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				





Content



CNARC Symposium 2019 Report "Arctic Fisheries, Polar Silk Road, and Sustainable Development Practices"
 Keynote speech of Mr. Yang Huigen at the opening ceremony of the 7th China-Nordic Arctic Cooperation Symposium (May 8th , 2019, Shanghai)
 Keynote speech of Ms. Chen Danhong at the opening ceremony of the 7th China-Nordic Arctic Cooperation Symposium (May 8th , 2019, Shanghai)
 Publications and events
 CNARC fellowship report (2018-2019)
 The 8th China-Nordic Arctic Cooperation Symposium 2020, December 2020 – Umea, Sweden



CNARC Symposium 2019 Report "Arctic Fisheries, Polar Silk Road, and Sustainable Development Practices" 8 May 2019, Shanghai

Prepared by Liu Han, Executive Secretary

Co-organized by Shanghai Ocean University and Polar Research Institute of China, the 7th China Nordic Arctic Cooperation Symposium was held from 8-9 May 2019 in Shanghai. Up to 120 participants from China, Finland, Denmark, Sweden, Norway and Russia gathered together for discussion of cutting-edging issues in the Arctic, such as Arctic geopolitics, governance, legislation, economy, and sea route utilization. Mr. Olafur Ragnar Grimsson, the former President of Iceland, Mr. Gao Feng, China's special representative for Arctic Affairs, Mr. Yang Huigen, Director of Polar Research Institute of China, Ms. Chen Danhong, Deputy-director of China Arctic and Antarctica Administration, Mr. Chen Yudong, President of Shanghai Ocean University, as well as representatives from the Embassy of the Arctic countries in Shanghai, addressed the opening ceremony.

The opening ceremony was co-moderated by Dr. Yang Jian, Deputy Director of Shanghai Institutes of International Studies, and Dr. Arild Moe, Deputy Director of Fridtjof Nansen Institute. Mr. Olafur Ragnar Grimsson traced the achievements of China-Iceland Arctic cooperation since 2012, especially the fruitful scientific cooperation, and gave high expectations to China's Nordic Arctic cooperation in the future. Mr. Gao Feng recalled the Ministerial Meeting of the Arctic Council in Rovaniemi in May 2019, and appealed that Arctic stakeholders should cooperate and utilize international platforms and mechanisms for Arctic governance, such as CNARC, to continue to promote international cooperation in the Arctic.

The academic conference, with the theme of "Arctic Fisheries, Polar Silk Road, and Sustainable Development Practices", is comprised of three sessions: Polar Silk Road: Vision, Progress and Outlook; Arctic Fisheries; China-Nordic Policy Synergies on Arctic Sustainable Development. Nearly 50 scholars from major institutes on Arctic social science research delivered keynote speeches and presentations.

Prof. Lassi Heininen from University of Helsinki, in his keynote speech on "Sino-Nordic Arctic Cooperation: Objectives and Approaches", introduced the Nordic model and cooperation and assessed Finland's performance as the chairmanship of Arctic Council during 2017-2019. He believed that Finland's greatest achievement is to maintain the low tension & high stability based on constructive cooperation between the eight Arctic states, connecting the priorities with each other, as well as searching for a balance between economic activities & environmental protection bound with political stability. He also noted that the key features of the Nordic model and cooperation are 'Unity in Diversity' and 'Diversity in Unity', which are valuable outcomes and learned lessons in globalized world. By virtue of their legacy, the Nordics have a unique potential to play a proactive role in world politics and be influential in the global Arctic.

Prof. Thorsteinn Gunnarsson from Icelandic Centre for Research, illustrated the development of Sustaining Arctic Observing Networks and overviewed the priorities of Iceland's Arctic Council Chairmanship, in his keynote speech titled "Designing a Pan-Arctic Observing System for Sustainable Development: Common response by the Arctic and Asian countries in view of the Priorities of Iceland's Arctic Council Chairmanship". He noted the vision, goals, roadmap, cooperation mechanism of Sustaining Arctic Observing Networks and its achievements, like the "Polar Data Project", focusing on promoting effective governance and establishing co-funding mechanisms so as to provide researchers and others with access to all Arctic observational data. He also introduced Iceland's priorities during the next president of the Arctic Council, including Arctic marine environment, climate and green energy solutions, people and society in the Arctic, and stronger Arctic Council.

In group discussion session on "Polar Silk Road: Vision, Progress and Outlook", Prof. Arild Moe from Fridtjof Nansen Institute illustrated the prospects of liquefied natural gas from the Arctic and its significance for China. In his perspectives, the drivers for China's involvement in the Yamal LNG project are a mix of economic, industrial and political interests. Also he explored the role of the Arctic in the broader Chinese supply picture as well as discussed political or economic obstacles in the way for a continued expansion of Russia's Arctic LNG projects. Prof. Zhao Huiyu from Shanghai Jiaotong University believed that the current UNCLOS and the special conventions of the Arctic do not cover the entire governance and ecological protection needs of China's "Arctic Belt and Road" strategy. She suggested that new cooperative policies and governance mechanisms in terms of Arctic Environmental governance need to be established. In group discussion session on "Arctic Fisheries", Prof. Zou Leiei from Shanghai Ocean University overviewed the retrospect and prospect of Central Arctic Ocean Fisheries Management. Prof. Steingrímur Jónsson from University of Akureyri and Marine and Freshwater Research Institute presented the importance of quantifying global warming and natural variability signals in the ocean around Iceland for sustainable decision making, which is an excellent case of science policy decision making.

In group discussion session on "China-Nordic Policy Synergies on Arctic Sustainable Development", with regards to Arctic geopolitics, Prof. Camilla T. N. Sørensen from Royal Danish Defense College analyzed the differences in assessments and strategies pointing to key drivers, e.g. different interests, concerns and stakeholders, in the Nordic capitals. She considered that Arctic politics and security has become increasingly intertwined with great power policy recently, especially the influence of the intensified great power rivalry between the U.S. and China, which influenced the assessments of strategies of Nordic states towards China in the Arctic. Arguably, a context of intensified U.S.-China great power rivalry makes it even more difficult for China as the only non-Arctic great power to ensure its access to and influence in the region. Prof. Zhang Pei from Shanghai Institutes of International Studies illustrated the "Polar Silk Road" should be viewed as a natural extension and integral part of "One Belt and One Road" initiative and more than exploration of the Northern Sea Route and based on the principle of extensive consultation, joint contribution and shared benefits. He urged that China should promote cooperation with the Nordics as a whole and at the same time, studying national development strategies of individual Nordic countries. Moreover, efforts should be made to foster a favorable social environment for the project and achieve win-win results by advancing the project based on reciprocity, mutual trust and respect through wide consultation, joint effort, and benefit sharing

The CNARC Symposium not only builds an epistemic community that facilitates the transfer of knowledge from the Nordic countries to China, but also become an important channel for China and Nordic states for policy advocacy and information dissemination. CNARC is willing to facilitate and enhance such dialogues through its symposium, roundtable and other mechanisms.



Keynote speech of Mr. Yang Huigen at the opening ceremony of the 7th China-Nordic Arctic Cooperation Symposium (May 8th, 2019, Shanghai)

Dear Ms. Chen Danhong, Vice Director General of CAAA

Dear Dr. Chen Dongxiao, President of SHOU

Dear Mr. Martin Bech, Consul for Higher Education and Science and Innovation Attache, Consulate General of Denmark.

Dear Dr. Nalan Koc, Deputy Director of the Norwegian Polar Institute,

Distinguished diplomats, Dear CNARC colleagues,

Ladies and Gentlemen,

This is the 7th China-Nordic Arctic Research Cooperation Symposium and it is co-convened by the Shanghai Ocean University (SHOU), Polar Research Institute of China (PRIC) and the CNARC Secretariat.

First of all, I would like on behalf of the CNARC, to extend the warmest welcome to all the participants, especially to our Nordic colleagues from far away to attend this meeting in Shanghai and the hearty thanks to the SHOU, PRIC, and the CNARC secretariat for the excellent organization of this symposium. Special thanks are due to the great supports from Consulates General of Nordic states in Shanghai, the Municipal Government of Shanghai and the Ministry of Natural Resources, the Ministry of Foreign Affairs of China. We will have the great honor to have H.E. Olafur Ragnar Grimsson, Chairman of the Arctic Circle and former present of Iceland, the Ambassador for Arctic Affairs of Swenden, the Special Representative for Arctic Affairs of China and Senior Adviser on International Affairs of the Nordic Council of Minister to deliver speeches during this symposium.

The theme of this symposium is on 'Arctic Fisheries, Polar Silk Road, and Sustainable Development Practices'. We are very pleased to have 130 registered participants to this Symposium and I'd especially extend warm welcome to students

and young people from both China and Nordic states to join our CNARC activities.

Fisheries is the strength of our host today SHOU, as one of China's leading universities in fisheries science established over 100 hundred years ago. SHOU signed an agreement with the University of Tromsø last year and will sign another agreement with University of Akureyri in Iceland. Both Norway and Iceland are important fishing nations with leading science and technology in the field of fisheries and fisheries management systems. It presents another excellent show-case of CNARC's contribution to the China-Nordic cooperation.

Established in the context of rapid change of the Arctic and global climate and world's economy globalization, the cooperative regime of CNARC has created a pragmatic and open network for multi-disciplinary and cross-cutting Arctic research, committed to increasing awareness, understanding and knowledge of the Arctic and its global impacts and to promote cooperation for sustainable development of the Arctic and coherent development of China in a global context. Under the joint efforts of its members, CNARC has promoted trans-regional cooperation on Arctic studies, policy advocacy and knowledge dissemination between China and the Nordic countries. CNARC has been acknowledged in the White paper of China's Arctic Policy as "promoting exchanges and cooperation among the stakeholders."

CNACR is currently composed of 17 member institutes, 9 from Nordic states and 8 from China. All members are leading think-tanks, research institutes and universities on Arctic studies in their respective country and endowed with capacities to facilitate, coordinate and initiate Arctic research in their professional fields. This year's members' Assembly and executive committee meetings discussed and decided to make amendments to the membership article of the CNARC ToR. I am pleased to announce that we are now ready to accept new members to the CNARC family and CNARC is aiming toward an open and international consortium of excellence on Arctic research.

Besides of academic exchanges, CNARC seeks to bring entrepreneurial initiatives into play and has organized economic roundtables as "a laboratory to incubate new ideas for business development and cooperation for scholars, business leaders and policy makers to dialogue together. This year we won't have a CNARC roundtable, yet CNARC secretariat and community has greatly contributed to the organization of the Arctic Circle China Forum, another big event on the Arctic in Shanghai will take place immediately after this Symposium. The Forum will have 500 participants and 6 plenary sessions and 20 breakout sessions with a theme on 'China and the Arctic: polar silk road, trans-regional cooperation, Arctic science and innovation, and sustainable development'. As the organizer of Forum, I would also welcome you to this Forum as well.

Lastly, I want to thank this year's host of the CNARC symposium, the Shanghai Ocean University, for their excellent works and great hospitalities.

To conclude, I sincerely wish the 7th Symposium gains a great success and all CNARC colleagues have fruitful and pleasant stay Lingang New Town of Shanghai.



Keynote speech of Ms. Chen Danhong at the opening ceremony of the 7th China-Nordic Arctic Cooperation Symposium (May 8th, 2019, Shanghai)

Distinguished Delegates,

Ladies and Gentlemen,

Good morning,

First of all, on behalf of the CAA (Chinese Arctic and Antarctic Administration) affiliated to the Ministry of Natural Resources, let me express a warm welcome to all the distinguished guests here, and thank Shanghai Ocean University for its efforts in hosting the conference.

As an observer country of the Arctic Council, China has carried out fruitful cooperation in science, environmental protection, economy and Arctic management with Nordic countries within the framework of the Arctic Council and other bilateral and multilateral frameworks. With the joint efforts of the participating countries, the China-Nordic Arctic Research Center is becoming a mature mechanism for multilateral cooperation. The topics of the symposium are becoming more and more extensive and important, and the discussions are closely related to the practice and development of the Arctic. The center now is more and more attractive and new members are constantly joining. CNARC has created a multi-faceted, multilateral, effective and open cooperation and communication pattern for academic and policy research, which has promoted the understanding of each other's Arctic policies, and has achieved a lot of fruitful research results.

We firmly uphold the policy of science and technology first and vigorously promote scientific and technological cooperation. This is the cornerstone and driving force of China's cooperation with Arctic countries. This year marks the 20th anniversary of China's scientific expedition to the Arctic on the platform of the "Xuelong". "Xuelong 2" icebreaker, jointly designed by China and Finland, plans to launch a trial voyage in July and it is expected to become a new cooperative platform. China will implement the "Xuelong Pole Exploration" project, focusing on the construction of the

Antarctic Observation Network and the construction of information and data service platform. The Ministry of Natural Resources and the Ministry of Science and Technology of China are formulating the next five-year plan for Polar Science and technology innovation. China will also actively participate in the MOSAiC project, a large-scale Arctic scientific cooperation project jointly launched by 13 countries. At the same time, we will continue to carry out Arctic scientific expeditions, continue to participate in cooperation patterns, such as the International Arctic Science Commission, continue to promote the integration and sharing of observation data, continue to support scientific research institutions to communicate with foreign think tanks and academic institutions, and continue to encourage enterprises to participate in the Arctic green development and utilization. These measures will not only enhance China's ability and level of Arctic expedition, but also enhance the foundation and capacity of international cooperation.

At present, the cooperation of science, technology, information, commerce and culture with the ocean as the carrier and link is increasingly close. China's President Xi Jinping recently proposed building a maritime community with a shared future. The Arctic Ocean is an important link connecting the continents of the Northern Hemisphere. The sustainable development of the Arctic is not only related to the welfare of Arctic countries and aborigines, but also closely related to the overall interests of the international community. We are willing to further strengthen practical cooperation with Nordic countries in science and technology, ecological environment protection and international management so as to better respond to the challenges and opportunities brought about by the rapid changes in the Arctic and make more efforts and contributions to the peace, stability and sustainable development of the Arctic.

To end, I sincerely wish great success for the 7th China-Nordic Arctic Cooperation Symposium.

Thank you!

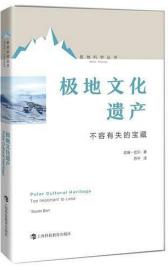


China-Nordic Arctic Research Center







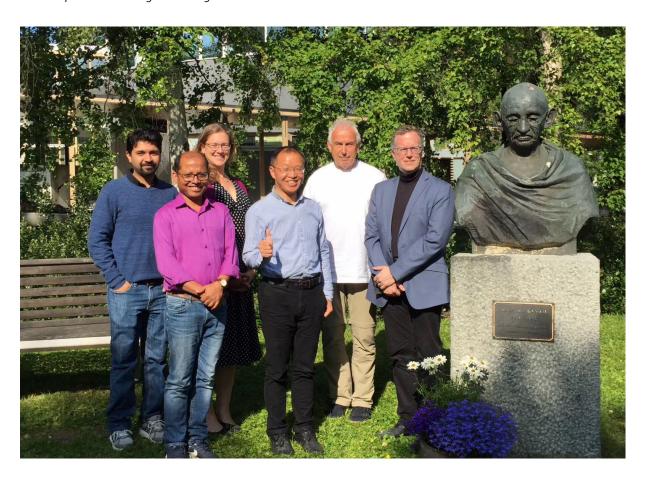


Publications and events

CNARC has facilitated two publication projects in 2019. The first CNARC book "Sino-Nordic Arctic Cooperation: Objectives and Approaches" edited by Yang Jian and Lassi Heininen was launched on December 10, 2018 with a target audience of Chinese researchers, policy-makers, business people and general public that have an interest in the Nordic countries and Arctic affairs and their relevance to China, filling a literature gap in Chinese on the Nordic Arctic. The second CNARC book "Polar Cultural Heritage ——Too important to lose" was launched on May 8, 2019, whose author is the former IASC President Susan Barr. This book introduces the diverse cultural heritages in the Arctic and Antarctic region, which are worthy to be explored and protected, to Chinese general public and students. A book donation ceremony to the library of Shanghai Ocean University and a book signing session were launched in the morning of May 8, 2019 during the 7th China-Nordic Arctic Cooperation Symposium.

CNARC fellowship report (2018-2019)

Prof. Wang Chuanxing from Center for Polar and Maritime Studies and School of Political Science and International Relations of Tongji University, Shanghai China was granted the fellowship to conduct a one-month academic visit at Fridtjof Nansen Institute and UiT in Norway in 2019. Texts below are the summary of an academic report of CNARC fellowship that Prof. Wang Chuanxing has submitted.



Research Report on "Arctic Policy-Making and Legislation in the Nordic Countries——A Case Study of Norway"

In policy making studies, there is the shift from the macro-level analysis to the micro-level analysis in the past decades. Such a shift is also reflected in the foreign policy making studies as foreign policy making is a process entangling both domestic politics and international politics, because "states even superpowers-are stable, unitary actors is likely to be highly misleading". And such blurring between domestic politics and international politics is also reflected in Norway's Arctic policy (making) in that there are such an arguments: that one layer of Norwegian Arctic policy is to regard the High North as a "national project" since the post-Cold War; that the main public debates in Norway "can be said to have framed and defined the High North since the turn of the Millennium".

"While stressing the output side of political processes, the input side is in danger of being neglected" in policy studies. This is also one problem in Norway's Arctic policy (making) studies in that more emphasis is overwhelmingly laid on policy outcomes, rather than policy processes. In this report, it is the core to have an analysis of political participation of organized interests in the process of policy making, namely, to analyse the impact of organized interests on Norwegian Arctic policy making from the angle of corporatism/lobbyism, which implies Norway's Arctic policy making is neither purely Norway's domestic politics nor purely Norway's international politics.

Norwegian Arctic Politics and Defining Norway's Arctic Policy

Broadly speaking, Norway's Arctic policy can be separated into two periods, with the end of Cold War as the watershed. In the first period, Norway's "interest in the polar areas has not shown consistency either, and has had a tendency to be steered by impulses from other sources than a considered long-term policy." This is a striking contrast with the second period during which Norwegian governmental official delivered Norwegian Arctic speeches and Norwegian governmental/official Arctic strategy reports have been issued.

And in the period before the end of Cold War, Norway experienced two different phases regarding its Arctic policy: the phases before and after the end of WWII. During the phase before the end of WWII, although "the public and the political interest that collect around Svalbard and Norwegian arctic activities during the first two decades of the 20th century represented the first period of relatively intense occupation with a Norwegian polar images and status", "the polar areas have in many and sometimes long periods been peripheral in national policies and priorities in Norway", which is reflected in the fact that NSIU (Norway's Svalbard and Arctic Ocean Research Survey) as a government agency "was not until 1937 that it could rely on government funding alone." And what's more, "although the post-war Norwegian government felt the need to support and encourage Norwegian polar status and activities, the will failed when necessary resources had to be weighed against all the other financial needs of the country." During the phase before the end of Cold War, Norway's Arctic policy is the embodiment of a dualist approach: on one hand, the European Arctic as a high-tension interface between East and West; on the other hand, with the fundamental changes in the law of the sea, Norway and the Soviet Union entered into a formal partnership to manage the rich fish resources of the area in the Arctic. During this period, Norway's Arctic policy is a component of the European Arctic policy which is a part of the Western strategy to contain the Soviet Union itself before 1980s; and before the collapse of Soviet Union in 1991, there emerged cooperation between Norway and the Soviet Union, although security was still the major concern.

The second period, namely, the post-Cold War period, is typical of "a considered long-term" Norwegian Arctic policy, as is mentioned above; and in such a policy, there are four layers: the High North as an arena for great-power politics (mainly a legacy from the Cold War), the High North as an arena for institutionalized collaboration with Russia (mainly a legacy from the 1990s), the High North as a "national project" (mainly a legacy from the mid-2000s), and the High North as an arena for circumpolar politics (present throughout the period, but increasingly important the last few years). During this period, like other Nordic countries and beyond, owing to changes both in Arctic environment and Arctic politics, Norway is very actively involved in the Arctic affairs.

This paper focuses on analyzing Norway's Arctic policy in the post-Cold War period. But first of all, it is necessary to differ "The Arctic" from "The High North" terminologically in Norway, because, Norwegian Arctic policy outside Norway is nowadays highly possibly known as Norwegian High North policy, which could result in "a distinct lack of joint or shared understanding when Norwegians and non-Norwegians exchange views on policy issues related to areas which could be referred to as the Arctic/the Sub-Arctic/the European Arctic/the High North/the Far North or the Circumpolar Regions." In Norway, "although 'The Arctic' and 'The High North' may, to some extent, be mutually overlapping, the former is a distinctly geographical concept", while the term "The High North" which was used in official language and took full effect only in 2003 is a political concept.

To avoid such "distinct lack of joint or shared understanding", the concept "The Arctic" is used equivalent to the concept "The High North", namely, "The Arctic" is used more as a political concept like "The High North" in this paper.

Organized Interests and Norwegian Arctic Policy Making

The separation of international politics from domestic politics "have limited the field's ability to understand international relations". This is also true in the Arctic policy making in Norway. In other words, organized interests have been deeply involving in Norway's policy making in general, and in its Arctic policy making in particular, because Norway is a corporatist state, which indicates "the formal representation and participation of organizations on government boards, committees and councils"; and Norway's shift from corporatism to lobbyism since 1980s signifies organized interests' adopting a lobbyism position on their involvement in policy making, which implies organized interests taking "a means of political influence that is practiced through personal relationships, telephone conversations, informal meetings, correspondence, etc". Consequently, while "lobbyist relations may be both frequent and stable, but often more *ad hoc* based than the formal and institutionalized corporatist relations.... Interest organizations and other

lobbyists can lobby on their own initiative. Hence, lobbyism is a more flexible strategy than corporatism".

"Organized interests" involvement in Norway's Arctic policy making is embodied in two respects.

The first respect is that, in Norway's Arctic policy in general and in its Arctic policy making in particular, there are clear evidences of the convergence between international politics and domestic politics, and especially evidences of the involvement of organized interests:

There's a very interesting balancing act for the Norwegian government here. On the one hand, it's not politically correct to present High North initiatives as old-fashioned regional policy – that feeds into the picture of Northern Norway as needy. On the other hand, there are clear expectations of financial support in Northern Norway, for instance by stakeholders that I call "the mayors", local politicians who see "roads, ports and jetties" as legitimate priorities in the government's High North policies. Then you have the "Cold War romantics", who yearn for a revival of geopolitical interest in the North; the "petro optimists" who see salvation in oil drilling in the Barents Sea; the "Barents practitioners" in Kirkenes, and the "Arctic foxes" in Tromsø. Arctic fox is the translation of the Swedish word "fjellräven", which again is a brand of outdoor clothing frequently worn by politically correct outdoorsy people who worry about the vulnerability of the natural environment in the Arctic. Arctic politics creates enthusiasm in Norway, sometimes at a deafening volume, but ownership to the phenomenon is diverse."

The second respect is about specifications of organized interests' involvement in Norway's Arctic policy making in the Norwegian strategy reports. First, regarding the report Look North! Challenges and opportunities in the Northern Areas (2003), its committee (initiated to create such a committee by Foreign Minister Jan Petersen on March 3, 2003) members inculde scholars from think tanks and universities, representatives from NGOs, business, Arctic organization. What's more, the committee ... has sought to consult environments and individuals with particular interest and expertise for the topics the committee has addressed; ... has also held meetings with a number of central ministries; ... has received a number of written input from organizations and individuals, and obtained information through attending conferences and seminars. Second, in The Norwegian Government's High North Strategy (2006), besides emphasizing Norway's good neighborly relations with Russia, its responsibility for combating illegal fishing and managing the renewable fish resources its opportunities in the Barents Sea presenting as a new European energy province, taking environmental and climate considerations into account, it also touches upon the points that "we will improve living conditions, opportunities and the quality of life for all those who live in the High North, and we will exercise our particular responsibility for safeguarding indigenous peoples' rights....This is more than just foreign policy, and more than just domestic policy"..."We have also maintained close contact with a large number of groups and institutions in the High North, and with regional authorities and the Sámidigqi (the invaluable advice on how to make Norway's Arctic policy as forward-looking and effective as possible." Sami Parliament)....The key words for the strategy are presence, activity and knowledge....This strategy sets out the framework for our efforts in the High North. Third, in New Building Blocks in the North: the next step in the Government's High North Strategy (2009), while continuing to maintain the argument that "the overall aim is to enhance knowledge in and about the north, increase our activity and presence in the area and lay the foundations for sustainable economic and social development in the years to come...", it begins to emphasize to "build on constructive partnerships – between the public and private sector, between central and local authorities, and between Norwegian and foreign actors." Fourth, in Norwegian Ministries, Norway's Arctic Strategy: between geopolitics and social development (2017), special attention is paid to the arguments that "(F) oreign and domestic policy are intertwined in the region, and people's everyday lives are affected both by high politics and by day-to-day issues"; that "(F) oreign policy and domestic policy converge in the Arctic"; that "(G)overnment has sought to give greater consideration to the domestic aspects of Norway's Arctic policy". Thus, "(I)n the development of North Norway, it is the region's own citizens, companies and politicians that have the most important role to play"; "(E)nthusiastic representatives of the business sector, various organizations and knowledge institutions from all over North Norway have given us invaluable advice on how to make Norway's Arctic policy as forward-looking and effective as possible."

And based on these reports, there are two findings. First, the increasing shift from emphasizing Norwegian Arctic policy as a foreign policy to emphasizing it as both a foreign policy and domestic policy, which leaves increasing larger room for the involvement of organized interests in Norway's Arctic policy making. Second, Look North! Challenges and opportunities in the Northern Areas (2003) is written by a committee created based on Norwegian Foreign Minister Jan Petersen's initiative; both the Norwegian Government's High North Strategy (2006) and the New Building Blocks in the

North: the next step in the Government's High North Strategy (2009) are issued by Norwegian Ministry of Foreign Affairs, and forwarded by Prime Minister Jens Stolternberg; however, Norwegian Ministries, Norway's Arctic Strategy: between geopolitics and social development (2017) is issued by Norwegian ministries, and forwarded by Prime Minister Erna Solberg, Foreign Minister Børge Brende, and Minister of Local Government and Modernization Jan Tore Sanner. The implication is that Norwegian Arctic policy is increasingly not a pure foreign policy; rather, it is increasingly converging between Norwegian foreign policy and its domestic policy, which gives room to organized interests regarding their involvement in Norway's Arctic policy making.

Dr Steingrimur Jonsson, Professor from the University of Akureyri, with research expertise on physical oceanography in the Arctic, took opportunity of CNARC fellowship program to conduct a one-month fellow visit from April 29 to May 27 in 2019 at Shanghai Ocean University. The text below describes his academic activities during his visit in China.



A report from my visit to the Shanghai Ocean University

1. Research project

It is a well-known fact that the Arctic has been warming faster than other parts of the world due to climate change. However, areas at the southern boundary of the Arctic are not necessarily following this trend since they are also under the influence of other climate systems. In order to investigate this and the role of the ocean in the recent warm trend occurring in the area around Iceland, hydrographic data have been analyzed in an attempt to quantify how much of the warming observed in the waters south and west of Iceland are due to global warming and how much is due to natural variability. This is possible because there exist long time series of temperature and salinity in the area for both warm

and cold periods. The different warm periods can be compared to see if there is anomalous temperature rise during the recent warm period compared to previous warm periods. This anomalous temperature rise can be assumed to be due to global warming whereas the rest of the temperature rise can be attributed to natural variability. The natural variability is caused by changes in the subpolar gyre, that cause warmer and more saline water to be advected to the area. The higher temperatures and salinities were not just observed in the Icelandic waters but also in the Nordic Seas and in the Atlantic water circulating in the Arctic Ocean leading to increased heat content there, adding to the sea ice melt. The proposed research therefore has a much wider scope than just Icelandic waters and there is a potential for studying other areas of the sub polar gyre with the same methods.

Monitoring of the waters around Iceland has been ongoing on a regular basis at standard stations for about 50 years. This has included the seasonal variations as well as interannual and decadal variations. Prior to that there was also a less regular monitoring in some areas. This monitoring has revealed that during the last two decades the ocean around Iceland has been considerably warmer than during the cold period from 1965 to 1996. From 1920 to 1965 warm and saline conditions dominated the waters south and west of Iceland similar to the conditions after 1995. Those variations have been related to the AMO (Atlantic Multidecadal Oscillation). The recent rise in temperature as well as its effects on the biology and fish stocks in Icelandic waters is often attributed to global warming. However, the rise in temperature was quite sudden and it was also accompanied by higher salinity. Both of those facts indicate that there was a shift in the distribution of water masses in the area leading to an advection of warmer and more saline waters from further south in the Atlantic. It is very likely that some of the increase in the temperature is due to global warming but some of it is certainly due to natural variability. The aim of the proposed research is to attempt to quantify the contribution from each of those processes.

Before arriving at Shanghai Ocean University, I had already made some preliminary attempts at this problem that seemed promising. The first ten days of my visit I worked on this problem and prepared the lectures I was going to give at the CNARC symposium and at the Arctic Circle China Forum conference, both of which were held in Shanghai during my stay at the Shanghai Ocean University.

The results of these investigations have relevance for decision making in many aspects such as for fisheries since it is important to know if the higher temperatures observed in the recent two decades might reverse due to changes in the dynamics of the ocean. I am supervising a master's student at the University of Akureyri who is working on a related subject including the distribution of fish species. He is using data from fish stock assessment available for the years 1987-2016 for studying the relation with environmental variables such as temperature and salinity etc., using various multivariate statistical methods. It is of interest in this respect to be able to quantify the changes occurring in environmental parameters such as temperature and salinity due to global warming and natural changes in circulation and water mass distribution.

2. Cooperation with SHOU in the fields of education and research

The rector of the University of Akureyri visited Shanghai Ocean University on May 7th and spent the day together with me, meeting with representatives from Shanghai Ocean University discussing various types of cooperation ranging from exchange of students and teachers to common research projects. We visited various facilities of the Shanghai Ocean University such as their research vessel and their deep-water submarine vehicle. We had good discussions with the people at all the sites we visited and gained a lot of information about the ongoing activities at Shanghai Ocean University. At the CNARC Symposium that took place in the Shanghai Ocean University form May 7 to May 9 a memorandum of understanding was signed by the rectors of the two universities.

On Tuesday May 21st I had a meeting with the director of admissions office in the College of International Cultural Exchange about possibilities for student and teacher exchange between the University of Akureyri and Shanghai Ocean University. There are certainly many opportunities, especially regarding the Department of natural resources at the University of Akureyri and the Shanghai Ocean University. This will be looked at in the coming months at both universities and way of cooperating will be found and implemented.

3. Participation in conferences and lectures given.

I participated in the CNARC Symposium that took place in the Shanghai Ocean University form May 7 to May 9. It

was held by the Shanghai Ocean University in cooperation with the Polar Research Institute of China. The conference had good attendance from all the Nordic Countries as well as from China and several other countries. The themes of the symposium were, Arctic Fisheries, Polar Silk Road and Sustainable Development Practices. I gave a talk there in the session on "Arctic Fisheries" on preliminary results from the research project I worked on in Shanghai prior to the conference. It emphasized the need to have the right information for being able to make sustainable decisions for management of natural resources and hazards. One of the most important factors of today is climate change and it is very important to be able to separate the effect of climate change and changes due to natural variability. This is especially important in areas where there is great natural variability such as in Iceland. The results indicated that of the warming observed during the last two decades in the ocean south and west of Iceland more than 50% of it was due to natural variability whereas the rest was probably due to climate change.

I also participated in the Arctic Circle China Forum on China and the Arctic. The subjects of the conference were: Polar-Silk Road – Oceans – Transport -Energy – Science – Indigenous Dialogue – Governance. The conference took place in the Shanghai Science and Technology museum from May 10 to May 11.

I was a co-convener of the breakout session "Marine Ecosystems and Living Resources Conservation in the Arctic". My co-convener was professor Guoping Zhu from the Shanghai Ocean University.

The presentations at the session included subjects ranging from physical oceanography, ecology of arctic fish species to fisheries management in the central Arctic Ocean. There was also a presentation dealing with Persistent Organic Pollutants (POPs) in the Arctic Ocean. I gave a presentation of the results of the research project I had been working on at the Shanghai Ocean University during the time up to the conference. I included special emphasis on the fisheries in Iceland and how sustainable decision making depends on the knowledge of climate change and natural variability in the ocean.

In addition to this I gave 3 lectures at the Shanghai Ocean University. The first was mainly aimed at the faculty and Ph.D. students and was titled "Oceanography and Fisheries in Iceland".

The second one was for a class of undergraduate students on oceanographic processes in Icelandic waters.

The third was a general introduction to Iceland and the Icelandic society for students at Shanghai Ocean University.

I participated partly in the "Marine Fisheries International Program" held by the Shanghai Ocean University for international students on various aspects of marine science, Fisheries and aquaculture in the period May 6 – May 31, 2019.

4. Plans for future cooperation between the University of Akureyri and Shanghai Ocean University.

A major focus of the visit was to investigate opportunities for future research collaboration between the University of Akureyri and the Shanghai Ocean University. This was considering exchange of students and teachers but mostly emphasizing research. A research project was proposed with Professor Song Hu where it is the intention to model the tides in an area southeast of Iceland where there are some canyons. The focus will be on the nutrient fluxes across the continental slope and the effects of the canyons on the structure of the tides. Professor Song Hu has great experience in such modelling using the Finite-Volume Coastal Ocean Model (FVCOM). Already during my stay a grid for the bathymetry was developed.

The Shanghai Ocean University has been studying and modelling the distribution of freshwater in the Arctic Ocean. The main pathway of this freshwater after it exits the Arctic Ocean through Fram Strait is along the Greenland slope towards Denmark Strait between Iceland and Greenland and this can have great influence on Icelandic waters. This is of major importance to Iceland since this greatly affects fish stocks as was the case during the Great Salinity Anomaly in the late 1960s. This is therefore an area where the two Universities could come together and focus on a very relevant topic.

Dr. Zheng Yingqin, Research fellow at Shanghai Institutes for International Studies, was granted the opportunity to conduct a one-month fellowship at Nordic Institute for Asian Studies (NIAS) in Copenhagen in 2018. The text below describes her academic activities during his visit in China.



Research Report of Academic Visit in NIAS

The six weeks (from April 23rd 2018 to May 31st 2018) academic visit in Denmark with the support of 2017-2018 CNARC Fellowship is very significant for me. During my staying in the Nordic, I was mainly based in Nordic Institute for Asian Studies (NIAS), University of Copenhagen, to conduct my research on *Cooperation between China and the Nordic on Building the Polar Silk Road*. By attending around academic conferences and workshops as well as doing interviews with scholars and officials related to my research topic, I had not only experienced the academic atmosphere and local culture of the Nordic, but also enhanced my ability of conducting research and gained the big picture of the cooperation between China and the Nordic countries.

Firstly, I would like to say a little bit about Nordic Institute for Asian Studies (NIAS). NIAS is an excellent academic platform for academic exchanges, especially for scholars who are interested in Nordic and Asian studies. As a visiting scholar of NIAS, I have had a great time of daily working with NIAS colleagues. By attending the staff meeting every week, I found that NIAS is more than an institute; its operation is a very good case for self-governance study based on knowledge sharing and collaboration. Staffs of NIAS are all very nice and eager to exchange their ideas and to cooperate with each other as well as to provide help for all visiting scholars and students. I was quite impressed by their spirit of sharing and their desire of making a better NIAS together. And there are lots of academic events held by NIAS, like the SUPRA talk, Brownbag Talk, etc. which provide great opportunities for scholars and students to discuss and exchange our ideas. Here I would like to extend my gratitude to Director of NIAS, senior researcher Dr. Geir Helgesen who has provided great support, arranging the office and research resources as well as the accommodation for me. Besides of NIAS, another center is very supportive for my visit, that is Fudan-European Center for China Studies (FECCS). Fudan-European Center is also based in University of Copenhagen (UCPH) and functions as an innovative platform for

promoting cutting-edge, cross-disciplinary and comparative research on China. It has conducted a series of important academic events, which enriched my visiting experience in Copenhagen. And Dr. Liu Chunrong, Executive Vice Director of FECCS, is very supportive and helpful during my visit in the Nordic. He gave me very helpful advices to my research and introduced me related experts to interview with. My visit would not be so smooth without Dr. Liu's help.

Second, to make full use of this visit, I have taken part in as many academic conferences as possible, which not only broaden my horizon but also provided me the knowledge of what issues the Nordic scholars have focused on. During the six weeks, I have attended around 10 academic events including conferences, symposium, workshop, lectures, etc., and carried out interviews among 8 important scholars and officials who are related to Polar studies and China-Nordic relations. Here I would like to choose some of the events I have attend, to explicit my main findings.

1. How the Europe sees the world and the rising China. By taking part in the conferences like the "China-EU Relations in a Changing World Order" held by NIAS and FECCS in May, and "The Transformation of Europe: Twenty-Five Years On" held in May by the Department of political science at UCPH, I learned that the EU sees the change of world order in a quite different way from the US. Rather than caring about the power shift, the challenges brought by the emerging powers to the traditional Western values and to the liberal international world order are what the Europeans concern about. By talking with Prof. Ole Waever (a very famous scholar of the Copenhagen School of IR), I gained the points of view that identity is key to the Europeans, but Europeans are reluctantly considering whether to draw a line in the sand on principled "European values" and there is an expectation that any change will be gradual so that Europe will be able to adjust, that is, the Europeans resist to radical change of the world order. He also shared with me his insights on the world order. He argues that the emerging structure is one of no superpowers and with the main great powers nested in different regions. That is, a pattern of conflict and cooperation is basically de-centered—not a focused competition for world power or for leadership as an aim in its own right. And the domestic issues of those main powers are also important. Therefore, the Trump revolution has become the object of concern. From the lecture on "American Discontent---The Rise of Donald Trump and Decline of Golden Age" by John Campbell, I learned that populism and faked news are threat to democracy, even to such a sophisticated democracy as the US. The change of domestic political situation in the US has spillovers on the entire world. In the Europe, the Euro-skepticism has become a constitutive element of modern populism. On the topic of the changing world, another popular topic is about "Sino-US relations". Scholars here pay great attention to the on-going change of Sino-US relations and its impacts on the world. In the lecture "The Return of Bipolarity in World Politics: China, the United States and Geo-structural Realism", Prof. Øystein Tunsjø argued that the international system has entered a new US-China bipolar system, and the "trade war" between China and the US has caused Europe's concerns. From this point of view, I noticed that geopolitical competition is back to the core of international relations realm.

2. What the Nordic countries concern about. The most significant issue that the Nordic countries concern about is the climate change. Climate change has direct impacts and has brought great transitions here. I learned this not only from some conferences and interviews, but also from myself experience in Tromsø, where is within the Arctic Circle. I was quite shocked that the temperature there gets higher than 20 degree in May. By attending the 6th China-Nordic Arctic Cooperation Symposium on "Integrated Ocean Management in the Arctic" held in Tromsø, I learned that climate change has brought great challenges to the indigenous people as well as the governance of the Arctic. Luckily, the melting of ice also brings economic opportunities, like the possibility of using new shipping routes and exploiting energy and resources. Those transitions also demand further international cooperation between Nordic countries and the stakeholders of the Arctic. To tackle and adapt to those changes, the Nordic countries have taken effective steps. By interviewing with Prof. Ian Manners (Professor of Department of political science, UCPH), I learned the concept of "planetary politics", which is about the importance of the entire environment of the plane we are living in and the necessity of sustainable development. He emphasized three important aspects that the Nordic have made progress to deal with the environment challenges—the awareness of environment protection, green energy development and recycling.

Overall, I truly appreciate CNARC for offering me such a great opportunity to study in the Nordic, from which I have benefited a lot for my academy and for my life.

Dr. Lau Blaxekjær is Researcher at NIAS – Nordic Institute of Asian Studies in Copenhagen, Denmark, and Associated Researcher at the University of the Faroe Islands. He spent a month in Shanghai as a CNARC Fellow at Shanghai Ocean University (SHOU) in 2018. The text below is a summary of Lau Blaxekjær's activities and research outcome of his stay in Shanghai.

Second time in Shanghai

I first visited Shanghai in 2010 for the official opening of the new Nordic Centre building at Fudan University. I was therefore excited to receive the CNARC Fellowship and once again get to experience the city, its people, rhythm, and stimulating academic environment. This time, I was on the research side of China-Nordic collaboration. My China-Nordic engagement goes back many years, whereas my perspective on the Arctic is more recent. It stems from my time as Assistant Professor and Programme Director of West Nordic Studies at the University of the Faroe Islands from September 2014 to March 2018. Before that, I studied climate change governance with special attention to Northeast Asia. My research combines the three pillars of Asian Studies, Climate Governance, and Arctic Studies, which was also the case as a fellow at Shanghai Ocean University (SHOU) for one month in April and May 2018.

At SHOU, I teamed up with Professor Tang Jianye from the College of Marine Science to begin work on potential new joint projects



on Arctic marine and fisheries governance. Later in June, I was appointed Adjunct Professor at SHOU, and I am looking very much forward to spending more time in Shanghai and China in the near future. I also gave several lectures in Shanghai (at SHOU, PRIC, and Tongji University) about the Faroe Islands, its Arctic policy, and West Nordic geo-politics, and I participated in various seminars, and of course expanded my network. My stay in Shanghai helped me prepare for a plenary session on China's Polar Silk Road at the Arctic Circle Forum held in Tórshavn, the Faroe Islands, 8-9 May right after my stay. At this plenary, I was honoured to introduce China's special representative for the Arctic, Gao Feng, and discuss the Polar Silk Road in a West Nordic Perspective. This report summarises the talks I gave in Shanghai and the research I prepared for an upcoming academic article about China's Polar Silk Road in a West Nordic perspective. Emphasis in this report is on the Faroe Islands as my understanding is that this has more interest in a CNARC perspective.

Introduction to the Faroe Islands

The Faroe Islands, like Greenland, is a self-governing nation in the Kingdom of Denmark, and is thus not a fully independent sovereign country. It has taken home various policy areas like taxing, education, trade, energy, exploitation of natural resources, health, and the environment (including marine), but not foreign policy although it has the right to negotiate international fishery agreements and trade agreements, the latter which is currently being prepared with countries like Japan, South Korea, and China.

The Faroe Islands has its own parliament, national government, municipalities, schools and a university. The Faroe Islands' national and international politics are closely related to economic development and challenges of being small and to some extent dependent on Denmark and the outside world.

Like many countries, The Faroe Islands has embarked on a transition to a sustainable economy. The Faroe Islands has by international standards, chosen a very ambitious greenhouse gas mitigation policy goal of 100 percent renewable energy by 2030. The Faroe Islands is very dependent on oil for its fishing and shipping activities, and has since the early 2000s been engaged in oil and gas exploration in own waters so far without commercially viable discoveries.

Marine governance and the Arctic

In terms of marine governance, the Faroe Islands has taken home several areas from Denmark such as fisheries, ports, ferries, shipping, and registration of ships, coastal protection, and marine environment. The Faroe Islands is a flag state and associate member of IMO. Despite these circumstances, some challenges exist. The Faroe Islands has not signed the Paris MOU on Port State Control, and furthermore, the sea area is designated as a Faroese Fisheries Zone (FFZ of 200 nautical miles) and not a proper EEZ. The challenges are mainly related to environmental issues due to lack of more strict inspections of foreign vessels, ability to undertake effective search and rescue as well as contingency response within the whole FFZ, e.g. in relation to a large oil spill. As for international fishing agreements and negotiations, the Faroe Islands negotiates alone, and Denmark is as an EU member often not in a position to support Faroese interests.

The Faroe Islands is included in most definitions of the Arctic, although geographically just below the Arctic Circle. In Denmark (and to some extent in the Faroe Islands), however, the Arctic is almost exclusively equated with Greenland, and most political attention is given to Greenland. Generally, the Arctic is associated with ice, polar bears, science expeditions, climate change, and indigenous peoples. This does not fit a description of the Faroe Islands. Even in the Faroe Islands, people are only recently beginning to understand the Faroe Islands as part of the Arctic. In 2013, the Faroese Prime Minister's Office published an assessment of the Faroe Islands' Arctic policy as a precursor to developing a national Arctic strategy. The Faroese Parliament had debate on Arctic affairs and the recommendations in the assessment, but it was decided not to develop such an Arctic strategy. On the other hand, the Kingdom of Denmark's Arctic strategy also includes the Faroe Islands. The Arctic Assessment covers Faroese strategic interests in the Arctic. The six areas of interest are "Arctic cooperation", "Northern Sea Route", "Fisheries in the Arctic Ocean", "Research and Education", "Environment", and "Maritime Safety and Emergency Response". The assessment recommends that in relation to the Arctic, the Faroe Islands and Greenland be given more independent voice, and that a "joint West Nordic approach to Arctic cooperation, together with Iceland, Greenland and Northern Norway, should be promoted and enhanced".

The Faroe Islands and China

Trade relations between the Faroe Islands and China has increased in recent years, and in 2017, China ranks seven on the list of biggest trade partners after Denmark, Russia, Germany, Norway, UK, and USA. Exports to China, a little bigger in value than imports and almost entirely farmed salmon, has grown from 359 Mio DKK (5 percent of total exports) in 2015 to all-time high 569 Mio DKK in 2016 (7 percent of total exports), dropping to less than 500 Mio DKK in 2017.

Faroese collaboration with Huawei is especially relevant in relation to the Polar Silk Road. The Faroese telecom infrastructure needed a full and expensive modernisation and Huawei was chosen as the new strategic partner to develop Faroese telecom infrastructure to 4G-/LTE in 2015. The choice of Huawei in the Faroe Islands was not met by security concerns, as there had already been a debate about cyber security and espionage in Denmark in relation to Huawei. The Danish Defence Intelligence Service had analysed and approved Huawei, and Huawei Denmark even employed former Head of IT Security from the Danish National Police.

As explained by CEO of Faroese Telecom (FT), Jan Ziskasen, at the Arctic Circle Forum in Tórshavn the strategic partnership with Huawei has not only delivered one of the world's best telecom infrastructures and mobile coverage, it has developed into an equal partnership, where the huge size difference between the countries and companies is not understood as a problem.



The 8th China-Nordic Arctic Cooperation Symposium 2020 December 2020 – Umea, Sweden

Symposium Theme: Research Cooperation and Knowledge Sharing for a Sustainable Arctic

Roundtable Theme: Tourism, Winter Sports and Regional Development

DateConvened byDecember, 2020 (TBC)Umea UniversityLocationEvent by

Umea, Sweden China-Nordic Arctic Research Center (CNARC)

Language Participants

English Chinese and Nordic Institutions

We cordially invite proposals for oral presentations at the 8th China-Nordic Arctic Cooperation Symposium. Proposals are welcome from researchers affiliated with Nordic and Chinese universities, research institutes, think tanks and organizations. All presentations will focus on Arctic-related issues, within one of the session topics:

- Session I Society development and knowledge systems in the Arctic
- Community based research
- Sustaining Arctic knowledge systems and model of knowledge diffusion
- •Session II Globalization and the Arctic
- Arctic Council Agreement on Enhancing International Arctic Scientific Cooperation
- Transport, logistics and polar expeditions
- Health and well-being

•Session III - China – Nordic Arctic Cooperation

- China Nordic Arctic relations in the circumstances of new Arctic geopolitical dynamic
- Economic opportunities in the Nordic Arctic and China's engagement
- China Sweden Arctic relations

•Session IV - Arctic Ecosystems and Processes

- Marine and coastal environment
- Natural resources
- Climate change

Background description for each session:

Session I – Society development and knowledge systems in the Arctic

Sub-themes: (1) Community based research; (2) Indigenous issues; (3) Sustaining Arctic knowledge systems and model of knowledge diffusion

Social development in the inhabited areas of the Arctic is diverse. There are strengths and weaknesses to the human conditions in all Arctic regions, but also different approaches to sustainability. Still, knowledge about the history, root causes and long-term effects of social diversity needs to improve bringing ideas and perspectives from the bottom and up to bear on policies of development, reform and change. The needs and wants of local Arctic communities may not always speak to government agendas. Indeed, what are typically local aspirations in the Arctic and how do they transform into knowledge about the Arctic? How can different approaches to community based research contribute to successful diffusion of Arctic knowledge? These challenges include the implementation of local and traditional knowledge systems (TLK) in academic knowledge production.

Session II – Globalization and the Arctic

Sub-themes: (1) Arctic Council agreement on enhancing international arctic scientific cooperation; (2) Transport, logistics and polar expeditions; (3) Health and well-being

There can no longer be any doubt that climate change enhances the role of the Arctic in globalization. Increasingly, what used to be a frozen polar cap in the North is becoming a navigable sea of economic potential. The Arctic Council has thus far provided a forum for dialogue on mutual recognition, negotiation and stewardship as well as a way to circumvent international competition for resources and influence. Scientific endeavor and cooperation in such areas as polar exploration and transport remain high on the political agenda, promising of a future development where care and respect for the unique Arctic environment and its various biospheres dominate. Nevertheless, global economic opportunity is a harbinger of more uncertain, potentially less respectful future developments as humanity increases its pressure on global natural resources. What are the pros and cons of the Arctic Council science agreement, for Arctic states and for near-Arctic states? Which are the challenges of future transport systems and of vessel-based climate research? How can research-based knowledge improve health and well-being of the peoples in the Arctic?

Session III - China - Nordic Arctic Cooperation

Sub-themes: (1) China – Nordic Arctic relations in the circumstances of new Arctic geopolitical dynamics; (2) Economic opportunities in the Nordic Arctic and China's engagement; (3) China – Sweden Arctic relations.

With re-emergency of hard security concerns in the Arctic, the priorities for the agenda of Arctic Council and the Arctic strategies of Nordic countries may have shifted for the past year. China and Nordic countries encounter the emerging challenge of how their respective Arctic strategies and policies to be compatible with each other. This session hope to explore the following questions: How China – Nordic Arctic relations will develop in the circumstances of new Arctic geopolitical dynamics characteristic of the prioritization of hard security concerns and the growing competition of great powers in the region? With several setbacks in China's economic engagement with Nordic countries in the past year, what is the prospect for China-Nordic economic cooperation in the Arctic and are there any approaches that could strengthen mutual understanding and trust? Swedish Arctic strategy is distinct from others' as it emphasizes the notion of "comprehensive security" and sticks to green development and environment responsibility, for China and Sweden, what are the potential cooperative domains that could bring the bilateral Arctic relations to a new level?

Session IV – Arctic Ecosystems and Processes

Sub-themes: (1) Marine and coastal environments; (2) Natural resources; (3) Climate change

The rapid changes that take place in the Arctic have a severe effect on the eco-systems. The well-being of Arctic waters on land and the Arctic Ocean is of fundamental importance in the times of rapid climate change and its impacts on not only global climate, economics, politics, but also on health and well-being of indigenous and local communities in the Arctic. The natural resources in the Arctic are of increasing global importance. Their extraction is however a critical balancing act in terms of responsibility for a sustainable development. Often new initiatives for mining and energy production are met with local and national resistance, and it is of uttermost importance to analyze the different interests involved. Climate change is the single-most important global challenge. How can research find multi-disciplinary find ways to reach the targets, and how can the monitoring systems be developed?



Call for Abstracts

Abstracts (250-400 words)

Deadline for Submission: March 1, 2020

Please submit abstracts electronically to:

LIU Han, Executive Secretary, CNARC, liuhan@pric.org.cn

Niklas Eklund, Vice Director, Arcum, Umea University, niklas.eklund@umu.se