



China-Nordic Arctic Research Center Newsletter, 5th Issue, December 2017

Secretariat of China-Nordic Arctic Research Center (CNARC)

Add: Polar Research Institute of China, No. 451 Jinqiao Road, Pudong Shanghai 200136, China

Contact Persons: Miss. LIU Han, Tel.: +86 21 58717243, E-mail: liuhan@pric.org.cn

Mr. Egill Thor Nielsson, Tel.: +86 131 6241 7903, E-mail: egillnielsson@pric.org.cn

Printed in December, 2017

China-Nordic Arctic Research Center
Newsletter, 5th Issue, December 2017



CNARC Roundtable 2017 Report
“Arctic Shipping and Port Cities”

By Egill Thor Nielsson

The aim of the China-Nordic Arctic Research Center (CNARC) Roundtable is to explore and promote China-Nordic Arctic cooperation. The CNARC Roundtable 2017: Arctic Shipping and Port Cities was held in conjunction with the 5th China-Nordic Arctic Cooperation Symposium: “Towards the Future: Trans-regional Cooperation in the Arctic Development and Protection” in Dalian, a port city in North of China, on 24-26 May. The CNARC Roundtable 2017 engaged stakeholders across industries, researchers and policy-makers, on an invited only basis, in a constructive discussion on the common goal of making Arctic shipping an economically viable and environmentally sound alternative to the traditional sea routes between the Pacific and Atlantic Oceans, including the importance of necessary infrastructure build-up of Arctic ports, their connections to global supply chains and generating cargo both ways between the Arctic and East Asia.

The Roundtable program included participation at the symposium plenary session, business visits to relevant organizations, including the Port of Dalian, and a concluding CNARC Roundtable 2017: Arctic Shipping and Port Cities discussion to promote cooperation through information sharing. This report focuses on the concluding Roundtable event. Chatham House rules apply to this part of the symposium, in accordance with the CNARC Roundtable code for all participants at the invitation only event.

The Roundtable’s opening remarks were delivered by Dr. Yang Huigen, Director-General of the Polar Research Institute of China and Director of CNARC, the co-Chair of the CNARC Roundtable 2017, with Professor Pan Xingxiang, Vice President of the Dalian Maritime University, and HE Olafur Ragnar Grimsson, the 5th President of Iceland and Chairman of the Arctic Circle. Yang Huigen started by welcoming all participants and explained this year’s roundtable theme “Arctic shipping and Port Cities”, which is a follow up on CNARC’s roundtable theme “Cooperation towards operational use of the Arctic Sea Routes” in 2015 in Shanghai. It is a topic CNARC has worked actively on in recent years, with the goal to facilitate a constructive discussion on making Arctic shipping an economically viable and environmentally sound alternative to the traditional sea routes between the Pacific and Atlantic Oceans. While communicating the importance of necessary infrastructure build-up of Arctic ports, their connections to global supply chains and the generation of cargo both ways between Arctic and Asian markets. Yang then gave the word to the guest of honor, HE Olafur Ragnar Grimsson. Grimsson started by underlining that this event was a sign to the rest of the world and that the development

Content

- CNARC Roundtable 2017 Report: Arctic Shipping and Port Cities 1
- Keynote speech of Mr. Gao Feng at the opening ceremony of the 5th China-Nordic Arctic Cooperation Symposium 3
- “The Evolution of the China-Nordic Arctic Cooperation” Breakout Session at 2017 Arctic Circle Assembly 5
- CNARC Fellowship Research Report 2016-2017 8
- Coming Event: the 6th China-Nordic Arctic Cooperation Symposium 23



of Arctic shipping was one of the important roles for China to play within Arctic affairs. He encouraged cooperation between Asian stakeholders in developing these opportunities, as it could make good sense to share these responsibilities as a joint pan-Arctic group.

During the 2017 CNARC Roundtable, 11 invited speakers delivered insightful presentations and 8 invited commentators gave their opinions. The Roundtable discussions were moderated by Mr. Felix Tschudi, Chairman of Tshudi Shipping and the Centre for High

North Logistics, and Dr. Yang Jian, Vice President of Shanghai Institutes for International Studies and Deputy Director of CNARC. The roundtable mainly concentrated on providing feedback for three key questions: (1) How can Asian and Arctic partners cooperate closer on Arctic shipping? (2) Are Arctic port cities sufficiently well connected to the supply chain? (3) What are the most important priorities in terms of Arctic infrastructure build-up?

There was an overwhelming positivity towards increased cooperation between Nordic and Asian stakeholders on Arctic shipping. A vision towards developing profitable and environmental sound shipping lanes between continents were voiced by most, if not all, the speakers. Including on the possibilities of port investments and joint Arctic shipping projects, including on energy projects, as is on-going with the Yamal LNG project; as well as with products such as frozen seafood that are already traded both ways between Atlantic and Pacific Oceans'. The key questions were in that way answered by underlining that in order to cooperate closer, between Asian and Arctic partners, joint projects both on a commercial and research basis are essential. With opportunities to further establish routes through the Arctic, and also connect to the networks of local Arctic and Asian ports for synergies on cargo both-ways. There is a need for infrastructure investments in the Arctic and the China-led Belt and Road Initiative was frequently mentioned as a potential policy underlining for partnerships in the Arctic that can increase economic growth and safety on the increasingly accessible Arctic sea lanes, to the mutual benefits of all stakeholders. The CNARC Roundtable has enhanced the dialogue on Arctic shipping between relevant stakeholders, the next steps following policy coordination and information exchange is action, which the industry itself will need to lead in order for economically beneficially and environmentally sound steps being taken in building up joint trans-regional Arctic shipping projects between companies and research institutions between the continents in the Northern hemisphere. CNARC is willing to facilitate and enhance such dialogue through its roundtable and other mechanisms.



Keynote speech of Mr. Gao Feng at the opening ceremony of the 5th China-Nordic Arctic Cooperation Symposium (May 25th, 2017, Dalian)

**Your Excellency President Olafur Ragnar Grimsson, Vice Administrator Mr Lin Shanqing,
Ladies and Gentlemen,**

Good Morning, everyone. It is my honor to attend the 5th China-Nordic Arctic Cooperation Symposium to discuss the theme "Towards the Future: Trans-regional Cooperation in the Arctic Development and Protection" with all of you here, jointly depicting the harmonious blueprint of the Arctic with the aim of "respect, cooperation, win-win, sustainable-development".

Firstly, I would like to extend the warmest congratulations to the successful convocation of the 5th China-Nordic Arctic Cooperation Symposium. In the past five years, the China-Nordic Arctic Cooperation Symposium has already become the significant platform of discussing Arctic issues between China and Nordic states and jointly promoting Arctic substantive cooperation, which effectively enhances mutual trust and cooperation, as well as plays a positive role to keep the peace, stability and sustainable development of the Arctic region.

In recent years, China and Nordic states have actively participated the global governance and the international regulation formulation process, explored the solutions to the Arctic trans-regional and global problems, and contributed the wisdom to the wide scope of fields including the Arctic science, climate change and environment protection. From 2016 to now, China has accomplished the 7th scientific expedition on the Arctic Ocean; attended multilateral mechanisms like the executive meeting and ministerial meeting of Arctic Council, Arctic Circle, Arctic Frontiers and the Central Arctic Ocean Fisheries Management; sent experts to participate the Protection of the Arctic Marine Environment, Conservation of Arctic Flora & Fauna, the Meeting of the Arctic Monitoring and Assessment Program and the Task Force for Enhancing Scientific Cooperation in the Arctic; actively carried out bilateral dialogues to discuss the Arctic issues with Arctic and Non-Arctic states. The positive progress of the Arctic cooperation has become the priority areas of China-Nordic cooperation. The main building of the China-Iceland Joint Aurora Observatory has completed, the Arctic submarine fiber optic cable project has been discussed between China and Finland, the recovery of Arctic affairs dialogue mechanism between China and Norway is on the agenda since the normalization of China-Norway relations. China also keeps good communication with Denmark and Sweden on Arctic affairs.



China is closely linked with the Arctic trans-regional and global issues. The close communication and cooperation between China and the Nordic states on the Arctic issues, is not only the beneficial exploration to the Arctic problems for Arctic stakeholders, but also the significant way to effectively participate in the Arctic governance, promote the development of the Arctic region and protect the Arctic from the perspective of the non-Arctic states. Finland just took over the chairman of the Arctic Council at the tenth ministerial meeting of Arctic Council, and we are looking forward that this will inject fresh impetus to China-Nordic Arctic cooperation in the future. In the next phase, China would like to enhance the communication and cooperation with the Nordic states from the following aspects.

Firstly, China will actively participate the Arctic multilateral mechanism. During the period when Finland takes the chair of the Arctic Council, China will further enhance the substantial participation in the tasks of Arctic Council working groups, follow up the implementation of Agreement on Enhancing International Arctic Scientific Cooperation, take science research as the priority and enhance the talent input to the Arctic Council. Moreover, China will deeply participate multilateral platforms such as Arctic Circle and Arctic Frontiers, maintain constructive interaction with all parties, and continue to expand the depth and breadth of cooperation.

Secondly, China will constantly facilitate the Arctic bilateral talks. China attaches importance to maintain the constructive interaction with Arctic and non-Arctic countries, develop the bilateral negotiation in terms of Arctic issues with Nordic states, set up the dialogue mechanism about sea laws and polar affairs with various non-Arctic states in order to share the policies, practice and experience about Arctic international cooperation and scientific research. China and Nordic states have frequent interactions especially since this year, China has all-round development with Nordic states and the Arctic cooperation becomes more deep and solid. China is looking forward to develop the more comprehensive and in-depth communication and cooperation with Nordic states in the near future.

Thirdly, China will exploit new cooperation fields in the Arctic and enrich the Arctic cooperation modes. Based on the scientific research, China would like to strengthen the cooperation in various fields such as climate change, environment protection, shipping, resource exploration and information infrastructure building. China will support the enterprises and research institutes to give full play to their advantages to participate the Arctic governance; support the dialogue and conversation between Chinese research institutes and foreign think tanks; encourage enterprises to participate the commercial development and utilization in the Arctic region; enrich and innovate the cooperation modes with Arctic states, and develop the inclusive, all-round and diversified cooperation, so as to promote the development of the Arctic region and contribute to an all-win result under the premise of the peace and stability of the Arctic region.

Ladies and Gentlemen, the future of the Arctic is concerned with the well-being of mankind, so the protection and rational utilization of the Arctic is the significant mission faced by the international community. I wish that China-Nordic Arctic Cooperation Symposium will consistently make constructive contribution to the China-Nordic Arctic multi-domains cooperation. And I sincerely hope that the symposium will be held successfully and achieved positive outcome! Thank you!



“The Evolution of the China-Nordic Arctic Cooperation” Breakout Session at 2017 Arctic Circle Assembly

By Liu Han

“The Evolution of the China-Nordic Arctic Cooperation” Breakout Session organized by CNARC, was held between 17:55 to 19:25 on 13th October at the 2017 Arctic Circle Assembly in Reykjavik, Iceland. This session was moderated by Hallgrímur Jonasson, the Director-General of Icelandic Centre for Research. Six representatives of CNARC member institutes delivered insightful presentations and had a panel discussion in the end of the session. This session attracted nearly one hundred scholars, policy-makers and industry representatives from various countries and organizations.

1. Yang Huigen, Director-General, Polar Research Institute of China and Director, CNARC

Topic: The Evolution of the CNARC

As the Director of CNARC, Yang Huigen firstly mentioned the purpose and organization of CNARC. A series of activities like symposium, fellowship program, publication and inter-institute cooperation were introduced as CNARC's function. From 2013 until 2017, the member institutes have developed from 10 to 14, with the other 2 membership applications in process. CNARC has built up regular exchange in social science as the first output, holding symposium and roundtable each year since 2013 to enhance mutual understanding between China and the Nordic countries. Moreover, it has facilitated communication on some emerging issues, deepening exchange between policy-makers, scholars and industry. CNARC focuses on important issues in the Arctic (including climate change and its impacts, resource development, shipping and economic cooperation, as well as policy and law), encouraging social and natural science to collaborate. Currently, CNARC's Nordic Arctic book project and the preparation of the 6th CNARC symposium are in progress. Concerning the future directions of CNARC, Yang Huigen underlined that CNARC has built up an important platform for Nordic cooperation in China, from this the Chinese side is now paying more attention on the Belt and Road Initiative in regards to the Nordic Arctic.

2. Thorsteinn Gunnarsson, Senior Adviser, Icelandic Centre for Research

Topic: North Meets East: Learning at the Crossroads

China-Nordic Arctic Cooperation Symposium was developed from China-Icelandic workshops held in 2011 and 2012. As the witness at the crossroads of China-Nordic cooperation, Thorsteinn Gunnarsson introduced its timeline and then presented the shifting focus of China-Nordic Arctic cooperation: from natural sciences to social sciences and policy. After that, he took 2nd China-Nordic Arctic Cooperation Symposium as an example to analyze how North meet East via various activities and discussions. Finally, Thorsteinn Gunnarsson highlighted five outcomes from learning at the crossroads: (1) CNARC is the test bed for ideas, which created spin-offs such as the CIAO and economic roundtable; (2) the discussion at the symposia has provided new insight and had not only scientific but also socio-economic impacts; (3) there has been a shift from focusing on natural sciences to emphasising on social sciences and policy, attracting broader participation from more diverse sectors of society; (4) The discussion at the symposia has progressed from being cautious to become more critical; (5) CNARC has increased understanding of different political and economic cultures, as well as increased awareness of a fluid and reconstructed Arctic identity.

3. Yang Jian, Vice President, Shanghai Institute for International Studies and Deputy Director, CNARC

Topic: Chinese Perspectives on CNARC

Yang Jian gave a few words about the history of CNARC and its member institutes in the first place. Based on his experience as the deputy director of CNARC, Yang Jian summarized four effects of CNARC: (1) Building the Epistemic community: the knowledge about the Arctic, for example on climate change, melting ice and the internal connection of the earth system, has expanded to non-Arctic nations from Arctic nations and CNARC facilitates China-Nordic cooperation via carrying out joint research projects, convening regularly symposium and so on; (2) the concept of “governance” has been adopted by Chinese government in the Arctic cooperation; (3) Chinese media and businesses have begun taking concrete actions to practice the concept of sustainability and governance through deepening bilateral cooperation, improving the internal mechanism and so on; (4) the positive role of China in the Arctic governance has been gradually acknowledged. CNARC, based on the linkage between Chinese and Nordic think tanks, tries to make the two sides aware of the great potential of China-Nordic cooperation through exchanges, visits and dialogue.

4. Timo Koivurova, Director and Research Professor, Arctic Centre, University of Lapland

Topic: Finnish Perspectives on CNARC

Timo Koivurova gave a few words on the introduction of University of Lapland firstly. Then he mentioned that University of Lapland actively participated the CNARC activities as one of its founding members. The 4th CNARC symposium, held in Lapland, was a nationally important symposium, which not only promoted the development of Arctic tourism in Lapland, but also brought forward valuable commercial research topics discussed at the CNARC Roundtable. He concluded that CNARC played a vital role in motivating China and Nordic countries cooperation and facilitating for them to get to know each other, learning about different viewpoints and facilitating communication across the stakeholder spectrum.

5. Jan-Gunnar Winther, Specialist/Director, Norwegian Polar Institute

Topic: Norwegian Perspectives on CNARC

Jan-Gunnar Winther regarded the normalization of bilateral relations between China and Norway as a great opportunity for the Arctic bilateral cooperation, especially after the official visit of Prime Minister Erna Solberg to China in April 2017. On the one hand, it seems that the Arctic is a special area of interest from the perspective of the President of China, Xi Jinping. On the other hand, Norway pays great attention on the Arctic issues all the time. Norwegian scientists also played a vital one in Arctic science, mainly including two aspects: climate change and the development of blue economy.

At present, the world needs the leadership of Arctic issues. Although, President Obama and President Xi formally issued a joint statement on climate change in 2016, the situation is different now due to President Trump’s withdrawal from Paris climate agreement. Jan-Gunnar Winther considered there is an opportunity for both China and Nordic

countries to take the leadership in such complicated situation concerning climate change in the Arctic, and globally.

6. Egill Thor Nielsson, Executive Secretary, CNARC and Visiting Scholar, Polar Research Institute of China

Topic: CNARC Perspective on “Information sharing and cultural exchange in Arctic context” CNARC Roundtable

Egill Thor Nielsson briefly introduced the mechanism and themes of each roundtable from 2013 to 2017. This year’s roundtable was hosted at the end of the symposium on 28 May 2017 and its theme was “Arctic Shipping and Port Cities”. With the development of the past five years, the CNARC Roundtable has become an important part of the annual symposia, engaging a diverse set of stakeholders from China, the Nordics and other Arctic and Asian countries in a constructive dialogue on topics of strategic importance for Arctic cooperation. The CNARC Roundtable has become widely recognized as an important platform for China-Nordic cooperation and the CNARC symposia was mentioned in a joint press release of the Nordic Council of Ministers’ and China’s Ministry of Foreign Affairs on Sino-Nordic cooperation. On behalf of CNARC secretariat, Egill appealed member institutes to consider how to further explore and promote exchanges between China and the Nordic countries using the mechanism of the roundtable.

A panel discussion took place in the end of the session. When talking about the future direction of CNARC, Jan-Gunnar Winther put forward two critical thoughts. One concrete thought is that natural science will be included in the next symposium. Also, he held the idea that Nordic countries had benefits to work with CNARC, but CNARC should pay attention to the dissimilarity of each Nordic country and promote the win-win cooperation. Expanding the multi-channel financial support of CNARC was mentioned as well. The invited speakers answered the other questions such as the coming theme of next roundtable and CNARC member application structure.





CNARC Fellowship Research Report 2016-2017

Dr Camilla T. N. Sørensen, Assistant Professor at the Department of Political Science, University of Copenhagen, with research expertise on Chinese-Russian cooperation in the Arctic, took opportunity of CNARC Fellowship program to conduct a one-month fellow visit from January to February in 2017 at the Centre for Polar and Oceanic Studies, Tongji University in Shanghai China. Texts below are the summary of an academic report of CNARC fellowship that Dr. Camilla T. N. Sørensen has submitted.

CNARC Fellowship Research Report
EMERGING CHINESE- RUSSIAN COOPERATION IN THE ARCTIC
Possibilities and constraints

1. Introduction

Cooperation on developing energy resources and sea routes in the Russian Arctic at first glance looks like an objective where Russia and China could work closely together and have complementary interests. Russia is one of the world’s largest energy exporters and China is one of the largest energy importers. The Russian Far East and the Russian Arctic are rich in energy resources and minerals yet lack infrastructure, capital and technology, which are all areas where China has something to contribute.

In the past decade, China has increased its focus on and engagement in the Arctic. Meanwhile, Russia increasingly focuses on developing the Russian Arctic as a way to strengthen its economic base, which primarily worked with European countries to develop its energy resources. However, long-term trends in energy markets, stagnation in the European market and the recent conflict in Ukraine resulted in Western companies’ involvement in energy projects in the Russian Arctic. This situation motivated Russia to look even more to Asia for potential investors and technology partner.

Looking at the overall picture and especially at the joint statements and rhetoric coming out of Russia and China in recent years, it can be said that relations between the two countries are at an all-time high, such as the China–Russia Joint Statement on Strengthening Global Strategic Stability in 2016.

However, China and Russia do not agree on how to deal with this growing US pressure, and there is still a high degree of strategic mistrust as well as clear tensions and differences between them in terms of specific core interest areas. And there are still not many concrete results, either in general terms or in relation to the Russian Arctic.

This report examines the evolving roles, interests and activities of China and Russia in the Arctic, using these analyses as a departure point for detailed discussions of the possibilities for and constraints on stronger cooperation between the two countries in the region.

2. The evolution of China’s Arctic policy since 2010

Recent years, China has clearly expressed a desire to be involved in the development of Arctic affairs and to be acknowledged and included as an ‘Arctic stakeholder’. In the Third Arctic Circle meeting in 2015, the Chinese Foreign Minister, Wang Yi, further described China as a ‘near Arctic state’ and referred to China’s long history of Arctic interests stretching as far back as China’s signing of the Spitsbergen (Svalbard) Treaty in 1925.

The drivers of China’s growing interests in the Arctic

The drivers of China’s growing interests in the Arctic can be expressed in the following four aspects.

(1) China is taking an active part in the general science diplomacy in the Arctic, such as Aurora Observatory in Iceland and Russian–Chinese Polar Engineering and Research Centre, contributing to strengthening the image of China in the region and Chinese relations with the Arctic states, thereby gradually building trust and integrating China into Arctic governance structures.

(2) The second driver behind China’s growing activities in the Arctic region relates to economic interests and concerns about securing and diversifying its energy supply. China has built strong economic partnerships with Iceland, especially relating to the fishing industry, aquaculture development and renewable energy. Also, Norway is a significant state for China because of its resources, Arctic sea routes and high-level technologies.

(3) The sea routes become the third important Chinese interest in the Arctic region. Arctic sea routes could give China alternatives to the longer and strategically vulnerable routes currently in use, especially addressing its reliance on the Malacca Strait. The state-owned shipping company China Ocean Shipping is planning to launch regular services through the Arctic to Europe by way of the Northeast Passage.

(4) China is interested in the Arctic region owing to its importance in relation to global and regional governance and institution building. On the one hand, China respects for the inherent rights of the Arctic statesas well as the ‘overall interests of the international community’, presenting itself as a collaborative and attractive partner in the Arctic. On the other hand, China will be more actively engaged and will seek to play a bigger role in the near future. For example, China is developing its own categories, such as ‘near Arctic state’.

China’s role, interests and activities in the Arctic are growing, although overall China is still careful and hesitant. China often referring to its scientific interests and interest in the new sea routes rather than the investment. This approach could prove difficult to maintain for China if economic and strategic cooperation and coordination with Russia inside and outside of the Arctic region continue to grow. Russia does not have the same image concerns and, in contrast to China, seems to have no reservations about directly challenging and confronting the USA.

China’s views on and relations with Russia in the Arctic

China acknowledges that the support of Russia is needed especially in relation to its broader ambitions to ensure a seat for itself at the table when future Arctic governance and institutional arrangements are debated and developed, for example in the Arctic Council. China is well aware of Russian hesitation about including non-Arctic states in Arctic governance affairs, and therefore China has generally sought to downplay its political and strategic ambitions in the Arctic and has stressed scientific interests and scientific and economic partnerships. However, China also seeks to take advantage of current Russian geostrategic and geoeconomic vulnerabilities and of Russia’s need for China as a partner to develop the Russian Arctic to gradually strengthen its presence and relationships in the Arctic.

In relation to more concrete Chinese interests in ensuring access to energy resources and sea routes in the Arctic, Russia also stands as the ‘unavoidable’ partner. China’s demand for energy resources and minerals continues to grow, and

Chinese SOEs are constantly encouraged to identify and establish new areas for exploration and extraction. However, Chinese Arctic scholars emphasize the importance of avoiding an intensification of US–Russian tensions. They fear a return of what they call ‘cold war mentality’ and the ‘melon effect’, whereby sovereignty issues due to intensified US–Russian tensions start playing a stronger role in dividing the Arctic between the Arctic states, isolating non-Arctic states, which in turn will make Chinese activities more difficult.

3. Russia's Arctic aspirations

According to President Vladimir Putin, the ‘Arctic is a concentration of practically all aspects of national security—military, political, economic, technological, environmental and that of resources’. Recent Russian official strategy papers identify the development of energy resources and shipping routes as being the country's main policy interests in the region. Despite the fact that Russia has tried to diversify its energy partnerships, challenges like fluctuation on world energy markets, geopolitical confrontation with the West and the increasingly difficult economic situation in Russia underlined Russia's need to diversify.

The Russian Arctic as a resource base for the 21st century

The Russian economy is largely dependent on revenues from oil and gas, and the geography of production has been shifting to new regions, including the Arctic. Development of the offshore and onshore resources of the Russian Arctic differs significantly. Whereas Russia has a considerable history of developing oil and gas in the northern regions onshore, the offshore projects are a new area of exploration. More than 90 per cent of circumpolar offshore gas and more than 45 per cent of circumpolar oil is concentrated in the Russian sector of the Arctic shelf. However, the Arctic shelf is largely unexplored because Russian companies are lacking investment and technologies. Therefore, Rosneft and Gazprom focused their efforts on finding partners.

The Northern Sea Route

The second goal of Russia's Arctic strategy is to develop the Northern Sea Route (NSR). Shipping along the NSR has been steadily increasing, which is closely linked to domestic shipping and the hydrocarbon resources in the AZRF and on the Arctic shelf. The Russian Government used Article 234 of UNCLOS on ice-covered areas to establish its own rules of navigation along the NSR as well as established the Administration of the Northern Sea Route, clarifying the legal status of the NSR. One of the main current obstacles to the full-fledged functioning of the NSR is the absence of necessary infrastructure, and federal projects aimed at developing the NSR and infrastructure remain on paper. To date, the only viable project is construction of the seaport of Sabetta on the Yamal Peninsula.

Is Russia ‘turning East’ in the Arctic?

A series of factors, such as the US shale gas revolution, the EU's plans to prioritize the diversification of gas suppliers and the fall in oil prices, have made it more difficult for Russian energy firms to finance new projects. The main decisive factor behind Russian companies' need to diversify their partnerships has been geopolitical tensions between Russia and the West in the wake of the Ukraine crisis. After that, the USA and EU introduced sanctions against Russia that had significant implications for the transfer of technologies. Consequently, Russian companies had to stop loads of geological exploration of the Arctic shelf and the Kremlin's openness to non-Western, participation in Russian energy projects has increased. Asian countries have always been seen by Russia as potential destinations and consumers of the NSR. However, Russian officials are now talking about attracting Asia not just as a user of the NSR but also as its co-developer together with Russia.

4. Recent developments in overall Chinese-Russian cooperation

Drivers behind and limits to Chinese–Russian strategic rapprochement

Although China and Russia increasingly strengthen cooperation on several international political and security issues, a strategic alliance includes mutual military assistance and collective defense commitment is still not expected.

Besides a strong interest on both sides over energy resources and investments flows, Chinese and Russian government have different attitudes when facing with the USA. Compared with ‘loud dissenter’ Russia, China does not challenge the USA directly. The reason is that Chinese leaders need to get along with the USA—China's most important

trading partner. Further, China also needs to coordinate and cooperate closely with the USA to solve domestic challenges.

As a way to reassure Russia about China's so-called win–win approach, President Xi Jinping suggested integrating China's high-profile ‘One Belt, One Road’ (OBOR) initiative, connecting China with vital European markets via train routes, for example, central Asia and Russia—with Russia's Eurasia Economic Union (EEU) initiative. But China is still cautious and sought to stay out of ongoing international security crises and conflicts where Russia is involved.

The reasons to explain the limits to the Chinese–Russian strategic rapprochement can be summarized like the mistrust rooted in historical grievances and strategic cultural differences and the growing concerns particularly on the Russian side about the long-term implications of the ongoing shift in relative power.

It seems that Chinese–Russian strategic relations not as an long-term alliance but as a flexible strategic partnership in which the two partners pragmatically seek to tactically identify mutual strategic interests and ways to coordinate and cooperate on them on an issue-by-issue basis.

Russian oil and gas cooperation with China

Since 2014 the Kremlin has been eager to show that it has viable economic and political alternatives to the West, including in energy cooperation with China. However, Russia's turning east progressed very slowly and brought only limited results.

As for the oil cooperation, although Rosneft's rapid expansion promoted the relatively smooth and streamlined process of getting agreements with the Chinese and pushing the Russia–China projects through Russian bureaucracy, cooperation has slowed down since 2014. The reason is that Chinese companies have proceeded with caution since they have a very strong bargaining position and other Asian companies like Oil Indi have joined in the upstream projects.

When it turning to the gas cooperation, gas delivery remained on paper owing to disagreements over price. Facing sanctions and increasing international isolation, Russia has needed to prove that it had technological and investment alternatives for Russian oil and gas companies. One of the immediate results of this is that Gazprom and the CNPC signed a 30-year contract for the supply of natural gas on the eastern route through the Power of Siberia pipeline in 2014. However, there is no progress on finalizing it—the construction of the Power of Siberia pipeline delays and Chinese commercial banks are very cautious about opening credit lines for Russian companies.

5. Recent developments in Chinese-Russian cooperation in the Arctic

Oil and gas cooperation in the Arctic

Although the offshore projects between China and Russia remain doubtful for the future, the onshore gas cooperation in the Arctic is advancing. In 2013, Novatek and the CNPC signed a contract for the sale of a 20 percent stake in Yamal LNG. The agreement includes a long-term contract for the supply of LNG to China in an amount of not less than 3 million tons per year. After the Ukraine crisis, Yamal LNG announced the signing of agreements with the China Exim Bank and the China Development Bank on two 15-year credit line facilities for the total amount of €9.3 billion and ¥9.8 billion to finance the project, meaning that China has provided up to 60 per cent of the capital to implement this project.

The current unstable political and economic situation has made the Russian market less appealing to Chinese companies. Moreover, Chinese companies work on projects that they are interested in only under conditions that they find acceptable. Thus, Russia is no longer a gatekeeper for the Chinese; it has to offer good conditions to actually attract the Chinese and develop Russian–Chinese energy cooperation.

Shipping and NSR infrastructure cooperation

China has made a number of experimental voyages along the NSR since 2012. In 2012 the icebreaker Snow Dragon was the first Chinese vessel to successfully navigate the NSR and in 2013 the first commercial vessel Eternal Life, owned and operated by COSCO, sailed from Dalian to Rotterdam. In 2016, a total of five COSCO vessels passed along the NSR. However, there is no official agreement between COSCO and any of the Russian companies to make the voyages a

regular occurrence. Thus, there is no guarantee that China's shipping frequency along the NSR will remain at the same level in 2017.

In a Joint Statement signed by Chinese Premier Li Keqiang and Russian Prime Minister Medvedev in December 2015, possibilities for investing in projects of NSR have been discussed. Currently, a few NSR infrastructure projects have Chinese participation. Some Russian experts worried that stronger Chinese involvement in NSR infrastructure construction might spur further debate over the extent to which this route remains under Russian jurisdiction and the extent to which Russia has the right to establish its own rules of navigation.

Military developments and search and rescue capabilities

Over the past five years Russia has increased its security presence in the Arctic, restored military bases and deployed additional Russian military forces in the Arctic, setting up a new central unified Arctic strategic command. A stronger and upgraded Russian military presence might provide enhanced Arctic governance ability, especially if it enhances the search and rescue capabilities of the Russian coastguard in the Arctic. While China is worried that tensions between the USA and Russia will further intensify and start seriously affecting the Arctic; in particular China fears the return of a cold war mentality.

Currently, owing to its geostrategic location, the Arctic region is becoming of more interest to China and specifically to the Chinese military—the People's Liberation Army. In 2015 ships from the People's Liberation Army Navy were for the first time spotted passing through the Bering Sea after finishing joint military exercises with Russia in the North Pacific. A recently released Chinese military White Paper also mentions 'polar regions' as an area of concern. It is likely that the Chinese military presence in the Arctic will grow as the Arctic opens up, which may lead to potential frictions and mistrust in the Chinese–Russian strategic partnership.

Russian and Chinese views on and interests in Arctic governance

China respects the inherent rights of Arctic states, and it also calls for respect for the legitimate interests and rights of non-Arctic states. China seeks to enhance its presence and influence in Arctic governance carefully and gradually by applying an increasing number of instruments. Chinese scientific engagement with all the Arctic states helps legitimize and facilitate its growing Arctic presence and interests, thereby gradually building trust and integrating China into Arctic governance. Russia, for its part, insists on Arctic states' privileges in setting the rules of the game in the Arctic, and prefers to strengthen the established Arctic legal and political institutions, which ensure the rights of the Arctic states. Russian leaders see the Arctic as a unifying national theme, a resource-rich basin and a source of geopolitical leverage, hence it sought to avoid the development of alternative and potentially competitive Arctic governance forums that would be more inclusive and allow room for more influence by non-Arctic states. Therefore, Chinese efforts are met with resistance in Russia.

In addition, Chinese and Russian interpretations of UNCLOS are contradictory. China claims the right to explore the area of the Arctic Ocean that is within international waters and it has previously suggested that (part of) the NSR is in international waters, which potentially conflicts with Russia's policy that the route is in its internal waters. What is more, UNCLOS grants Arctic states the possibility of expanding their territory by claiming a continental shelf extending 200 nautical miles (370 km) from a state's coastal baseline, which would diminish the high sea area or international waters in the Arctic and leave less 'common heritage' for non-Arctic states to explore.

6. Conclusions

Despite the stream of positive adjectives flowing from both Russia and China in recent months about partnership and friendship, cooperation in the Arctic has not progressed much. Except for cooperation on the Yamal Peninsula, Russian and Chinese companies have not yet found further mutual ground for energy cooperation in the Arctic, because Russian companies are not entirely comfortable allowing Chinese companies to play too big a role in Russian energy projects while Chinese companies would not agree to anything less than a significant control and management role.

The difference between anticipation and reality can be explained by looking at differences in the main Chinese and Russian concerns behind efforts to improve their overall strategic relationship. Whereas China is primarily seeking to pursue economic goals, especially access to Russian energy resources in order to secure and diversify its energy supply,

Russia is looking to strengthen its strategic relationship with China in a geopolitical and security-driven context. On the one side, faced with the case of heightened tensions between the West and Russia, China fears of a melon effect which may negatively influence its position in Arctic governance. On the other side, Chinese scholars argue that Russia is trying to diversify its partnerships with Asian states in the Arctic, in order to lessen the risks of locking itself completely to China. And it seems probably that Russia will turn towards Europe again as soon as sanctions are lifted.

There is a significant degree of uncertainty about how the development of Chinese–Russian cooperation in the Arctic will develop, especially after Trump in power. There are indications that the Trump Administration is considering lifting sanctions, which would allow Russia to cooperate again with Western companies in developing the Russian Arctic and slow down the efforts of recent years to strengthen Chinese–Russian cooperation. The Chinese–Russian relationship also depends on how China will approach the different legal regimes in UNCLOS concerning territorial and maritime disputes and rights because Russia will not expect a looser Arctic governance with non-Arctic states playing a stronger role.

Dr. Liisa Kauppila, PhD Candidate at University of Turku, Finland succeeded in applying for a one month Fellowship at China Ocean University in Qingdao from March to April in 2017. The excerpt below in the CNARC fellowship report of Dr. Kauppila describes her academic activities and basic research findings during her visit in China.

CNARC Fellowship Research Report

The main research activities of the CNARC Fellowship stay can be listed as follows: library work, interaction with local researchers and students and the thesis writing..

1. Library work

During my stay, I devoted loads of time to analyzing Arctic-related Chinese language academic journal articles at the library of China Ocean University. I was most interested in analyzing the academic discourse/ intellectual debate on 1) China-South Korea-Japan collaboration in Arctic issues, 2) Chinese views on Arctic governance, 3) China's Arctic identity and 4) Chinese notions of great power responsibility with regard to climate change. I gathered a rather sizable collection of fruitful articles, which I have already utilized as a primary source in my thesis writing process.

Spending a lot of time by analyzing Chineses-language journal texts also confirmed my previous thoughts on the fundamental differences of western and Chinese academic discourse. To me, Chinese texts are more policy-oriented and they always include recommendations on what China should do in the future. In the west, we do this in policy papers but less so in basic academic articles. This finding also made me somewhat rethink of the role of academics in Chinese society.



2. Interaction with local researchers and students at China Ocean University

I gained plenty of useful information, especially on China's role in remaking the Arctic as a political region when talking with researchers. The most illuminating talks were related to Sino-Russian relations, China's stance on High Seas fisheries, Chinese views on international relations and great power responsibility as well as the role of science and technology in China's Arctic entrance and the country's rise in general. I was intrigued by the different research findings that the Western and Chinese biologists are demonstrating in the talks dealing with High Seas fisheries. Also I was once again reminded of the fact that the Arctic, in many contexts, continues to be a relatively unimportant issue for the Chinese central government.

We also frequently exchanged views on recent Arctic-related media texts. These analytical talks of Chinese media writing revealed fundamental differences in the worldview of scholars/students who come from a non-Arctic country that is becoming a great power (China) and a small Arctic country(Finland). My stay also coincided with President Xi's visit to Finland, which naturally offered plenty of good media articles and topics to analyze together. What I noticed during these talks was that Finland and the Nordic countries in general might be gradually becoming more important partners for China, as the country's economy is developing from an investment and export-driven model to an innovation and domestic consumption-oriented direction.

There seemed to be plenty of interest in Finnish politics, because of the country's chairmanship in the Arctic Council. While discussing the topic, I noticed that 'Arctic collaboration' was understood much more broadly than in Finland. Despite the fact that the Finish government has recently emphasized how 'Arctic' only if it touches upon such themes as tourism in Lapland, business collaboration in Arctic-related industries or the work of the Arctic Council-to name some examples. High-tech collaboration between the two countries, in turn, would not be discussed as a topic of Arctic research.

In addition to having talks with the researchers, discussing the High North with Chinese bachelor's, master's and PhD students was extremely illuminating to me. We held a mini seminar, where each student introduced their Arctic-related research topics. I greatly enjoyed these discussions because they made me realize better how the Chinese students view the Arctic.

3. Thesis writing

I mostly focused on writing my article on Yamal LNG Project, which is a case study of China's functional regionalization in the High North, and it explores how China's participation in the pioneering Arctic energy scheme changes both the High North and China itself. Furthermore, I occasionally focused on writing two other papers which I coauthor with Doc. Soc.Sci. Sanna Kopra. They focus on China's notions of responsibility in the Arctic and the interests of different Chinese actors in the High North.

Dr. Pan Min, associate professor at Center for Polar and Oceanic Studies of Tong Ji University, was granted the opportunity to conduct a two-month fellowship at Umea University in Sweden, where had chance to meet a wide range of researchers and experts with respect to the Sami and Arctic Governance. Texts below are the summary of an academic report of CNARC fellowship that Dr. Pan Min has submitted.

CNARC Fellowship Research Report

The Sami and Arctic Governance

There are 4 million inhabitants in the Arctic, 10% of which are the Arctic indigenous peoples. The two most populous indigenous peoples are Inuit and Sami. The Sami mainly live in the Nordic region, whose population is estimated to be between 70,000 and 100,000. They are distributed in the Arctic regions of Norway, Sweden, Finland and Russia, where the area they live is called the Sápmi area.



Currently, the Arctic region is undergoing substantial and accelerating changes, which include not only the mainstream climate change, but also a series of political, economic, social and cultural changes, , which may be more difficult for the indigenous peoples to adapt. Therefore, the indigenous peoples' participation in the governance of the Arctic is both right and imminent.

The dramatic legal empowerment of Indigenous peoples over the past two decade has profoundly shaped new and emerging governance arrangements. One of the trends of future Arctic governance is the rise of indigenous people's political and legal status by giving them more governance rights. This study will cover three levels: local, Nordic-Arctic and Arctic governance and selected representative Sami organizations and governance platforms on each level, to explore these questions: which activities were the Sami involved in? How can they participate in these activities? What is the effect?

1. Local Level

Sami's participation in the local governance of Nordic countries is mainly carried out through the Sami parliaments. The Sami Parliaments of Norway, Sweden, and Finland are the representative bodies for people of Sami heritage in three states. The Parliament acts as an institution of cultural autonomy for the indigenous Sami people. It is a national body that has political relations not only to the national government, but also connections to municipal and county-level governments.

The Sami Parliament was formed in the process of Sami's pursuit of the right to self-determination. Self-determination refers to two aspects: the right to autonomous governance and own institutions, and full and effective participation at all levels of decision-making.

The competences of the three Sami Parliaments include the allocation of state subsidies and funds from the governments; the appointment of the Board of Directors for Sami schools; the guidance of work on the Sami language; the participation in community development and ensuring that Sami needs are considered. The Sami parliaments are democratically elected every four years. The Sami parliaments administer their own electoral registers and organs. In each country, Sami inhabitants have a vote in each country to elect representatives to their Sami Parliament.

However, the role of the Sami parliaments in local governance is often limited. The Sami parliaments have the political autonomy to develop policy recommendations to their respective national parliaments, but are limited in that the recommendations are advisory and not legally binding. The Sami Parliament would be forced to administrate even

those decisions of government facilities which do not comply with its politics.

Now the Sami Parliamentary Council, represented by the Sami parliaments of Finland, Norway and Sweden, is discussing to formulate a Nordic Sami Convention which will recognize the self-determination rights of the Sami as a people and the authority of the Sami parliaments.

2. Nordic-Arctic Level

The major governing platform in the Nordic Arctic region is Barents Euro-Arctic Council (BEAC). the Barents region's county governors together with the representatives of indigenous peoples signed a cooperation protocol establishing the Barents Regional Council (BRC).One aim of the Barents Cooperation is an acknowledgement of the importance of indigenous/local knowledge, the ability to identify the most urgent common priorities and the capacity to carry out cross-border projects and cooperate on implementation of common programs.

Working group of indigenous peoples (WGIP) is one of ten working groups in BEAC, which is the only working group established on a permanent basis and given an advisory role to the Barents Euro-Arctic Council and the Regional Council. And the Chair of the WGIP as a permanent observer to the Barents Euro-Arctic Council since 2013.

WGIP has resident representatives in the formal structure of the Barents Euro-Arctic Cooperation on behalf of Sami, Nenets and Veps, such as Committee of Senior Officials (CSO) and Barents Regional Committee. The main task of these representatives is to participate in forums, meetings and congress and bring issues concerning indigenous people onto the trans-regional agenda, for example, the social and economic development of the region, as well as the opportunities and problems brought by changes in the Arctic region. The second task of WGIP is to push forward a series of Action Plans for the Indigenous Peoples in the Barents Euro-Arctic Region. For instance, the Action Plan of 2013-2016 contains proposed measures and projects aiming at development of the indigenous peoples' communities and societies within the BEAR. To organize the meetings, forums and conferences concerning indigenous peoples in the Barents region is another main work of WGIP. At present, the important conference is Barents Indigenous Peoples' Congress which holds once three years.

Currently, however, the impact on the output of those WGs was less visible and there was still a lack of coordination between the WGIP policies and the output of the other WGs.

3. Arctic Level

The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous communities and other Arctic inhabitants on common Arctic issues. Indigenous organizations enjoy permanent participant status in the Arctic Council; they can participate in its all conferences and sit with the government officials and discuss all issues concerning the Arctic freely. Although representatives of indigenous peoples do not have the right to vote in the Arctic Council, they can make their voices heard through the platform to promote their social and economic development. Any resolution of the Arctic Council also needs to consult with the representatives of indigenous in advance.

The Sami Council, representing the Sami people involving in the Arctic governance, is a permanent participant in the Arctic Council. The Sami Council, a grouping of Sami organizations from Norway, Sweden, Finland, and Russia, has been the most prominent pan-Sami institution. The Council aims to protect and develop the social, economic, linguistic, and cultural rights of the Sami. Protection of Sami interests also requires international co-operation, thus the Sami Council has increasingly worked internationally, especially in the UN and in the venues of Arctic and Barents regional cooperation.

The Sami Council now is pushing three important issues concerning the Sami people in the Arctic: (1) The sustainable development of reindeer farming; (2) Protecting environment in the Arctic; (3) Promoting the use of indigenous traditional knowledge in Arctic governance.

4. Conclusion

In general, the Sami's participation in local level is relatively higher than other two levels of governance. Sami's representatives are selected from the Sami parliamentary elections. They keep a close connection with the central

government of concerned countries and frequently interact with the municipal government, regional government, and local government. Through these contacts and participation, all levels of government pay attention to Sami's problems and solve them.

In Nordic-Arctic region governance, The Indigenous Working Group of Barents Europe - Arctic Council has been given special status and can be represented in other working groups. Through this special institutional arrangement, the opinion of the indigenous peoples could be sent to every corner in Barents Europe - Arctic Region. Because of the lack of human resources, language constraints and other factors, there is still a long way to improve the indigenous people's participation in the governance.

The Sami Council represents the Sami people involving in the Arctic governance and Participate in the Arctic Council Working Group projects. However compared with the Inuit Circular Council (ICC), the Sami Council's activities in the Arctic Council are less.



Professor Rasmus Gjedssø Bertelsen from University of Tromsø–The Arctic University of Norway was granted the fellowship to conduct a one-month academic visit at China Nordic Arctic Research Center, Polar Research Institute of China in Shanghai from March to April in 2017. The fellowship report of Prof. Bertelsen and his description of his activities are listed as below.

CNARC Fellowship Research Report

Triple-helix knowledge-based Sino-Nordic Arctic relationships for trust and sustainable development

1. The Nordic countries in the circumpolar Arctic and the two grand international Shifts

This paper discusses the role of Sino-Arctic knowledge based collaborations among academia, business, civil society, and government as part of the Arctic region's adaptation to power transition and globalization in response to systemic international political and economic changes. The Arctic is deeply affected by power transition and globalization. The rise of China is an instance of power transition in the international system, which has been a recurrent phenomenon

historically.

The transition of power is a complex and dangerous process to manage. A feature of the transition of power is fear and mistrust between status quo powers and rising powers, which is also the case between the West today and China including in relation to the Arctic region. The argument here is that knowledge-based collaborations between academia, business, civil society, and government can contribute to managing the transition of power and mitigating distrust in the Arctic region. Lessons from managing the transition of power in the Arctic are therefore relevant in wider academic and policy contexts.

The material for this paper was collected during Rasmus's time as a guest researcher at the China Nordic Arctic Research Center, Polar Research Institute of China, Shanghai, in March and April of 2016, as well as during my teaching of the summer school course entitled "The Global Arctic" at the University of International Relations (UIR) in Beijing from 11 to 22 July, 2016. The paper focuses on the five Nordic states (Kingdom of Denmark, Finland, Iceland, Norway, and Sweden) along with their three self-governing territories (Faroe Islands, Greenland, and Aaland) as well as the Saami indigenous people of Sápmi, spanning northern Norway, Sweden, and Finland.

2. Beyond science diplomacy

This paper seeks to go beyond science diplomacy in relation to science in the Arctic to knowledge based cooperation between academia, business, civil society, and government. Before taking this step, the potential of Sino-Arctic science diplomacy for mitigating the distrust and governance challenges presented by the transition of power will be briefly outlined based on previous research by Bertelsen et al. Bertelsen et al point out that comparing the distrust surrounding the mere thought of Chinese investment in land and natural resources in the Arctic region contrasts clearly with more harmonious Sino-Nordic Arctic scientific collaborations. Therefore, their conclusion is that science diplomacy in the Arctic makes it possible for China to enter the Arctic, causing less distrust among Arctic states, and for Arctic states to integrate China into the Arctic region with greater confidence.

Distrust of China was evident in the controversy surrounding the proposal by Huang Nubo to establish a tourist resort in northeast Iceland, which foundered in the atmosphere of Icelandic mistrust. This mistrust was also evident on the Danish side toward both Greenland and China when Greenland was keen to obtain Chinese investment in iron ore mining projects. It is important to emphasize that such distrust of investment by a rising world power has a significant structural element.

The Polar Research Institute of China (PRIC) is currently completing the construction of the Chinese-Icelandic Aurora Observatory in conjunction with Rannís, the Icelandic Center for Research, at Kárhóll in northeast Iceland, which has been well received. Further, the Yellow River Station on Svalbard is an important Arctic research connection between Norway and China. Meanwhile, PRIC is developing its research connections with Greenland. The China-Nordic Arctic Research Center (CNARC), which was originally a Sino-Icelandic initiative, is now the key Sino-Nordic Arctic social and human sciences forum. China's observer status on the Arctic Council allows it to participate in the epistemic community of the Arctic Council's working groups

3. Knowledge-based Sino-Nordic Arctic triple-helix development

A triple-helix approach refers to collaboration in terms of research, development, and innovation between academia, business, and government, which in the context of this paper is expanded to include civil society in light of the importance of both the local and indigenous communities in the Arctic region. As noted earlier, the trust-building and governance advantages presented by Sino-Arctic science diplomacy are in contrast to the pervading atmosphere of distrust regarding potential Chinese investment in the Arctic region.

Academics and policymakers are paying increasing attention to transforming the natural-resource-based economies in the Arctic to more innovative, entrepreneurial, knowledge-based economies. This goal presents opportunities for Sino-Arctic triple-helix cooperation that is mutually beneficial. Arctic communities are traditionally natural resource-based economies. However, there are numerous environmental, social, and cultural sustainability challenges in relation to natural-resource based economies. Discussions around China's interest in the Arctic have centered on natural resources, i.e. seafood, minerals, and shipping access, but the focus could easily shift to more knowledge-based economic activities.

Observations gathered during Rasmus's guest researcher period at the CNARC indicate possible areas for Sino-Nordic triple-helix cooperation. These areas can be developed in terms of both depth and scope, but are briefly outlined below. **Kingdom of Denmark:** the use of Hempel's coatings for ships and installations involved in Chinese investment projects in the highly challenging Arctic environment is a possible area of Sino-Danish Arctic high-tech collaboration. **Finland:** Finnair and other Finnish organizations have considerable expertise in developing Chinese and other Asian tourism in the Nordic countries, including the Arctic. **Iceland:** Since the late 1970s, Iceland has worked in partnership with China to develop China's geothermal energy resources through the United Nations University Geothermal Training Program hosted by the Iceland National Energy Authority. And the Sinopec Green Energy Geothermal Development Company is a concrete example of Sino-Icelandic collaboration, spreading geothermal energy use in China. **Norway:** Tromsø is a recognized center for cold and blue biotechnology, and so Norway and China could pursue further high-tech collaboration in blue biotechnology. There is also the possibility of combining fish farming and seaweed farming to capture nutrients and carbon. **Sweden:** Sweden has built an advanced sociotechnical mega-system throughout northern Sweden and northern Norway integrating mining, processing, energy, transportation, communities, and defense, which should be of great interest to China.

4. UIR student projects

The other data used in this research were gathered from projects for innovative and entrepreneurial Sino-Arctic cooperation generated by Chinese undergraduate international relations students at the UIR in Beijing. These projects demonstrated the wide range of possibilities for Sino-Arctic joint projects, with most being in innovative areas such as academia, culture, and sustainable development rather than in the traditional fields of oil and gas exploration, shipping, and fishing.

From 11 to 22 July 2016, Rasmus taught a summer school course at the UIR in Beijing entitled "The Global Arctic: Climate Change, Power Transition and Globalization". The course was taken by nearly 40 first- and second-year Chinese undergraduate students from a range of majors. The students were placed into 10 groups of up to four students, with a mix of gender and majors. The course assignment required each group to develop an idea for a collaborative project between Chinese and Arctic partners. Each project had to take into consideration climate change, international politics, economic globalization, and the political, economic, scientific, and transnational nexus between China and the Arctic country in question.

The group projects are as follows: (1) climate change research project; (2) Sino-Danish-Faroese wind energy research center; (3) Sino-Danish-Greenlandic cultural center project; (4) UIR-UmU exchange and cooperation project; (5) UIR-PKU-HÍ exchange and cooperation Project; (6) Sino-Canadian Arctic oil and gas exploration and production collaboration; (7) Beijing-Reykjavik geothermal heating collaboration; (8) low-carbon Chinese tourism in Alaska; (9) Dalian Maritime University-Arctic Council collaborative research on Arctic shipping; (10) State Oceanic Administration, Ocean University of China, and Arctic Council collaborative research on Arctic fishing.

5. Conclusion

This research revealed possible fields of Arctic knowledge-based collaborations among academia, businesses, civil society, and government between the five Nordic countries and China. These fields of knowledge-based triple-helix cooperation can transfer the trust-building and governance from science diplomacy to more commercial areas. Triple-helix knowledge-based cooperation is expected to mitigate the distrust of potential Chinese investment in Arctic natural resources and land that has been identified in science diplomacy research.

The 10 Sino-Arctic cooperation projects revealed great innovativeness and entrepreneurialism. These projects were mainly in the areas of academic collaboration, renewable energy, low-carbon tourism, and fisheries research, with only two projects proposed in traditional fields, one relating to Northern Sea Route shipping and the other to oil and gas exploration. These projects demonstrated that there is strong interest, innovativeness, and entrepreneurialism among Chinese people in developing triple-helix knowledge-based collaboration between Arctic societies and China.

These projects show promise in building trust and contributing to sustainable development in both Arctic societies and Chinese society. These societies should take notice of this innovativeness and entrepreneurialism and focus on facilitating such triple-helix knowledge-based collaborations as the future of Sino-Arctic relationships rather than continuing to focus on the traditional areas of oil and gas exploration, fishing, and shipping.



Associate professor ZOU Leilei from Shanghai Ocean University, was granted the fellowship to conduct a one-month academic visit at Fridtjof Nansen Institute in Oslo, Norway from January to February, 2017. Based on the communications and interviews with scholars and institutions in terms of Norway's Arctic policies on marine living resources and the Arctic cooperation of Norway, she has provided some research findings, with below an excerpt of her research report.

CNARC Fellowship Research Report

Implications of the Central Bering Sea Pollock Resources Conservation to the Central Arctic Ocean Fisheries Management

40% of the Central Arctic Ocean (CAO) was the open waters in 2012 and the Arctic will be free of summer sea ice by 2050 owing to the climate change, which gives rise to emerging fisheries in CAO. The five coastal states of Arctic Ocean, including Canada, U.S.A, the Russian Federation, Norway, and Denmark in respect of Greenland (A5) released The Declaration Concerning Prevention of Unregulated High Seas Fishing in at Arctic fisheries meeting in 2015. However, the procedures involving the construction of CAO fisheries management regime go beyond the universally accepted legal framework. For example, the interim measures are internally agreed upon among coastal states, fishing moratorium as the interim measures applies to CAO where there are so far no commercial fisheries, and interim measures are so far only binding on coastal states. Therefore, important distant-water fishing states try to figure out the intention behind their Declaration and challenging the rationale of their proposed interim measures to prevent unregulated high seas fishing. There are similarities in some important issues concerning CBS Pollock Resources Conservation (CBS) and CAO fisheries management, so this paper tries to explore how over-20-years' experience in CBS pollock resources restoration will shed some light on CAO fisheries management.

1. CBS Pollock Resources Conservation

Bering Sea has an extensive water coverage for about 2.27 million square kilometers, most of which falls under the jurisdiction of coastal states, only 8% located at the central part as high seas. The Central Bering Sea is the high seas of Bering Sea. Two coastal states, together with distant-water fishing states of Japan, Korea, Poland and China, used to conduct pollock fishing at Bering Sea. With UNCLOS concluded in 1982, the concept of “freedom of the seas” was replaced. Coastal states were entitled to claim for jurisdiction over EEZs, and distant-water fishing states had to shift to CBS for pollock fishing. There was also an abundance of pollock resources at CBS, while the pollock stocks were almost exhausted with 10 years of overfishing.

A meeting was initiated between USA and USSR in April 1988 and they proposed the establishment of some management regime to define Total Allowable Catch and coordinate scientific research and investigation into pollock resources at Bering Sea. They gathered 6 stakeholders (2 coastal states plus 4 distant-water fishing states) to attend the meetings but the meetings turned out to be a failure in that 4 distant-water fishing states objected unanimously to coastal states' proposals. The first reason is that they thought that the coastal states' proposal deprived them of their fishing rights and interests at the high seas. Secondly, they thought it was not a fair game if they refrained from fishing at CBS while coastal states kept fishing at their own EEZs. The pollock harvest in 1992 voiced the complete stock collapse, which made all states find it urgent and compulsive to create a more permanent management regime on a multilateral cooperation basis. Finally in 1994 came the conclusion of The Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea (CBS Pollock Convention). The convention was ratified by 6 states and took in force in December 1995. With the convention provisions, no pollock fishing will take place unless there is indication from scientific data that the stock is restored to the level that will permit the maximum sustainable yield.

2. Fisheries and Fisheries Management at CAO

2.1 A Contrastive Study

There are some comparability between CBS pollock conservation and CAO fisheries management. Both of them involve fisheries management at high seas and potential conflicts between coastal states and distant-water fishing states. There is an absence of competent RFMOs, who are capable of making management measures and coordinating among conflicting stakeholders. In both cases, the coastal states are acting as a leading role in establishing management regime, then distant-water fishing states to be invited to the negotiation table where coastal states' proposal is to be sold.

However, there are also differences between two cases. CAO covers vaster waters than CBS. CBS Pollock Convention is the remedy to restore the collapsed stock, while CAO interim measures are precautionary approach for fisheries that haven't occurred yet. CBS conservation measures are devoted to pollock, while CAO fisheries management attends to a puzzle where composition, quantity, and distribution of fish stocks remain unclear. CBS Pollock Convention involves 6 stakeholders while CAO fisheries management, A5 are acting as the steward, 5 important potential distant-water fishing entities are “passive” participants who are expected to give a nod for A5's management proposal. Although distant-water fishing states played a key role in the process of negotiation, they are not having much say before they are invited to be present at A5 Arctic fisheries meetings. It seems that CAO may encounter more potential conflicts in its fisheries management.

2.2 Implications

The application of precautionary approach is important in fisheries management. Since precautionary approach is applied when scientific information is uncertain, unreliable or inadequate, data collection and research programs should be developed to enhance the understanding of the situation for better approaches later. However, with the climate change, there is great dynamics for CAO fisheries, and it is more sensible that A5 coordinate with other non-Arctic states to conduct extensive scientific investigations and research into CAO fisheries and put forward more sensible management measures when we have a better updated knowledge of CAO fisheries.

International cooperation can be well facilitated by the good relationship between coastal states and distant-fishing states in high seas fisheries management. Coastal states proposed fishing moratorium at CAO while fishing operations continued at most EEZs, which mismatches the EEZs-high seas compatibility principle advocated by FSA and makes

distant-water fishing states find it an unfair game when coastal states' EEZ privileges are sustained and distant-water fishing states' high seas fishing freedom rights are denied. Five entities are deprived of the chance to be involved in negotiating the interim measures while they are provided with the chance to give a nod for the interim measures and comply with them. The way the international cooperation is conducted by A5 is not the typical way the international cooperation should be conducted in the light of UNCLOS and FSA.

RFMO is the appropriate platform capable of facilitating international cooperation and establishing management measures. RFMO has some advantages in coordinating high seas fisheries management. Parties to RFMO are entitled to equal rights and duties in fisheries management, facilitating the implementation of management measures. However, the procedure involving the establishment of interim measures at CAO doesn't seem to be in compliance with the procedure advocated in FSA. Five entities invited to attend the enlarged meeting of Arctic fisheries haven't been invited to participate in the establishment of interim measures. Currently A5 deny the need to establish RFMO for CAO. There is no indication that more states who are interested in CAO fisheries will be invited to attend the Arctic fisheries meetings. There is still a long way to go before every state has an equal voice for CAO fisheries management.

Priority should go to the dynamics of fisheries management. CBS Pollock Convention provides that decisions should be made by consensus at the annual conference among parties concerning allowable harvest level, individual national quota, conservation and management measures, observer program, boarding and inspecting, etc. Considering the fragile ecosystem at CAO, fishing moratorium as the interim measures can be interpreted as a good attempt for precautionary approach, while it should not serve as the excuse to keep non-Arctic states away from CAO in the name of environmental protection. Instead, it is more sensible to establish the RFMO where more extensive research and investigations involving more stakeholders can be coordinated and conducted to keep us informed of the latest development of fisheries status at CAO.

A good knowledge of fish stocks is of importance to the establishment of management measures. Overfishing led to pollock collapse at CBS, while the lack of the knowledge of pollock stocks sped up the collapse.

3. Conclusion

There are lessons and implications that we can learn from CBS pollock resources conservation. It turns out that we have to pay a much bigger price if the remedy is made after the damage is done to the ecosystem health. Without sufficient data about CAO fish stocks, precautionary approach is the best option for CAO. However, CAO calls for the timely establishment of RFMO since RFMO provides all stakeholders with the equal chance to get involved in fisheries management and RFMO is capable of coordinating among stakeholders, establishing sensible and updated management measures, and monitoring the implementation of management measures. With the sustainable fisheries as the common ultimate aim, coastal states and distant-water fishing states should have regular dialogues and face up to fisheries challenges in a cooperative manner. CBS pollock conservation measures are to restore the collapsed stocks, while CAO fisheries management is to attend to the emerging fisheries. Both of them call for the dynamic management in the light of latest scientific fisheries data.

With more extensive waters, more varieties of fish stocks, and more stakeholders of different interests, CAO fisheries management will encounter more challenges. CBS pollock resources conservation has some implications to CAO fisheries management. The increasingly sophisticated fisheries international legal instruments not only provide the management framework that we can adhere to, but provide the concrete guidelines in operation and implementation of management measures. With international cooperation as the principle and sustainability as the aim, the challenges that CAO fisheries management will encounter will hopefully melt away as the sea ice melts away.



6th China – Nordic Arctic Cooperation Symposium
23–25 May 2018 – Tromsø, Norway

Symposium Theme: Integrated Ocean Management in the Arctic

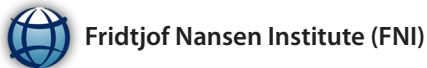
Overarching issues: Knowledge building, governance challenges, science-governance interplay

Conveners:



NPI is Norway's central governmental institution for scientific research, mapping and environmental monitoring in the Arctic and the Antarctic. The Institute advises Norwegian authorities on matters concerning polar environmental management and is the official environmental management body for Norwegian activities in Antarctica. The Institute's activities are focused on environmental management needs in the polar regions. In addition to collaboration on environmental protection in the Barents region, the Institute dedicates much effort to research on climate, long-range transport of pollutants and their impact on the environment, and biodiversity.

www.npolar.no/en/



FNI is an independent social science institute engaged in research on international environmental, energy and resource management politics and law. Research on international law and political cooperation in the Arctic has deep roots at the Institute, which is located outside Oslo in the former home of Fridtjof Nansen, world-known polar explorer, scientist and international statesman. FNI follows Arctic-related processes and cooperation both at circumpolar and regional levels. More recently, the Arctic interests of Asian nations have been an important study area.

www.fni.no



UIT - The Arctic University of Norway is the northernmost university of the world. Its location on the edge of the Arctic implies a mission. The Arctic is of increasing global importance. Climate change, the exploitation of Arctic resources and environmental threats are topics of great public concern, and which the University of Tromsø takes special interest in. UIT is a classical university divided in 7 Faculties; Faculty of Health Science, Faculty of Science and Technology,

Faculty of Law, Faculty of Humanities, Social Sciences and Education, Faculty of Biosciences, Fisheries and Economics, Faculty of Fine Arts and Finnmark Faculty.
<https://en.uit.no/startside>

Session 1 Fisheries Management in Arctic Waters

Since December 2015, the so-called ‘five-plus-five’ negotiations on high seas fishing in the central Arctic Ocean have been going on between the five central Arctic Ocean coastal States (Canada, Denmark, Norway, Russia and the United States) and China, the EU, Iceland, Japan and South Korea. This exercise represents a new interesting constellation of actors in Arctic governance. While there is currently no fishing activity going on in that region, extensive fisheries take place in sub-Arctic waters. Notably, the main demersal fisheries (fish living on or near the bottom) in the Barents Sea, including the world's largest cod stock, are managed jointly by Norway and Russia, while large pelagic stocks such as herring, mackerel and blue whiting in the Norwegian Sea are managed by EU, Norway, Iceland and the Faroe Islands in multilateral so-called ‘coastal states regimes’. Scientific advice for the entire North East Atlantic is provided by the International Council for the Exploration of the Sea (ICES). The main challenges in recent years are related to the extension northwards of the area of distribution of the Norwegian Sea pelagic species. The coastal states are currently not able to agree on total allowable catches that are within the scientific advice provided by ICES. This is a political issue between the involved states, but the science/policy interface is also of great importance because a major issue of contention is how, scientifically, zonal attachment of fish stocks should be defined.

For this session, papers are invited for the entire range of fisheries management issues related to the central Arctic Ocean and sub-Arctic waters. Examples:

- How well are fisheries management systems working in various parts of the Arctic?
- How is the interface between scientific knowledge and policy challenges working in a time of extensive stock shifts in Arctic waters?
- How are Arctic fisheries perceived from outside the Arctic, i.e. from China?

Session 2 Marine Pollution

One of the major issues of our time is the increasing contamination of the marine environment by plastic. The enormity of the issue – over five trillion pieces of plastic pollute the surface of the world’s oceans – makes this an urgent situation. Worldwide, only 14 % of plastic is recycled and 32 % is released into the environment. The economic impact of those 32 % is estimated by the World Economic Forum to result in a loss of between USD 87 and 125 billion annually. Plastic enter the oceans by a number of sources, for example through inadequate waste disposal infrastructure, accidental or deliberate emissions from industry and lost or discarded fishing equipment. Recent studies indicate that a limited number of large rivers, of which some lie in China, transports the majority of plastic from land to ocean. Since plastic debris in the ocean does not respect state boundaries, effective global governance responses are required. The current international legal framework on marine pollution is insufficient to handle the full complexity of the plastic issue.

In this session, we would like to see presentations addressing the issue of marine plastic pollution both from the natural and social sciences point of view.

- Processes from source to recipient, i.e. the life cycle of marine plastic, toxic effects and mitigation strategies are all relevant topics.
- To what extent is marine pollution becoming a theme in national policies? How well is scientific knowledge communicated?
- What kind of international initiatives are needed to tackle the issue?

Session 3 Climate change, maritime governance and sustainability in the Arctic

The changing climate affects the Arctic Ocean. The gateway to the high Arctic is gradually opening, with reduced sea-ice coverage and shorter periods with ice-covered waters as a consequence. Natural resources are thus becoming more accessible, and we can expect increased maritime activity. This will raise a number of issues related to the sustainable management of the marine resources, how to operate safely in Arctic waters and organize search and rescue, how to balance increased activity with the vulnerable Arctic environment

In this session, we will include a presentation describing how climate change affects the Arctic, not only with

a changing ice situation, but also acidification of the oceans and new weather patterns. We then invite papers/ presentations on such issues as

- How can increased maritime activity be governed in a safe and sustainable manner?
- How can the international community respond to climate change in the Arctic?
- How well is science integrated in decision-making processes?
- What are the interests and policies of the coastal states, as well as non-Arctic states?
- What is the role of transnational governance, and in particular the Arctic Council?
- How is the Arctic affected by the international geopolitical situation?

About Tromsø

Tromsø is located 350 kilometers north of the Arctic Circle and is the largest city in Northern Norway with a population of appr. 65,000. Human settlement in the Tromsø area dates back thousands of years, though the city itself was founded only about 200 years ago. Tromsø soon became the centre for trapping in the Arctic region, and in the early 1900s it was the starting point for expeditions to the Arctic. Hence its nickname: “Gateway to the Arctic”.

From 20 May to 22 July the midnight sun makes it possible to do as the locals and participate in various activities around the clock. In general, Tromsø has a mild climate for such a northerly destination because of its seaside location and the warming effect of the Gulf Stream. It is easy to get to Tromsø from other Norwegian cities and abroad.

Tromsø is home to the University of Tromsø - The Arctic University of Norway, the Norwegian Polar Institute and several other Arctic-related research institutions. The secretariat of the Arctic Council is located in Tromsø. The international conference Arctic Frontiers is organized annually in the city.

For the outdoor enthusiasts, Tromsø city centre is conveniently located just around the corner from seemingly untouched wilderness, which offers many opportunities for activities such as hiking, fishing, kayaking and whale safaris. The city is known for its lively night scene and a range of restaurants specializing in the fresh ingredients of the Arctic.



Call for Abstracts

Abstracts (250–400 words)

Deadline for Abstract Submission: March 5th, 2018

Acceptance for abstracts: March 20th, 2018

A selection committee nominated by CNARC will review and select the proposals. A publication of research papers written for the occasion will be issued.

Please submit abstracts electronically (with a short CV attached) to:

Ms. **Liu Han**, Executive Secretary, CNARC: liuhan@pric.org.cn

Ms. **Anne Kibsgaard**, Chief Secretary, Norwegian Polar Institute: anne.kibsgaard@npolar.no