ice<sup>6</sup> when President Xi Jinping met with Russian leader, and Finland<sup>7</sup>. Based on above mentioned policy and pragmatic practices, China has formulated its own understanding of the PSR.

*First of all, jointly building the PSR is an international initiative which refers to specific region, involving the cooperation in Arctic's major shipping routes and coastal areas.* It focuses on Arctic's geopolitical, economic and social connections to the world by joint efforts by Arctic nations, international organizations and other stakeholders for Arctic governance. According to the conditions for the development and utilization of Arctic shipping routes, the PSR is currently more concentrated in the development of the NEP, connecting East Asian countries with European partners.

*Secondly, the PSR reflects the common policy orientations of Arctic states and other stakeholders towards to new opportunities of the Arctic, in particular for commercial opportunities of development of the Arctic sea routes, while countering enormous ecological and environment challenges with the increase of human activities.* The possibility of commercial use of Arctic shipping routes may significantly shorten the traditional voyage, further enrich the international shipping network, and promote economic and trade relationship of relevant countries and region as whole. The PSR should not be a *patented product* of a individual country, but a new platform for policy coordination and science, industrial, social collaboration among various countries. China advocates multilateral cooperation to jointly build the PSR and focus on the forward-looking investments, focusing on the infrastructure construction

and green development to achieve a balance between development and protection of the Arctic. China's participation to the PSR is also a proactive response to the expectations of some countries, regarding China's relative advantages in capital, technology and talent on the development and utilization of the Arctic.

*Thirdly, the PSR serves one of the most pragmatic platform of bilateral and multilateral cooperation between Arctic and Non-Arctic states.* Although China's perception of changes in the Arctic is direct and rapid, as a Non-Arctic coastal state located beyond the Arctic circle, bilateral or multilateral cooperation based on respect of the sovereignty, sovereign rights, and jurisdiction enjoyed by the Arctic States in this region, respect the relevant marine management policies and willingness of Arctic coastal states are important prerequisite for jointly building the PSR. In practice, China attaches great importance to bilateral cooperation with the Arctic countries, conducts bilateral consultations on Arctic affairs with all Arctic countries, and established regular dialogue mechanisms with all Arctic states. In 2012, China and Iceland signed the Framework Agreement on Arctic Cooperation, which was the first inter-governmental agreement on Arctic issues between China and an Arctic State. In addition, China, Japan, South Korea and other countries have carried out discussions on Arctic shipping issues, promoting the establishment of equal mutual trust and mutually beneficial cooperation among potential shipping route users and investors, China also supports platforms such as "The Arctic: Territory of Dialogue", "The Arctic Circle", "Arctic Frontiers", "The China-Nordic Arctic Re-

6 Xi Stresses Commitment to Good China-Russia Relations (2017). *Xinhuanet*, November 1, 2017. Available at: [http://www.xinhuanet.com/english/2017-11/01/c\\_136720942.htm](http://www.xinhuanet.com/english/2017-11/01/c_136720942.htm), accessed 12.12.2019.

7 China, Finland Vow to Write New Chapter in Bilateral Ties (2019). *Ministry of Foreign Affairs of China*, January 14, 2019. Available at: [https://www.fmprc.gov.cn/mfa\\_eng/zxxx\\_662805/t1629472.shtml](https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1629472.shtml), accessed 12.12.2019.

search Center”, in promoting exchanges and cooperation among the stakeholders, to explore a new model of Arctic international cooperation involving multi-stakeholders.

*Last but not least, the PSR is an integral part of China's Arctic policy and an extension of the Belt and Road Initiative.* As the major global trade partner and a potential user, cooperation on Arctic shipping routes are undoubtedly becoming one of the policy priorities of China. Starting from 2013, Chinese companies have begun to explore the commercial opportunities associated with Arctic shipping routes. The COSCO shipping continued to carry out frequent navigation via NEP, successfully finishing 10 voyages in 2018 along, and has dispatched 15 ships to complete 22 voyages since 2013.<sup>8</sup> This policy orientation has been demonstrated by the Vision for Maritime Cooperation under the Belt and Road Initiative and the Arctic Policy issued by the China, where clearly proposed the construction of the “blue economic passage is also envisioned leading up to Europe via the Arctic Ocean”<sup>9</sup>. The construction of the blue economic passage and eventually the PSR is not only concentrated on maritime interconnection, but also to promote the free flow of marine knowledge, culture, technology and talents, advocates peaceful, green, innovative and win-win maritime cooperation and deepens global significance and humanitarian care of the BRI.

## 2. China's policy orientations towards to the PSR

In general, China's policy goals on the Arctic are: to understand, protect, develop and participate in the governance of the Arctic, so as to safeguard the common interests of all countries and the international community in the Arctic, and promote sustainable development of the Arctic.<sup>10</sup> Unfortunately, many of China's moves relating to the Arctic have been met with suspicion in light of its population size and its status as one of the largest consumers of oil and natural gas products. The “China threat” has become a hot topic that is highlighted in the media worldwide, its increased prominence in the region has prompted concerns from Arctic states over its long-term strategic objectives, including possible military deployment,<sup>11</sup> deliberately compared China's activities in the Arctic with Russia's increased military deployment in its Arctic region. Regarding the PSR itself, it is also discussed in scholarly arguments that Northern Sea Route (NSR) has been renamed to the PSR<sup>12</sup>, which have completely misinterpreted China's policy orientations towards to the PSR.

*Emphases on docking of national interests and strategies of relevant states.* In response to the opportunities and challenges brought about by the Arctic changes, relevant countries have introduced and updated their development strategies, covering various aspects of Arctic shipping. For in-

8 2018 Arctic Voyages of COSCO Shipping Completed Successfully. *COSCO Shipping Specialized Carriers*, October 27, 2018. Available at: <http://www.coscol.cn/News/detail.aspx?id=11857>, accessed 12.12.2019 (in Chinese).

9 Full Text: Vision for Maritime Cooperation under the Belt and Road Initiative. *Xinhuanet*, June 20, 2017. Available at: [http://www.xinhuanet.com/english/2017-06/20/c\\_136380414.htm](http://www.xinhuanet.com/english/2017-06/20/c_136380414.htm), accessed 12.12.2019.

10 Full Text: China's Arctic Policy. *State Council Information Office of China*, January 26, 2018. Available at: <http://www.scio.gov.cn/zfbps/32832/Document/1618243/1618243.htm>, accessed 12.12.2019.

11 China Unveils Vision for 'Polar Silk Road' across Arctic. *Reuters*, January 26, 2018. Available at: <https://www.reuters.com/article/us-china-arctic/china-unveils-vision-for-polar-silk-road-across-arctic-idUSKBN1FF0J8>, accessed 12.12.2019.

12 Groffman N. (2018) Why China-Russia Relations Are Warming up in the Arctic. *South China Morning Post*, February 17, 2018. Available at: <https://www.scmp.com/week-asia/geopolitics/article/2133039/why-china-russia-relations-are-warming-arctic>, accessed 12.12.2019.

stance, one of the principle of the Icelandic Arctic Strategy is “make full use of employment opportunities created by changes in the Arctic region”<sup>13</sup>, especially focuses on opening up new Arctic shipping routes which connect the North Atlantic, the Arctic Ocean and the Pacific. Sweden is calling for efficient, multilateral cooperation on the Arctic, “aiming to prevent and limit the negative environmental impact potentially caused by the opening-up of new shipping routes and sea areas in the Arctic” and “contribute to safer and greener shipping”<sup>14</sup>. One of the priorities of the Finland’s Arctic strategy is “continue to maintain Finland’s position as a leading expert in the Arctic maritime industry and shipping and keep Finnish companies closely involved in development projects in Arctic sea areas”<sup>15</sup>. Coastal states of the Arctic ocean are more focused on utilization of new shipping route and update of related transport infrastructures, especially when Russia has defined “use of the Northern Sea Route as a national single transport communication of the Russian Federation in the Arctic” as one of its national interests in the Arctic<sup>16</sup>.

In the process of participating in the Arctic affairs, China follows the basic principles of “respect, cooperation, win-win result and sustainability”<sup>17</sup>, which suggests that whether bilateral or multilateral

cooperation between China and Arctic countries is included in the framework of the BRI initiative, the Chinese government respects the willingness of Arctic partners, and will rely on the development and utilization of the Arctic sea route with all interested countries, especially Arctic states.

Hence, many Arctic countries see the PSR also as an opportunity and gave positive responses. Finnish President Sauli Niinistö believes that “the Polar Silk Road is not only a plan for more roads, railways and shipping routes, but also a vision for promoting understanding among different peoples”<sup>18</sup>. Iceland’s Foreign Minister, Mr. Thordarson underlined that his “government follows carefully and with interest the Belt and Road Initiative, including the “Silk Road on Ice”, which is focused on opening up new shipping routes through the Arctic.”<sup>19</sup> Russian President Vladimir Putin has expressed that Russia is consistently upgrading maritime, railway and road infrastructure, investing significant resources into improvements to the NEP in order for it to “become a global competitive transport artery”, and more importantly to calling for “completely reconfigure transportation on the Eurasian continent”, by putting “infrastructure projects within the EAEU and the One Belt, One Road initiative in conjunction with the Northeast Passage”<sup>20</sup>.

13 A Parliamentary Resolution on Iceland’s Arctic Policy (2011). *Ministry of Foreign Affairs of Iceland*, March 28, 2011. Available at: <http://library.arcticportal.org/1889/1/A-Parliamentary-Resolution-on-ICE-Arctic-Policy-approved-by-Althingi.pdf>, accessed 12.12.2019.

14 Sweden’s Strategy for the Arctic Region (2011). *Ministry of Foreign Affairs of Sweden*. Available at: <https://www.government.se/49b746/contentassets/85de9103bbbe4373b55eddd7f71608da/swedens-strategy-for-the-arctic-region>, accessed 12.12.2019.

15 Finland’s Strategy for the Arctic Region 2013, Government Resolution (2013). *Prime Minister’s Office of Finland*, August 23, 2013. Available at: <https://vnk.fi/documents/10616/334509/Arktinen+strategia+2013+en.pdf/6b6fb723-40ec-4c17-b286-5b5910becf4>, accessed 12.12.2019.

16 Basics of the State Policy of the Russian Federation in the Arctic for the Period till 2020 and for a Further Perspective, adopted by the President of the Russian Federation, September 18, 2008. *ARCTIS*. Available at: <http://www.arctis-search.com/Russian%2BFederation%2BPolicy%2Bfor%2Bthe%2BArctic%2Bto%2B2020>, accessed 12.12.2019.

17 Full Text: China’s Arctic Policy (2018). *State Council Information Office of China*, January 26, 2018. Available at: <http://www.scio.gov.cn/zfbps/32832/Document/1618243/1618243.htm>, accessed 12.12.2019.

18 China’s Arctic Policy in Line with International Law: Finnish President (2017). *Xinhuanet*, March 7, 2017. Available at: [http://www.xinhuanet.com/english/2018-03/07/c\\_137021608.htm](http://www.xinhuanet.com/english/2018-03/07/c_137021608.htm), accessed 12.12.2019.

19 Thordarsson G.T. (2018) Iceland-China Relations Will Continue to Strengthen. *China Daily*, September 6, 2018. Available at: <http://usa.chinadaily.com.cn/a/201809/06/WS5b90702ba31033b4f465477b.html>, accessed 12.12.2019.

20 Vladimir Putin, Speech at the One Belt, One Road International Forum (2017). *President of Russia*, May 14, 2017. Available at: <http://en.kremlin.ru/events/president/news/54491>, accessed 12.12.2019.

*Prioritizes knowledge accumulation and scientific research as the guiding principle for cooperation.* The Arctic is no doubt rich in resources, but is also the region that receives the most direct impact of climate change, climate change is causing major changes in the Arctic, threatening the Arctic ecosystem, including changes in species range, permafrost loss, and destruction of the marine food chain, which demands of utilization and development in a sustainable manner are more urgent than other places. Coal, metals, oil and natural gas, fishery resources and other “Arctic golds” are stored in an fragile environment and harsh production conditions. Therefore, in addition to the exploration of Arctic resources and new shipping routes, all human activities regarding resource exploration require environmental risk, production safety risk and ecological sensitivity assessments. In this sense, the PSR should reflect common exploration of humankind for accumulate knowledge, responsible action and joint response to global challenges, to understand how climate change and human activities pose obstacles to the migration and reproduction of Arctic species, and how environmental pollution such as oil spills can affect fragile marine ecology. The acquisition of knowledge and the response based on scientific researches are necessary for the development the PSR.

Currently, one of the biggest challenges in the year-round operation of Arctic shipping routes is limited monitoring and forecasting knowledge of sea-ice conditions, frequent navigation with limited hydrological data. China is aimed to joint research and data sharing on feasibility and operational safety of the PSR with interested parties. This can occur under various frameworks including the International Arctic Science Committee, Arctic Council working groups, the University of the Arctic, and the Agreement on Enhancing International Arctic Scientific Cooperation,

also through bilateral cooperation. Formulating and implementing mandatory environmental standards and technical requirements based on a solid scientific basis is essential to the PSR. Navigation security in the Arctic shipping routes is one of China's priorities of concerns, which has been conducted comprehensive studies and hydrographic surveys with the aim to improving the navigation, security and logistical capacities in the Arctic region. China abides by the Polar Code, and supports the IMO in playing an active role in formulating navigational rules for Arctic shipping.

Besides conducting research on climate change trends and ecological assessments, innovation in both the natural and social sciences can be promoted by strengthening research on Arctic politics, economics, law, society, history, culture, and the management of human activities. In addition, sustainable development in the Arctic will need to balance development and protection at the international level and catalyze bilateral and multilateral cooperation across various sectors—e.g., the economy, environment, health, and infrastructure. To this end, Arctic states, non-Arctic states, and nonstate actors should coordinate their long-term policies on technical standards and investment of the PSR. Plans for cooperation should address the preservation of ecology and biodiversity, prevention of marine pollution in Arctic sea routes, reduction in marine acidification, and promotion of sustainable fisheries.

*Promotes green technology solutions and humanistic concerns.* Technology serves humanity. The exceptionality of the PSR and Arctic region as whole raising the demand of green economy and green solutions, require both “economic development road map” and the “green technology progress map”. Although the economic benefits driven by the opening up of shipping routes will increase the economic development rate, but extreme weather con-



dition such as low temperatures, magnetic storms will pose a threat to equipment and personnel safety. The core area of Arctic technological innovation need to focus on communications, navigation, infrastructure and logistics, in particular on various scientific monitoring and detection technologies, engineering techniques suitable for Arctic environment, shipbuilding and navigation, resource utilization technologies in permafrost regions and fragile environments.

China attaches importance to both land based and marine based cooperation of the PSR, promotes the interaction between the inland economy and the marine economy through infrastructure connectivity, also encourages the development of technology and equipment that pays attention to environmental protection capabilities and innovative elements in the construction of Arctic infrastructure, focuses on sustainable energy system, including wind power, ocean tidal energy, geothermal energy and hydropower, strengthening clean energy cooperation with Arctic countries, exploring the supply and utilization of geothermal and wind energy, achieving low-carbon development.

Promoting interconnectivity of the Arctic is an important indicator for innovative solutions of the PSR. To achieve a balance between development and protection, China is committed to green solutions of infrastructure construction and digital connection in the region. Norway is actively considering the possibility of greater involvement by Chinese Arctic shipping stakeholders,<sup>21</sup> the Arctic Corridor project – railway project that would

connect the city of Rovaniemi in northern Finland with the Norwegian port of Kirkenes- could be well-suited for cooperation under the PSR framework, parties concerned have come to China to discuss the possibility to cooperate with Chinese companies and the project has a brochure in Chinese.<sup>22</sup> In addition, Chinese government and enterprises are involved in Arctic cooperation in submarine cable construction. The Ministry of Industry and Information Technology of China and China Telecom are working with the Finland on trans-Arctic submarine cable project- a 10,500 kilometer fiber-optic maritime cable link across the Arctic Circle- and will be joined by Russian, Japanese and Norwegian partners<sup>23</sup>.

The Arctic is also home to four million people, including indigenous populations and other residents highly dependent on the Arctic ecosystem. Accelerated ice melting eases access to resources, aiding the economic development of indigenous communities, but increased offshore and onshore commercial activities endanger the traditions and lifestyles of indigenous peoples, who want to preserve the environment and develop it using traditional knowledge. The development of the PSR needs to focus on the UN 2030 Sustainable Development Goals and elimination of digital gaps, by developing effective and convenient transportation and communication system, accelerating infrastructure and digital network construction, promoting people's well-being and economic development, and helping to meet the Arctic local social development education and health , language and cultural needs.

21 Liang Youchang, Zhang Shuhui (2018) Norway's Arctic Town Envisions Gateway on Polar Silk Road with Link to China. *Xinhuanet*, March 10, 2018. Available at: [http://www.xinhuanet.com/english/2018-03/10/c\\_137029993.htm](http://www.xinhuanet.com/english/2018-03/10/c_137029993.htm), accessed 12.12.2019.

22 Arctic Railway Rovaniemi-Kirkenes. *Arctic Corridor*. Available at: <http://arcticcorridor.fi/wp-content/uploads/jkrautatiekiinasr02.pdf>, accessed 12.12.2019 (in Chinese).

23 Buchanan E. (2018) Sea Cables in a Thawing Arctic. *The Interpreter*, February 1, 2018. Available at: <https://www.lowyinstitute.org/the-interpreter/sea-cables-thawing-arctic>, accessed 12.12.2019.

### 3. The PSR: new growth pole of China-Russia cooperation

At present, Sino-Russian relations are at their best in history. The high-level exchanges between the two countries have formed a common practice of mutual exchanges between the heads of state, and established regular exchange meetings and cooperation mechanisms between the prime minister, the parliamentary cooperation committee, and energy, investment, humanities, economy, trade, local, law enforcement, and strategic security. The Sino-Russian Arctic cooperation in this context also has an important realistic basis.

*Consistency and complementarity of interest demands.* Promoting the comprehensive social and economic development in the Russian Arctic region, promoting the development of science and technology related to the Arctic, building modern information and communication facilities, protecting the ecological security of the Arctic and border security are main interests of Russia for its international cooperation in the Arctic. These reflect not only the rising value of the Arctic in terms of strategy, economy, scientific research, environmental protection, sea routes and resources in recent years, but also a strategic orientation made by Russia in the context of the globalization and the coexistence among major powers, aimed for improvement of its importance to global economy and modernization of energy industry. In China's view, issues such as the climate change, environment, scientific research, utilization of shipping routes, resource exploration and exploitation, security, and global governance in the Arctic are "vital to the existence and development of all countries and hu-

manity, and directly affect the interests of non-Arctic States including China",<sup>24</sup> which forms an unity of acknowledge on the significance, goals and values of Sino-Russian Arctic cooperation.

From Russian point of view, the focus of Sino-Russian Arctic cooperation is an opportunity to solve the *bottleneck* problem in terms of funds, technologies and resources for Arctic development, sees China as one of the most promising energy market and shipping consumer. As the largest Arctic country in terms of geography and population, Russia is the most important partner for China in the Arctic affairs. Participation in Arctic sea routes, infrastructure investment and energy projects fall within the scope of plans for deepening pragmatic cooperation between China and Russia and the framework of the BRI maritime cooperation, two countries have overlaps and complementary interests for Arctic cooperation.

*Feasibility of achieving all-level cooperation.* At the political level, the two governments and leaders have reached mutual trust in the Arctic cooperation. For instance, authorities of two countries have held the regular dialogue on Arctic affairs since 2013, and incorporated the contents of Arctic sea routes cooperation in the joint statement. In 2015, leaders signed the *Joint Statement of the People's Republic of China and the Russian Federation on the Construction of the Silk Road Economic Belt and the Construction of the Eurasian Economic Union* in Moscow, officially proposing the goal of "docking cooperation", and in the same year in the Joint Communiqué of the 20th Regular Meeting between Head of governments, proposed to strengthen the cooperation in the development and utilization of the NSR and carry out research on Arctic

24 Full Text: China's Arctic Policy (2018). *State Council Information Office of China*, January 26, 2018. Available at: <http://www.scio.gov.cn/zfbps/32832/Document/1618243/1618243.htm>, accessed 12.12.2019.



shipping.<sup>25</sup> From 2017, President Xi Jinping expressed China's willingness to cooperate with Russia on Arctic sea routes and shipping several times. At present, the transportation departments of China and Russia are negotiating the Memorandum of Understanding on Maritime Cooperation between China and Russia in Polar Waters, constantly improving the policy and legal basis for Arctic cooperation between China and Russia.<sup>26</sup>

At the commercial level, Chinese companies have become the *major force* in the construction of Russia's Arctic energy and transportation infrastructure projects. The National Export-Import Bank of China and the China Development Bank have provided \$10.7 billion to the Yamal LNG project -one of the largest Arctic energy and infrastructure complex in Russia's Arctic region using the South Tambey Field as a resource base- with an output capacity of around 16.5 million tons per year by 2019, and expected to have a total investment of \$26.9 billion. Silk Road Fund has also provided a \$1.2 billion loan for the project.<sup>27</sup> The field's proven and probable reserves are estimated at 926 billion cubic meters, making it the largest Arctic producer of LNG.<sup>28</sup> In addition, NOVATEK signed in April this year with China National Oil and Gas Exploration and Development Company Ltd. (CNOOC, a wholly-owned subsidiary of China National Petroleum Corporation) a binding agreement to enter the Arctic LNG 2 project. Two months later, as part of Saint-Peters-

burg International Economic Forum 2019 held in June, NOVATEK has signed the Share Purchase Agreement with China National Offshore Oil Corporation (CNOOC Ltd.). Under these agreements, two Chinese companies will each acquire a 10% participation interest in Arctic LNG 2 project. The Arctic LNG 2 project envisages the construction of three LNG trains at 6.6 million tons per annum each, based on the hydrocarbon resources of the Utenne-eye field, which under the Russian classification reserves totaled 13,835 million barrels of oil equivalent.<sup>29</sup> With the construction of the Arctic LNG 2 project, the demand for construction and transportation of Arctic LNG projects is expected to continue to increase. It is foreseeable that Chinese shipping companies will continue to be important investors to Arctic LNG projects regarding ship leasing, logistic infrastructure, shipbuilding and etc.

Regarding ports and railways infrastructure, China represents a key partner in the implementation of relevant infrastructure projects, including the construction of the Belkomur railway line and the Arkhangelsk deep-water seaport.<sup>30</sup> In 2015, China Poly Group Corporation as large central state-owned enterprise signed a framework agreement with Russian Interregional JSC Belkomur on the railway integrated project, which including the construction of a new railway 1252 km long, linking Central Russia to Arkhangelsk in the Arctic, and series of ports and resources development projects along the railway. In addi-

25 A Joint Communique on the Results of the 20th Regular Meeting between the Heads of the Russian and Chinese Governments (2015). *Ministry of Foreign Affairs of China*, December 17, 2015. Available at: <http://www.mfa.gov.cn/chn/pds/ziliao/1179/t1325537.htm>, accessed 12.12.2019 (in Chinese).

26 The Polar Silk Road Attracts the World's Attention (2018). *People's Daily*, January 28, 2018 (in Chinese).

27 Final Investment Decision Made on Yamal LNG Project (2013). *Novatek*, December 18, 2013. Available at: [http://novatek.ru/en/press/releases/index.php?id\\_4=812](http://novatek.ru/en/press/releases/index.php?id_4=812), accessed 12.12.2019.

28 Further information on Yamal LNG is available at its official website: <http://yamallng.ru/en/>, accessed 12.12.2019.

29 NOVATEK and CNOOC Sign Share Purchase Agreement for Arctic LNG 2 Stake (2019). *Novatek*, June 7, 2019. Available at: [http://www.novatek.ru/en/press/releases/index.php?id\\_4=3245](http://www.novatek.ru/en/press/releases/index.php?id_4=3245), accessed 12.12.2019.

30 Governor Orlov Confirms China as Key Arctic Partner (2017). *The Barents Observer*, December 28, 2017. Available at: <https://thebarentsobserver.com/en/industry-and-energy/2017/12/governor-orlov-eyes-china-key-arctic-partner>, accessed 12.12.2019.

tion, the Poly Group and COSCO Shipping are considering to invest \$550 million in the construction of the deep-water port of Arkhangelsk.<sup>31</sup> China Poly Group Corporation is reportedly set to invest \$300 million in port facilities in Russia's Murmansk, a major transportation junction within the Arctic Circle, offering a positive signal that China may be taking a more active role in the development of the NSR from Northern Europe to East Asia via the Arctic.

At the scientific level, China has actively carried out Arctic scientific research cooperation with Russia in the multilateral frameworks such as the International Arctic Science Council and the Arctic Council in recent years, to strengthen scientific exchanges on the understanding of the Arctic. In order to implement the Sino-Russian agreement on cooperative research in the Arctic Ocean, the two countries launched the first Arctic joint expedition – a joint expedition of scientists on the Chukchi Sea and the Eastern Siberian Sea in the Russian Arctic Ocean exclusive economic zone – in August 2016<sup>32</sup>, conducting a comprehensive survey on the Arctic Ocean has become a historic breakthrough in the cooperation between two countries in the Arctic.

*The necessity of finding new “growth pole” for pragmatic cooperation.* It is worth noting that although China-Russia pragmatic cooperation has made great achievements in recent years, however, equivalent boost of economic and trade partnership has not been fully stimulated by the high level political-security mutual trust and cooperation, bilateral trade consists relatively limited share of total foreign trade of China. With the continuous development of globalization, the world economy and the global trade pattern have un-

dergone significant changes, exploring the new growth pole of Sino-Russian pragmatic cooperation has become an important mission for both sides. From medium and long-term perspective, the demand and pragmatic cooperation between China and Russia are no longer limited to the relationship between energy consumers and producers, the trade structure is no longer confined to traditional manufacturing and energy resources, and the form of trade is not limited to unilateral investments, it requires adaptation to the current global economic situation, and consistency with the regional environment and of domestic agendas of both countries regarding goals, priorities and capabilities.

Promoting Sino-Russian Arctic sustainable development cooperation with the joint effort on transportation infrastructure and energy projects will not only maintain traditional energy cooperation, but through Yamal LNG and other infrastructure projects which practice innovations on investment models, equity structures, profit sharing methods, will formulate common interests from multiple dimensions, develop new model of mutual beneficial cooperation with shared risks, promote “embedded” development model and win-win results.

#### 4. Challenges remain

Although the top priority of jointly building of the PSR is to promote the protection and utilization of the Arctic, due to its special geographical location and strategic significance, environmental security requirements, vulnerability of natural conditions for operation, unpredictability eco-

31 Nilsen T. (2016) New Mega-port in Arkhangelsk with Chinese Investments. *The Barents Observer*, October 21, 2016. Available at: <https://thebarentsobserver.com/en/industry-and-energy/2016/10/new-mega-port-arkhangelsk-chinese-investments>, accessed 12.12.2019.

32 Xie Chuanjiao (2018) Sino-Russian Expedition Provides Arctic Data. *China Daily*, October 31, 2018. Available at: <https://www.chinadaily.com.cn/a/201810/31/WS55bd9016fa310eff30328591e.html>, accessed 12.12.2019.

conomic benefits, and the geopolitical cooperation or competition of the Arctic countries and relevant stakeholders are constraining prospects of cooperation.

*The significant interference of global and regional geopolitics.* Peace and stability in the Arctic are the basis for the cooperation on the PSR, but the jointly construction of the PSR may devolve into another arena of the geopolitical contest. As an Arctic coastal state, the United States is both a core member in Arctic affairs and an unavoidable player in sea route development. The increasingly chronic US-Russia geopolitical tensions have also impacted their Arctic cooperation to varying degrees. As one of results of the Ukrainian conflict, the United States and its European allies have launched several rounds of sanctions against Russia, the content has been extended to ban the export of technology for deep sea and Arctic resources development, as well as sanctions against Russian oil companies and banks, have affected the speed of development of the Russian Arctic development strategy. Meanwhile, Russia's accelerated military buildup in the Arctic area in recent years has created apprehension and resulted in heightened vigilance from the U.S. The Secretary of State Mike Pompeo's exaggerated accusation on Russia and China at Arctic Council Ministerial Meeting in Rovaniemi -by calling Russia's regulation over the NSR as provocative actions and a pattern of aggressive behavior, accusing China's civilian research presence in the Arctic would strengthen its military presence, including by deploying submarines to the region as a deterrent against nuclear attacks<sup>33</sup> – undoubtedly increases tensions in

the region. It is also worth noting, that the United States has a long contested feud with Canada over sovereign claims through the Northwest Passage (NWP)<sup>34</sup>, when Canada claims sovereignty over it, which been described as *illegitimate claim* by the U.S, creating more uncertainty to the international cooperation of the PSR.

*The potential challenges of global environmental politics.* Global environmental politics is game of different interest groups and values regarding method of response and resource delivery in counteracting global challenges such as climate, environment and ecology, which also formed a harsh public opinion environment for the construction of the PSR. On the one hand, Arctic environmental protection mainly focuses on the principle of sustainable development, considering the Arctic is a region where human society survives and develops, the necessary economic development is inevitable, but it is necessary to protect natural resources, preserve the traditional ecology of indigenous people, protect wild animals and plants, and the pollution caused by economic activities in Arctic sea areas cannot exceed the self-purification capacity of the environment. On the other hand, environmental radicalism represented by some NGO's insists the idea of prohibition of development. The Greenpeace has a strong sense of pessimism and crisis towards the future of the Arctic eco-environment, argued that resource development should be stopped in the Arctic, and material and population growth in the region should be stopped.<sup>35</sup> Many companies are under pressure from environmental protection NGO's on their

33 Johnson S. (2019) Pompeo: Russia Is 'Aggressive' in Arctic, China's Work There Also Needs Watching. *Reuters*, May 6, 2019. Available at: <https://www.reuters.com/article/us-finland-arctic-council/pompeo-russia-is-aggressive-in-arctic-chinas-work-there-also-needs-watching-idUSKCN1SC1AY>, accessed 12.12.2019.

34 Mike Pompeo Rejects Canada's Claims to Northwest Passage as 'Illegitimate' (2019). *The Guardian*, May 7, 2019. Available at: <https://www.theguardian.com/us-news/2019/may/07/mike-pompeo-canada-northwest-passage-illegitimate>, accessed 12.12.2019.

35 Emerging Environmental Security Issues (Monthly Security Scanning-Items Identified Between August 2002 and June 2010). *Millenniumproject*. Available at: <http://www.millenniumproject.org/millennium/env-scanning.html>, accessed 12.12.2019.

development activities in the Arctic.<sup>36</sup> For example, in 2013, members of Greenpeace took the Arctic Dawning to the Gazprom rig on the Pechora Sea oil field, obstructing exploration activities and clashed with Russian companies and governments.

*Acknowledgement and capacity gaps between participants.* Compared with most of the routes in the BRI, the PSR represents higher level of technology in cooperation, representing a more *roundtrip flow* of technology, capital and information. Regarding China's participation, Arctic countries have high expectations for China's infrastructure construction capabilities, technology investment and capital investment, but at the same time follow strict standards of choice. For China, jointly building the PSR would be a new experience in cooperation with developed economies, the social development goals of the developed Arctic economies -social justice, ecological balance, economic development, intergenerational equity, economic ethics, climate response-are more diverse and integrated, the decision-making mechanism of social resource allocation is also complicated, reflects great differences in the pace of procedures and decision-making from China's experiences.

*Economic and technological uncertainties.* The growing demand for transit shipping via the NEP is an important driving force for the construction of the PSR. As the major part of the NEP, the NSR has experienced a seasonal ice-free period in recent years and voyages have also increased significantly. The cargo volume transported via the NSR in 2018 has set a new record of 18 million tons, but transit voyages connecting East Asia and Europe are in

fluctuation. In 2013, the number of transits via the NSR was 71, but it dropped to 23 and 27 in 2017 to 2018 respectively.<sup>37</sup>

Although Russian officials are aiming to increase attractiveness of the NSR for foreign shipping companies, by simplifying application procedure for navigation permits and introducing preferential fees for icebreaking and icebreaking pilotage, promoting its internalization and commercialization process of the NSR. However, barriers at the practical level still exist. For example, amendments are introduced into the Russian Merchant Shipping Code, suggest that pilotage, sanitary, quarantine and other controls, protection and preservation of marine environment in internal sea waters and/or in the Russian territorial sea, icebreaking and icebreaking pilotage in the water area of the NSR, marine transportation of oil, natural gas, gas condensate and coal produced in the territory of Russia and/or in the territory under its jurisdiction, storage of oil and oil products, natural gas (including LNG), gas condensate and coal, if such storage is made on board of a vessel in the NSR water area, should be made exclusively with use of vessels navigating under the Russian state flag.<sup>38</sup> How to maintain balance between commercial utilization and preserving Russia's exclusive rights over the NSR is essential topic of discussion.

The future significance of international transit shipping on the PSR will depend on a number of prerequisites, including international trade demand, sustainable cargo base, stable transit demand and year-round operation, more advanced navigation, monitoring, marine search and res-

36 Koivurova T., Molenaar E.J. (2014) *International Governance and Regulation of the Marine Arctic*. Available at: [http://awsassets.wwf.no/downloads/gap\\_analysis\\_marine\\_resources\\_130109.pdf](http://awsassets.wwf.no/downloads/gap_analysis_marine_resources_130109.pdf), accessed 12.12.2019.

37 *Statistics, Transit Statistics from 2011-2018, Northern Sea Route Information Center*. Available at: <http://arctic-llo.com/category/statistics/>, accessed 12.12.2019.

38 The President has signed the Federal Law on Amending the Merchant Shipping Code of the Russian Federation and Invalidating Specific Provisions of Legislative Acts of the Russian Federation (2017). *President of Russia*, December 29, 2017. Available at: <http://www.en.kremlin.ru/acts/news/56546>, accessed 12.12.2019.

cue infrastructures and practices. In general, the commercial attractiveness of the PSR will be affected by the improvement of navigation conditions on traditional routes, the fluctuation of international oil and gas prices, and the development of renewable energy sources. Therefore, requires more in-depth scientific research and comprehensive discussion on the pace of construction and effectiveness of the PSR.

## 5. Conclusion

Generally speaking, relevant countries have reached a consensus on the necessity and possibility of international cooperation on improvement of Arctic logistic connectivity and Arctic development cooperation at the macro level. However, the related political, economic, social, technical risks impose more coordination in the development focus, cooperation methods and technical standards. China's focus will be tied up to the principle of sustainability, accelerating mutual consultation between leaders and authorities of Russia, Nordic countries and others, in accordance with the multi-actors, multi-dimensional participation model and long term projects. China will promote coordination and dialogue at Arctic Council, Arctic Economic Council, Arctic Science Ministerial and other multilateral platforms, advance bilateral dialogues on the PSR with Arctic states and between high-level tri-lateral dialogues on Arctic issues China, Japan and the Republic of Korea, and actively support platforms such as "The Arctic: Territory of Dialogue", "The Arctic Circle", "Arctic Frontiers", "The China-Nordic Arctic Research Center", in promoting exchanges and cooperation among the stakeholders, including NGO's, comprehensive assess the geopolitical, economic and security impacts of related construction, and maintain peace, stability and sustainability in the Arctic.

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