

CHINA IN THE ARCTIC

*Policies, Strategies, and
Opportunities for Alaska*

February 2020

Authored by:
Liz Bowman and Dr. Qingchao Xu



**CENTER FOR
ARCTIC POLICY STUDIES**

University of Alaska Fairbanks

BIBLOGRAPHIC CITATION

Bowman, Liz, and Qingchao Xu. 2020. *China in the Arctic: Policies, Strategies, and Opportunities for Alaska*. Fairbanks: Center for Arctic Policy Studies.

CONTRIBUTORS

Liz Bowman is a Graduate Research Assistant at the Center for Arctic Policy Studies and a Master of Arts (MA) Candidate in the Department of Arctic and Northern Studies at the University of Alaska Fairbanks. Liz holds a Bachelor's degree in International Studies from the University of Idaho. Her research interests include Arctic international relations, particularly the role of non-Arctic states in regional affairs.

Qingchao Xu, Ph.D., is Research Fellow and Director of the Center for Arctic Sustainability Studies, China Institute for Innovation and Development Strategy (CIIDS), and Assistant Professor of University of Chinese Academy of Sciences (UCAS). Both CIIDS and UCAS are affiliated to the Chinese Academy of Sciences (CAS). Dr. Xu's research interests include China's Arctic policy and strategy, Polar Silk Road, and Arctic sustainability. Her next project is to explore Arctic-related cooperation between China, the United States, and Russia at state/province levels.

Table of Contents

<u>INTRODUCTION</u>	<u>4</u>
<u>CHINA’S ARCTIC IDENTITY, POLICY AND STRATEGIES.....</u>	<u>7</u>
<u>CHINA’S ARCTIC ENGAGEMENT IN CLIMATE CHANGE, ECONOMIC AND SOCIAL DEVELOPMENT</u>	<u>11</u>
<u>CHALLENGES AND OPPORTUNITIES FOR IMPROVED ALASKA-CHINA COOPERATION</u>	<u>16</u>
<u>CONCLUSION</u>	<u>19</u>
<u>REFERENCES</u>	<u>19</u>

Introduction

The objective of this report is to describe China's policy and positionality in the Arctic and, more specifically, to discuss the bilateral relationship between Alaska and China. As a non-Arctic state, China has limited capacity to impact regional decision making directly. Consequently, China has engaged Arctic stakeholders in order to increase its participation and influence within northern regional affairs. For public and private sectors in Alaska and the U.S. more broadly, it is critical to understand the role that China plays in the Arctic region already, as well as its plans for the future. An accurate and unbiased analysis of the significant Arctic interests of China, as well as other nations with whom the U.S. may currently have strained relations, is vital to the security of the region. Understanding how other countries, in particular non-Arctic nations, perceive and operate in the High North allows Alaska and the U.S. to create stronger and more beneficial partnerships in business and other endeavors such as scientific discovery and search and rescue. Consequently, our report is jointly written by scholars from both Alaska and China with expertise in their home countries' northern interests and policies. To frame this paper, the following two areas of inquiry are considered. Firstly, how is China already working in the Arctic? More narrowly, what has shaped the nation's interest in the North from its internal political development and how does it view its presence in the Arctic currently and into the future? Secondly, how should the state of Alaska interpret this engagement and what role does the state play within the complex national relationship the U.S. has with China?

The Arctic has a long-standing operational history of joint initiatives, primarily based on the region's inherent remoteness, environmental conditions, and lack of infrastructure. In particular, bi- and multinational cooperation is strong in scientific endeavors. Areas of research that are already flourishing include those related to climate and weather, where China is engaged heavily because of known impacts of Arctic regional climate change on its domestic climate. For example, in 2018, China and Iceland inaugurated a joint Arctic science observatory outside of Akureyri, Iceland.¹ In an effort to strengthen its Arctic science, China often draws comparisons between the Arctic and the "Third Pole" region, high mountain and frozen sections of the Himalayas, in order to provide expertise and support its justification for inclusion in Arctic research. This is because China has a long history of cryospheric research in the Himalayan region, and it can use this expertise to its advantage in the Arctic setting.

In order to better understand China's role and address the questions noted above, this paper discusses the following topics: China's interests and concerns in the Arctic, China's Arctic identity, policy and strategies, as well as China's engagement with climate change, economic and social development. It concludes with a section specific to the China-Alaska relationship and where there are opportunities for China and Alaska to expand collaboration.

China's Interests and Concerns in the Arctic

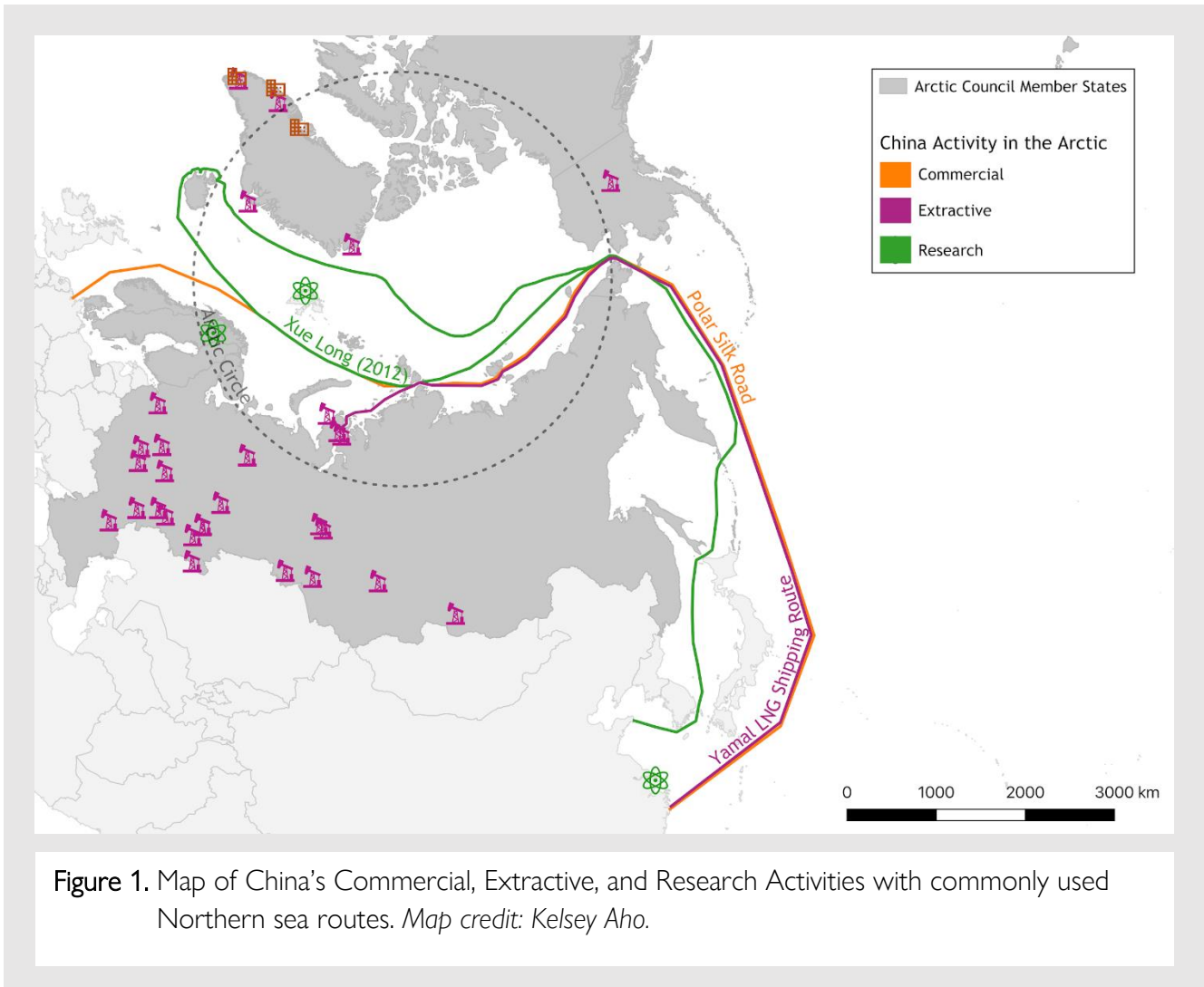
From the perspective of the interaction between China and the Arctic, China has established its own interests and concerns in the Arctic region largely driven by its domestic development. These interests and concerns are mainly reflected in the areas of climate change, resource and energy security (water and food security), and economic sustainability. China is highly concerned about the

impacts of climate change, both in the present and over the long term.² It has already started working towards emissions reductions targets to mitigate the impacts of a changing global environment, as set by the Paris agreement. For example, China has created approximately one-third of all wind turbines and solar panels in the world, mainly for export, and is in the process of implementing domestic policies to dramatically reduce coal consumption.³ As a result, China sees itself as a new leader in the clean energy economy.⁴ In contrast, the U.S.' Trump Administration actively resists policy aimed at addressing global climate change, although there have been efforts at the federal level to provide tools for communities facing immediate impacts related to climate change. For instance, the U.S. Climate Resilience Toolkit, launched in 2014, helps communities identify and mitigate issues related to climate issues.⁵ Efforts such as this are not touted by the Trump Administration and it is unlikely that the formal U.S. position on climate change will vary over the next few years. This is because the Trump Administration does not prioritize climate change issues and related policies. As a result, the United States has opened up the opportunity for China to gain a competitive advantage and a leadership role in regard to global climate issues, as demonstrated by China's aggressive investments in renewable energy, increased energy efficiency, and economic policies that focus on lowering energy usage and greenhouse gas emissions.⁶

Moreover, China has serious concerns with the long-term viability of water and food resources domestically. This is directly related to climatic changes such as warming in the north of China, increased rainfall differentials between northeastern and southern China, and irregular patterns of drought and floods.⁷ Additionally, China has linked increased days of haze pollution in Eastern China to Arctic warming patterns and loss of sea ice.⁸ Although there is more research to be done, scientists have noted a direct linkage between changes in the Arctic region and weather pattern changes within China. Additionally, long-term studies have shown the Arctic Oscillation to impact winter climate and precipitation events in China.⁹ Due to the lack of predictability and increased variability brought on by climate change, there may be negative impacts on the agricultural industry in China and a poor outlook for long-term food security. As a result of domestic weather and climate changes, China is also facing an increase in desertification, which Chinese scholars link directly to global climate change.¹⁰ This may also contribute to agriculture and food security issues in China.

The discussion of the Arctic within China varies from the discussion of China's Arctic activities in the international sphere. China embodies a more complex view of the Arctic region and the potential that it may provide for domestic development and non-traditional security considerations. One of China's motivations within Arctic development include the economic prospects of Arctic sea passages, most notably the Northern Sea Route, with variations listed in the map in Figure 1.¹¹ This is evidenced by China's continued research and participation in dialogue, such as the Arctic Economic Council or Arctic Circle forum, regarding shipping and related infrastructure.¹² This interest is due to several domestic factors, including increased pressure to identify shorter and faster shipping routes for exports, as China houses six of the ten busiest container ports in the World.¹³

China is also concerned with its own long-term resource security and economic sustainability to support its growing population. The Arctic has the potential to provide solutions to domestic issues including food production and energy security. This is because the Arctic, which is warming at twice the global rate, provides a unique environment to research food security, as well as options for



importing food sources such as Arctic seafood, and active oil and gas extraction projects involving China, which often include a percentage of raw materials returning directly to China. The rate of food required within China strains its domestic land available for agriculture and, in turn, causes increases in deforestation and degradation. Additionally, food security is a critical aspect of the Chinese Communist Party's legitimacy.¹⁴ China holds a great deal of technical expertise within agriculture, which could be shared with Arctic partners in exchange for increased access to food resources in the region.¹⁵ Moreover, China greatly outpaces the United States in terms of investment in agricultural research. China's official position on access to the Arctic is partly based on research focused on climate change impacts to domestic food production. Likewise, China maintains important ties to global energy as a net energy importer.¹⁶ Due to the state's rapid economic development, China's total primary energy consumption is approximately 3.1 billion tons oil equivalent or 23% of global energy consumption.¹⁷ As such, China has already invested heavily in the Arctic energy sector in an effort to increase access to future resources.¹⁸ In Russia, China has an existing relationship with *Rosneft* and *Novatek* via the China National Offshore Oil Corporation (CNOOC). *Rosneft* and *Novatek* are Russian state-owned enterprises in the petroleum and natural gas industries. CNOOC

has a strong relationship to these companies, with offshore drilling activities in the Barents and Pechora seas.¹⁹

China's Arctic Identity, Policy and Strategies

To some extent, China's cognition of its own interests and concerns in the Arctic defines its Arctic identity in terms of political discourse. Moreover, in accordance with the Arctic identity, China frames its Arctic Policy white paper and creates strategies and approaches to fulfill its goals. China dates its involvement in Arctic affairs to the signing of the Svalbard Treaty (formerly known as the Spitsbergen Treaty) in 1925, which established Norway's sovereignty over the Svalbard archipelago but grants signatories equal rights over resource exploitation and trade.²⁰ Norway has defined scientific research as a key economic activity in Svalbard, permitting many non-Arctic states to establish a research foothold in Arctic science.²¹ It was not until 93 years after this first foray into Arctic affairs, however, that China released a comprehensive Arctic policy. Between 1925 and China's re-emergence on the Arctic landscape in the early 1990s, China experienced important governmental and cultural shifts that shaped its ability to engage with the modern Arctic.

In 1978, Deng Xiaoping instituted market reforms in China, which allowed for an astonishing 8-10% annual GDP growth between 1980 and 1990.^{22 23} In the Arctic, the late 1980s and early 1990s made way for a significant paradigm shift with the collapse of the Soviet Union and the dissolution of the Cold War mentality. Many point to a transformational moment as Mikhail Gorbachev delivered his 1987 Murmansk speech, where he outlines specific steps that could be taken to ensure the Arctic could function as a "zone of peace."²⁴ This speech provided some impetus for improvements between the East and West and created space for conversation on the steps needed to achieve greater Arctic cooperation.²⁵ In the following years, the Finnish government responded with an environmental protection initiative called the Arctic Environmental Protection Strategy (AEPS), which was adopted in June of 1991 by the eight Arctic states: Canada, Denmark, Finland, Iceland, Norway, Sweden, the Union of Soviet Socialist Republics (later Russia), and the United States of America.²⁶ The AEPS provided a basis on which to build environmental policy in the Arctic, and it held meetings from 1993 to 1997, at which time the focus of the body shifted towards a merger with the Arctic Council in 1996.²⁷ Also in the early 1990s, as a result of its domestic economic stability, China began investing in Arctic research, purchasing the Xuelong (Snow Dragon) icebreaker vessel and undertaking its own research expeditions. As an emerging global power, China was well positioned to start investigating how it could contribute to Arctic scientific endeavors. Since the inception of the Arctic Council system, the attention towards the Arctic region has only grown. The increased spotlight has created additional avenues for cooperation and new areas of emphasis including economic development, social and cultural wellbeing, and scientific research.

Today, China self-identifies as a *near-Arctic state*, meaning that it is "one of the continental states that are closest to the Arctic Circle."²⁸ In the meanwhile, China's Arctic Policy white paper, a comprehensive Arctic strategy published in 2018, also emphasizes that "China is an important stakeholder in Arctic affairs." Based on these two vital narratives, China is particularly concerned with the environmental conditions of the Arctic region and the potential impacts that the region poses for China's own climate system, environment, and related economic interests.²⁹ With a far-

sighted vision, China maintains that it is leading the way towards a shared future for humanity through increased participation in Arctic affairs and contribution to knowledge and development of the Arctic in its research and economic activities.³⁰ This is observable in China's current five-year plan, 2016-2020, where it has bridged the operational capacity gap between itself and many Arctic states. For instance, China now has two polar icebreakers and more scientific infrastructure capacity in the Arctic than any other non-Arctic state, including Yellow River Station in Svalbard, China-Iceland Arctic Observatory, and the Xuelong and Xuelong 2 icebreakers.³¹

Guided by the thought of building a shared future for humanity in the Arctic, China's Arctic Policy white paper contains three overarching goals and several ways to achieve those goals. The three goals are: understand the Arctic, protect the Arctic, and develop the Arctic.³² Within the remainder of the policy, China has called out the following as key components for achieving these goals:

- 1) Deepening the exploration and understanding of the Arctic
- 2) Protection of the Arctic environment and addressing climate change
- 3) Utilizing Arctic Resources lawfully and rationally, including natural resources and tourism
- 4) Participating actively in Arctic cooperation and governance
- 5) Promoting peace and stability in the Arctic

In moving from policy to practice, China utilizes a range of strategies to gain political and economic influence within international affairs. Some of these strategies have been useful for China's engagement in the Arctic, whereas others have worked well mainly in other regions of the world. The most relevant strategies for China's engagement in the Arctic are investment (including foreign direct investment), the small states strategy, and bilateral engagements in the framework of the Arctic Council.

Basically, China demonstrates both bilateral and multilateral approaches to achieve its policy objectives, though it tends to rely more heavily on bilateral partnerships by seeking to work directly with Arctic partners in order to achieve goals that are of common interest. In Canada, China has invested approximately \$34 billion in developing the energy sector (mostly oil sands) over the last decade.³³ This has allowed Canada to develop this industry quickly, while providing a new source of energy for China's markets. Similarly, China has multiple investments in rare earth mineral mines in Greenland. China acknowledges that in order to be successful in the Arctic, it must create meaningful partnerships with other Arctic stakeholders, as it cannot function without the support of regional entities, therefore prompting the Greenlandic investments.³⁴ Due to Greenland's home rule status, these investments have drawn distinct opposition from the Kingdom of Denmark. Greenland has the ability to make its own economic decisions, however Denmark still oversees much of their external affairs. Given this status, any decision of Greenland's that does not involve Denmark as a partner often draws their intense criticism. China's investment into the economy of Greenland has major implications for both their economy and is what many would consider an 'external affair'. Beside any frustration over being left out of the investment negotiations, Denmark also fears that Greenland will become dependent on such outside investments.³⁵

These economic development strategies are beneficial for China, which is often working from a position of economic power in bilateral arrangements. Foreign direct investment (FDI) is an

investment made by a firm or person in one country into business interests located in a different country.³⁶ Foreign direct investment from China is appealing to other nations around the world as a means to grow investment recipients' respective industries and infrastructure. China uses this strategy to its advantage – providing a financial mechanism to fund large projects that benefit its long-term policy and strategy, such as the Belt and Road Initiative (BRI) discussed further below. To date, there have been many successful investments that China has made in the Arctic region. Some of the largest projects in the Arctic include the Arctic liquefied natural gas (LNG) projects in Russia, where China owns a twenty percent stake in Novatek's Yamal project.³⁷ Its success has led to an expansion of the LNG project.³⁸ China plays a similar role in LNG 2 and, likely in the near future, LNG 3.³⁹ LNG 2 and 3 are additional phases of a long-term program headed by *Novatek* to produce liquidized natural gas and related infrastructure, including transshipment terminals and storage facilities.⁴⁰

China is also involved in the mineral resources industry, where it has partnered with other countries to develop mineral resources. There are currently several Chinese-funded mines in Greenland, such as the Kvanefjeld site, a controversial rare earth and uranium mine. This site was the subject of scrutiny by the Danish government, which, after a long legal battle, let the mine continue in 2016 despite its reservations, which primarily concerned foreign interest in uranium production.⁴¹ As discussed previously, Denmark's primary concern is that Greenland will become too attached to outside investments, which puts at risk their precarious political relationship with each other.⁴² Under the 2009 Self Government Act, Greenland has specified oversight over its own affairs, including economic decision making, which in some instances becomes problematic for Denmark, as it still oversees all aspects of foreign affairs for Greenland.⁴³ Denmark has noted many times that it fears Chinese investments come with hidden political agendas that seek to draw Greenland away from the Kingdom of Denmark.⁴⁴ Although there is renewed interest in additional mineral development, new sites are usually slow to develop due to fluctuating commodity prices and scrutiny over foreign investments.⁴⁵

The small states strategy is an approach that leverages partnerships and relationship growth with smaller states. Smaller states generally have access to fewer domestic resources and as a result, they can benefit substantially from bilateral and multilateral partnerships. Such a circumstance enables larger countries like China to make such partnerships. By utilizing this strategy in the Arctic, China would gain additional influence via its work with smaller and easier to engage partners. This would specifically apply to China's relationships with smaller countries in the Arctic, such as Iceland, Denmark, Sweden, and Finland. One example of this is China's ongoing free-trade agreement with Iceland, which has led to improved relations in other sectors as well. A recent update to this agreement includes new protocols for aquaculture trade, which allows Iceland to sell farmed salmon products without tariffs.⁴⁶ With the China/Iceland Free trade agreement signed in 2013, the volume of trade between the two countries has increased from \$401 million in 2014 to \$712 million in 2018, with an average annual growth rate of 20.6%.⁴⁷ Furthermore, an investment that drew a great deal of attention from international media was the Chinese Embassy in Reykjavik. Both Chinese and Icelandic officials agree that the large size of the embassy was "built for the future," which assumes strengthened relations and an increase in shipping traffic.⁴⁸ However, others see this as an excessive show of friendship between China and a small state partner.⁴⁹ This display of friendship is an

important example, as it shows China as a strong and reliable partner to other small state actors in the Arctic, which can influence how each may consider acceptance of support and investment from China in the future.

The Arctic Council is the preeminent international forum for Arctic affairs and is also an important stage for China to engage in the Arctic. The Arctic Council addresses a wide range of issues related to scientific, environmental, and cultural topics. China, along with a cohort of other non-Arctic states, was granted observer status in 2013.⁵⁰ The main role of an observer to the Arctic Council is to follow meetings and view the work of the body, however, those with observer status are also encouraged to make relevant contributions at the working group level.⁵¹ Although China has observer status and it cherishes this outcome after its arduous seven-year application, it does not rely on the status for its Arctic involvement. Instead, China gravitates towards bilateral partnerships in lieu of the multilateral engagement that the Arctic Council facilitates. For example, in its 2016 Observer Report, China stated that its largest contributions to the work of the Arctic Council included attending Arctic Council and working group meetings, hosting meetings outside the auspices of the council related to the Arctic, and appointing a minister of Arctic affairs.⁵² In comparison, other observers reported more substantive contributions to the work of the Arctic Council, such as the Republic of Korea's funding of projects through the Protection of the Arctic Marine Environment (PAME) working group. China participates in several of the working groups of the Arctic Council, but it argues that the overall awareness of the interests and needs of non-Arctic observers within the Arctic Council are not a priority of the member states.⁵³ Based on this observation, China places less value on the formal governance structure of the Arctic Council and more value on its bilateral relationships and project arrangements directly with Arctic states.

Concerns about China's position on Indigenous issues were subject to serious debate prior to the admittance of China as an Arctic Council Observer in 2013. During the 2013 considerations, China refused to express support of Indigenous people in the Arctic. This was noted by leaders from the Inuit Circumpolar Council (ICC), Permanent Participants of the Arctic Council, at the 2013 meeting, who expressed concerns about admitting a state that does not value the environment or respect minority rights.⁵⁴

Despite concerns, it was decided that admitting China was in the best interest of the Arctic states, and the motion passed with consensus. Since the 2013 meeting, there has been a lack of significant development regarding China's approach to Indigenous issues in the Arctic. However, China did make it clear within its Arctic Policy that Indigenous people's rights in the Arctic are important and should be respected alongside state sovereignty.⁵⁵ The direct passage from China's policy on these reads:

*To protect the Arctic, China will actively respond to climate change in the Arctic, protect its unique natural environmental and ecological system, promote its own climatic, environmental and ecological resilience, and respect its diverse social cultural and the historical traditions of indigenous peoples.*⁵⁶

Compared to other non-Arctic states, China’s approach to the Arctic is motivated by domestic self-interest, receiving both positive and negative responses from the outside world. On one hand, China’s approach to the Arctic is similar to the approach of other non-Arctic states. China wishes to learn more about the region and develop its knowledge base as well as contribute to regional research and dialogue in ways that are seemingly mutually beneficial to all parties involved. On the other hand, unlike many other non-Arctic states, China takes this a step further by acknowledging that the wellbeing of the Arctic region is not only for Arctic countries and Arctic peoples, but rather encompasses the interests of the international community as a whole.⁵⁷ In essence, China presents itself as a strong partner that supports a common Arctic agenda for the global good. Such an agenda includes climate change research, infrastructure development (particularly around coastal areas), and energy and natural resource development. In order to be a viable partner in the region, China has created a network of bilateral and multilateral arrangements with all levels of stakeholders in the Arctic. This includes governments, corporations, and academic institutions. Likewise, China relies on what it calls a “win-win” approach to the Arctic. However, this self-positioning is interpreted as all participants in regional affairs having equitable responsibilities and benefits regardless of sovereignty in the Arctic.⁵⁸

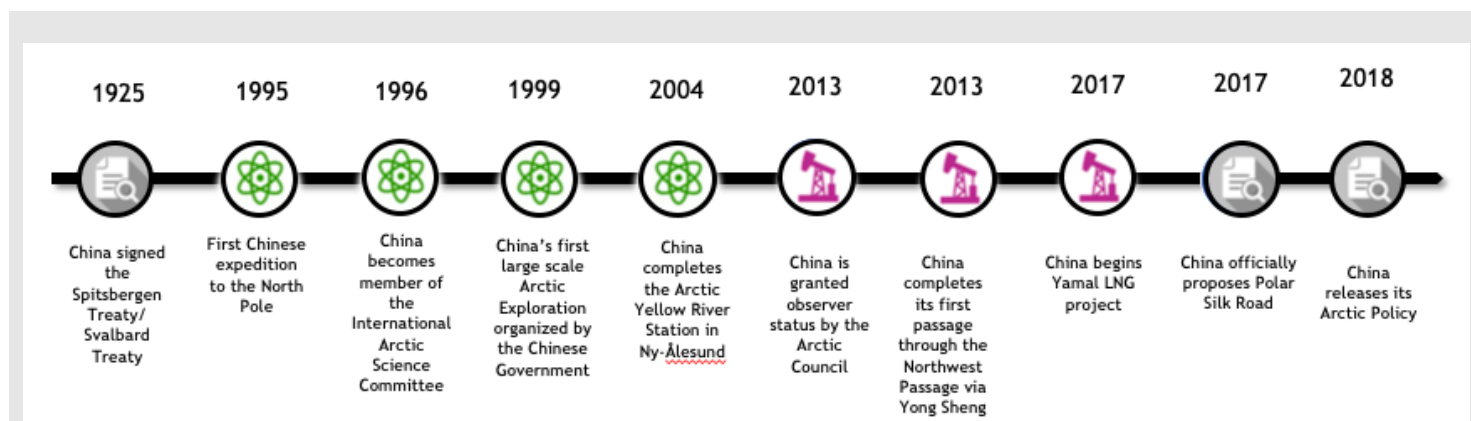


Figure 2. Timeline of China’s Engagement in the Arctic with Major Milestones 1925-2018.

Graphic credit: Kelsey Aho

China’s Arctic Engagement in Climate Change, Economic and Social Development

China’s scientific agencies are very active in funding research on climate change due to noticeable domestic impacts. China has thus prioritized research on the Tibetan Plateau area, also referred to as the third pole environment (TPE) or third pole region. The TPE, much like the Arctic, is highly sensitive to the impacts of climate change due to its large ice fields and pockets of snow-covered, mountainous terrain.⁵⁹ China has conducted research within the TPE to focus on the interactions between water, ice, atmosphere, ecosystem, soil, and human activities.⁶⁰ There are similarities between the TPE and the Arctic, and China has leveraged these linkages to build on its Arctic

knowledge base and position itself as a strategic partner in Arctic research. For example, in 2018 China hosted a symposium specifically on connecting polar research to the TPE region.⁶¹ This symposium focused on the commonalities of the climate systems in each area and served to provide scientists a way to collaborate more closely.⁶² Because of its experiences with TPE research, China is eager to collaborate with Arctic scientists on related research. In 2018, delegates from the Chinese Academy of Sciences (Institute of Tibetan Plateau Research) hosted a special session during the Arctic Circle Assembly meeting.⁶³ This session featured several presentations and a panel discussion to encourage new insight on research between the two areas and highlight the environmental linkages across the north, south, and third poles.⁶⁴

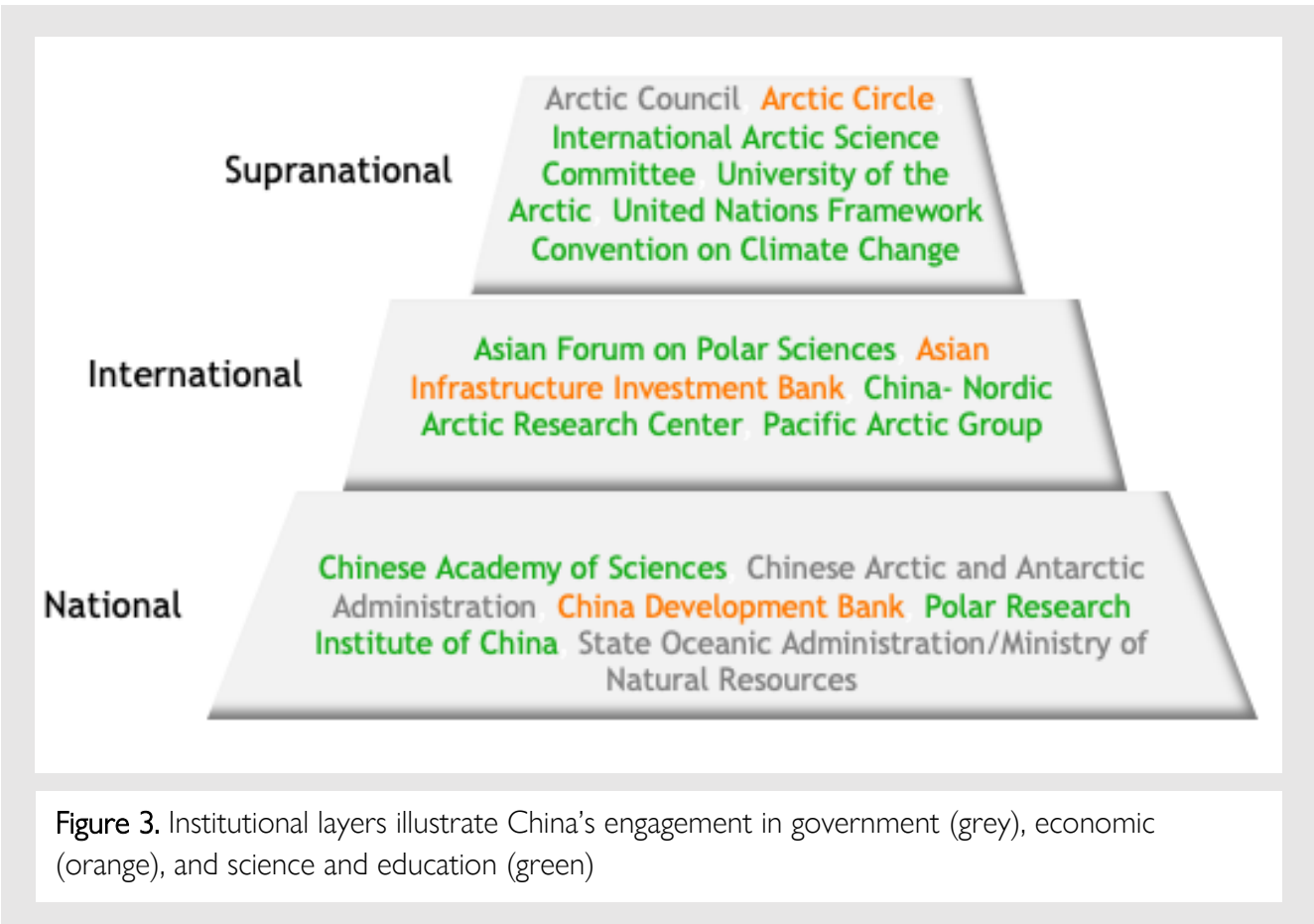
Scientific research is a large share of China's engagement in the Arctic and China uses science to justify its continued involvement in the Arctic region.⁶⁵ China participates in many Arctic-based scientific and professional organizations. There are several meaningful collaborations through international institutions and related working groups, including the International Arctic Science Committee (IASC), UArctic, Pacific Arctic Group (PAG), Intergovernmental Panel on Climate Change (IPCC), and Asian Forum on Polar Sciences (AFPS). Each of these bodies provides a formal venue through which China can work on Arctic issues. These organizations and groups are critical for China's maintenance of multilateral relationships in the Arctic.

There are two governmental research bodies in China that guide polar research. These are the Chinese Arctic and Antarctic Administration (CAA) and the Polar Research Institute of China (PRIC).⁶⁶ The CAA and PRIC each have specific mandates to implement the Arctic and Antarctic research agenda of China, and they therefore guide research objectives and provide funding. In addition to the two agencies, there are a range of university and academic research units in China that specialize in polar research, although few of these institutions are only Arctic focused rather most are inclusive of both the Arctic and the Antarctic.

A few academic research centers exist as multilateral collaborations between China and Arctic states. One example of this is the China-Nordic Arctic Research Center (CNARC) in Shanghai, China, which coordinates research activities between four Chinese institutions and six Nordic institutions.⁶⁷ CNARC maintains four main research themes: (1) Arctic climate change and its impacts, (2) Arctic resources, (3) shipping and economic cooperation, and (4) Arctic policy-making and legislation.⁶⁸ Additional sources of Chinese research on the Arctic come from various universities across the state, including those affiliated with the Chinese Academy of Sciences (CAS). In 2018, the CAS issued a press release stating that formal cooperation had begun between 15 Chinese universities, and a formal polar research center, which has yet to be named, will be created.⁶⁹

Over the past decade, China has increased its participation in Arctic conferences and as a result, Chinese delegations have become more prominent in regional dialogue. One important forum that has become central to the exchange of Arctic dialogue across political and academic arenas is the Arctic Circle. The Arctic Circle is an international regional conference organization that brings together practitioners of Arctic affairs, such as policymakers and business leaders, scholars and people who live and work in the Arctic. China has been involved in some capacity since the conference began in 2013.⁷⁰ Its engagement started with attendance and has increased to speaking engagements and moderating panel discussions. In May 2019, the Arctic Circle held a specialized

meeting in Shanghai titled the “Arctic Circle China Forum”. The meeting focused on China’s relationship with the Arctic, including topics such as the Polar Silk Road, governance, science, transportation, and energy.⁷¹ Also worth noting is the China-Nordic Arctic Cooperation Symposium, hosted by the China-Nordic Arctic Research Center. This yearly gathering started in 2014 and meets on a predetermined topic related to Arctic social science research and how China can contribute.⁷² The Symposia in May 2019 focused on Arctic fisheries, the Polar Silk Road, and sustainable development practices.⁷³



China plays a complex role in Arctic economic development and will continue to do so for the foreseeable future. As stated earlier, China has been involved in the Arctic since the region became more open and globalized, coinciding with the fall of the Soviet Union. In the following decades, economic development within the Arctic began to take shape. When discussing the potential for natural resource development, scholars often cite a 2008 United States Geological Survey (USGS) report, which estimated that the Arctic held approximately 30% of the world’s undiscovered gas and 13% of the world’s undiscovered oil reserves.⁷⁴ China, likewise, views the Arctic as a potential energy supplier for its large population and growing economy.⁷⁵ The geopolitical risks are much lower in the Arctic region compared to other regions in the world that are rich with natural resources, such as Africa or the Middle East. This is due in part to the Arctic’s geopolitical landscape, which is based on a history of openness and an established regional norm of cooperation.⁷⁶ The largest geopolitical risk

is a 'race for resources,' which suggests that Arctic and Non-arctic States could take advantage of the melting sea ice in the Arctic to competitively exploit newly available natural resources.⁷⁷ China is keen to do exactly this, develop available resources in partnership with Arctic states including oil, natural gas, minerals, marine resources, and tourism, and is already active in many areas of Arctic resource development. For example, China accounts for 50% of demand for Canadian minerals and has positioned itself as an investment partner within the Canadian mining industry.⁷⁸ Similarly, China has a complex relationship with Greenland, operating in partnership with other states, such as Australia, on several large rare-earth mining operations. China continues to seek permits for mining operations in Greenland, as well as parts of the Canadian Arctic.⁷⁹

Beyond natural resources, in practice China has a keen interest in developing long-term transportation infrastructure through its vision of the 'Polar Silk Road.' The Polar Silk Road is an extension of the approach to economic development underlying China's Belt and Road Initiative (BRI). BRI is a critical foreign policy objective of China's President Xi Jinping.⁸⁰ The principle of the BRI is to create a network of highways, railways, ports, and pipelines that will link Beijing via the Middle East to Europe, and later, Africa.⁸¹ To facilitate BRI projects and programs, China created unique financial mechanisms for international development, including the Silk Road Fund, the China Development Bank, and several state-owned companies.⁸² Thus far, approximately 900 projects have been identified as a part of the BRI at an estimated cost of \$900 billion.⁸³

The Polar Silk Road is a separate policy from the BRI, but it is aligned in its approach to development. This vision for the Arctic is to facilitate greater global trade and economic integration and, as such, to allow China to vary its maritime routes and minimize its expenditures for global trade.⁸⁴ Since 2018, all aspects of the Polar Silk Road initiative are overseen by China's Ministry of Natural Resources. This has elevated the profile of the policy.⁸⁵ Prior to oversight by the Ministry of Natural Resources, all polar items were organized under the State Oceanic Administration subcommittee.⁸⁶ This shifts polar issues from the oversight of oceans and environment to a larger body that oversees natural resources, including development.

The bulk of China's infrastructure interests tied to the Polar Silk Road are linked to shipping along the Northern Sea Route (NSR), as illustrated in the map earlier in Figure 1. Forecasts previously projected that approximately 5-15 % of China's foreign trade cargo (container ships) could be en route over the NSR by 2020.⁸⁷ We now know that these figures were overly ambitious, as polar shipping routes, particularly for cargo vessels, are far too environmentally unpredictable at present.⁸⁸ However, seasonal NSR usage can be more economical than the traditional route (which traverses the Suez Canal) given Russia's lowering of NSR tariffs.⁸⁹ Recently, China's Maritime Safety Agency hosted a conference titled "Practice and Prospects on the Polar Silk Road," which was set to inventory China's polar shipping capabilities and discuss priorities.⁹⁰ This is a very serious issue for China, and it is critical for Arctic states to pay attention to the developments of the Polar Silk Road. Increased traffic and infrastructure can economically benefit Arctic communities along proposed shipping lanes, but it also comes with increased risks for accidents in maritime and extremely remote areas.⁹¹

Other areas of interest which fit within the 'Polar Silk Road' vision include Finland's Arctic Corridor project, which the Arctic business community has suggested could benefit China's long-term strategic

investment plans.⁹² The Arctic Corridor project will link Rovaniemi, Finland to Kirkenes, Norway by rail, creating a formal linkage to mainland Europe from the Arctic Ocean.⁹³ A project statement for this initiative states that the “Arctic Corridor offers business and investors an opportunity to get involved in major projects in Arctic Europe.”⁹⁴ An additional component of this project includes fiber optic cable laying, which will increase the availability of digital infrastructure in the northern reaches of Scandinavia.⁹⁵ The project states that the railway and accompanying infrastructure would benefit Asia and lower the cost of international freight, as well as cut 20 freight days on cargo trips from Asia to Europe.⁹⁶ Although China is not yet directly involved in the project, there are targeted efforts by the Arctic Corridor project, mainly business leaders in Finland and Norway, to bring China onboard. The project site has listed a Chinese language investment brochure for the Arctic corridor project on its website.⁹⁷ Chairman Yang Erlin of the Finnish Chinese Business Council states that “private and state investors from China are very interested in this project in terms of investment as well as providing equipment and labor... they can raise the money. Now the biggest issue will be concerns about the environmental impact.”⁹⁸ A report published by the Finnish government confirmed that the alignment of interests between Finland and China on this project could lead to an investment and partnership on its implementation.⁹⁹ However, the latest news as of December 2019 is that continuous controversies within China over this proposed corridor has led to a negative evaluation and final suspension support on the Chinese side.

The last specific objective within China’s Arctic Policy white paper is the promotion of sustainable Arctic tourism.¹⁰⁰ China views the Arctic region as a unique destination for its citizens. Tourists from China are specifically interested in adventure travel and polar exploration.¹⁰¹ The growth of China’s tourism to the Arctic is outpacing the growth of its outbound tourism as a whole.¹⁰² China has suggested one way to create better involvement in Arctic tourism is to require specific training and regulation for Chinese tourism agencies that operate in or offer travel to the Arctic.¹⁰³ This is not a new development for China, but rather one that is seeing renewed interest after the formal publication of its Arctic Policy. Tourism industry experts note that one in three visitors to the Arctic and Antarctic are Chinese.¹⁰⁴ Chinese tourists focus on adventure experiences in the Arctic and popular destinations include Finish Lapland, Iceland, and the North Pole (via Russia). In the past, there have been attempts for private firms to purchase land in the Arctic to create tourism destinations specifically for Chinese clients. In 2014, Huang Nubo, a Chinese billionaire, attempted to purchase property in Svalbard to build a resort catering to Chinese tourists.¹⁰⁵ This purchase failed when the Norwegian Minister of Trade and Industry organized the purchase of the land instead in order to protect it from outside interests.¹⁰⁶ In a press conference, the Norwegian Minister of Trade and Industry announced this action because “the Norwegian government has the best possible basis on which to administer Svalbard for the Common good.”¹⁰⁷ According to the western media, this is an example of Norway acting as a protectorate of Arctic lands and imposing limitations on what outside interests can do in the region. However, interestingly, a senior manager from Huang Nubo’s Zhongkun group (an investment group) insisted in a telephone interview with Dr. Xu in August 2018 that their company never bid for the purchase of any land in Svalbard, though they did pay a business visit to another place in Norway during that time. Though Nubo’s Zhongkun group were wondering where these reports came from, they did not respond in public due to a previous failed investment in Iceland and consequent media storm in which they involved both at home and abroad in 2011.

Challenges and Opportunities for improved Alaska-China Cooperation

In recent years, China and Alaska have developed a unique relationship based on shared interests in trade, investment, and tourism.¹⁰⁸ Because no state in the United States can make agreements with any other nation or sub government per the Constitution, any participation in the international governance of the Arctic by Alaska must be done so through the U.S. Federal Government. Both public and private sectors in Alaska must therefore engage with China creatively, looking for opportunities for cooperation between lower levels of government or within the private sector. The following section explores this relationship, discusses potential roadblocks and proposes avenues for future cooperation.

Based on data from 2017, China is Alaska's largest trading partner. Alaska exports \$1.3 billion in goods annually, primarily seafood and natural resources, and an additional \$135 million in services to China.¹⁰⁹ In 2018, China represented 21% of Alaska's total goods exports.¹¹⁰ China imports nearly \$1 billion of seafood per year from Alaska, which includes fish for Chinese consumption as well as seafood that is processed for export from China to the global market. This constitutes approximately 54% of Alaska's total seafood exports.¹¹¹ According to the Alaska Seafood Marketing Institute, the relationship between Alaska and China within seafood trade is extremely important and is currently challenged by ongoing trade tension. It is important for Alaska to continue growing its relationship with China within the seafood trade, as this is a significant market for the growth of Alaska's seafood economy. In order to do so, Alaska must continue to promote sustainable sources of seafood, which is important to Chinese consumers.¹¹²

China is keen to grow its relationship with the state of Alaska directly, as tensions are high with the U.S. Federal Government, particularly on trade issues. The ongoing trade war between the Trump Administration and China has complicated the economic relationship between the two countries. For instance, tariffs imposed on seafood in 2018 have resulted in a 36% drop in U.S. seafood sales, valued at approximately \$340 million.¹¹³ If tariffs on Alaska products are not eased, long-term impacts could lower the demand for Alaskan seafood in China.¹¹⁴

The most positive China-Alaska development of late occurred during the Walker Administration, from 2014 to 2018. China Petrochemical Corporation (Sinopec), in collaboration with the Bank of China and China Investment Corporation, agreed to partially finance an Alaska LNG pipeline connecting the North Slope with the Pacific Ocean (see Figure 4).¹¹⁵ In order to facilitate this agreement, former Alaska Governor Walker led an extensive trade mission to China in May/June of 2018.¹¹⁶ As a part of the mission, Governor Walker traveled with Alaskan business representatives with the aim of strengthening the trade relationship between Alaska and China.¹¹⁷ This has since been put on hold for a variety of reasons, including domestic oil companies' loss of support with the high cost of LNG at current market rates.¹¹⁸ If the global rate of LNG were to increase, the development of the pipeline would likely be expedited.

The current executive leadership of Alaska, Governor Dunleavy, has shown less interest in this international engagement and is focused on natural resources development financed by domestic companies. One indication is the downsizing of the Alaska Gasline Development Corporation (AGDC), which oversees the Alaska LNG project.¹¹⁹ The department eliminated 50% of positions and

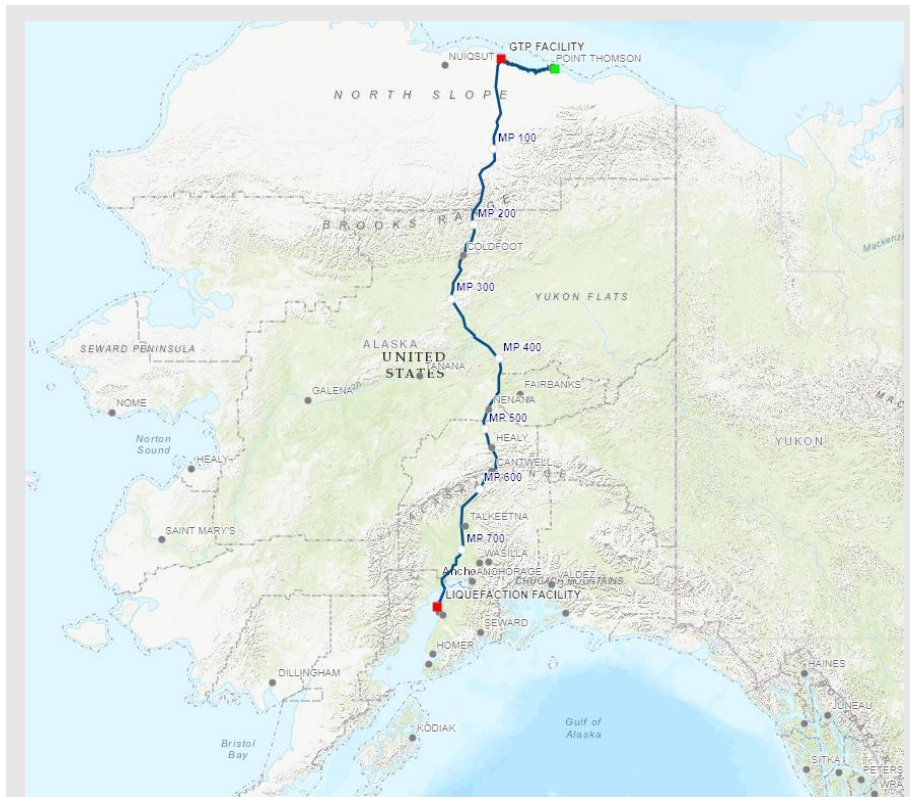


Figure 4. Proposed AK LNG Pipeline, image from Alaska Gasline Development Corp.

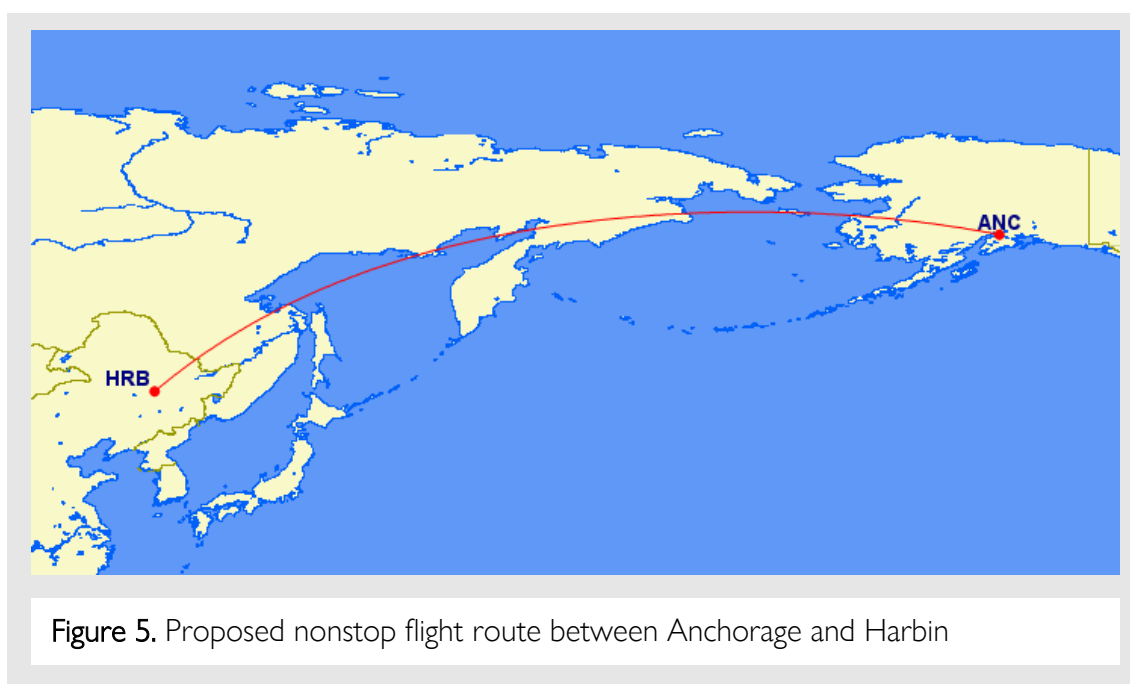
those that remain are focused on completing the draft environmental impact study for the Federal Energy Regulatory Commission (FERC).¹²⁰ In addition, the non-binding joint development agreement for Alaska LNG, which was signed between the Walker administration and three Chinese firms, has not been renewed.¹²¹ Although the president of AGDC Joe Dubler in an interview by the author in October 2019 was quite confident about getting federal authorization for the Alaska LNG deal by June 2020, the Dunleavy administration is not asserting the same level of effort as the Walker Administration, likely due to a combination of falling LNG prices and interest in other domestic investments.

The near future challenges for the Alaska and China trade relationship will be identifying new priorities of the governor's office and where China's collaboration can fit into the current administration's goals. For the Alaskan legislature, this may mean exploring new opportunities with China or capitalizing on existing ones. Before this can happen, however, the state will need to outline its priorities for engagement directly with other countries. Currently, China is a significant trading partner for Alaska. In 2018, Alaska exported approximately 80,000 tons of salmon to China, with a value of approximately \$300 million.¹²² One of Alaska's next hurdles will be identifying additional opportunities that can be pursued with the support of the U.S. Department of Commerce, which oversees both domestic and international commerce activities. It will be critical for the state of

Alaska to harmonize its interests with China in order to maximize its economic benefits, whilst staying within its legal bounds. Due to the ongoing tariff situation between the U.S. and China, many industries are under increased pressure, including seafood. According to Sam Karson, a legal scholar, Alaska is within its constitutional rights to pursue an economic relationship with China directly, so long as it does not interfere with U.S. national security interests.¹²³ This idea gives Alaska some space to pursue economic activities of mutual interest directly with foreign countries. An unlikely example of where this activity would be blocked is if Alaska decided to pursue a telecommunications venture with Huawei, a Chinese company that the Trump Administration has limited specifically due to national security concerns.¹²⁴

On a positive note, Alaska and China have several common economic development goals. Areas for potential collaboration include the development of Alaska LNG, offshore oil development, sustainable Arctic tourism, fisheries and seafood, and development of logistical resources - such as an air cargo hub and Arctic port infrastructure. Currently, the largest barrier to economic cooperation is unknown and fluctuating tariffs enacted by the Trump Administration. At this time, it is unclear what impact the January 2020 U.S.-China trade deal will have on the Alaska-China relationship.¹²⁵

To address the increasing uncertainties for future bilateral economic cooperation imposed by the ongoing trade war, Alaska and China need to work together at different levels. Amongst possible measures to take, keeping cultural exchanges and communications open among peoples is worthy of encouragement in the long run for better Alaska-China relations. Fortunately, a good basis in this point has been established between Alaska and China over past decades. For instance, Alaska has a long-standing sister state/sister province relationship with Heilongjiang Province. Additionally, the Municipality of Anchorage has recently re-established a sister city relationship with Harbin,¹²⁶ the capital city of Heilongjiang Province. In October 2018, Alaska's governor, with the Heilongjiang Province governor, announced that year-round passenger flights between Alaska and Harbin would become a reality as early as 2020 (shown in the map in Figure 5). Furthermore, academic



collaborations can move forward with partnerships in research, such as the recently re-signed memorandum of understanding between the University of Alaska Fairbanks's International Arctic Research Center (IARC) and the Chinese Academy of Sciences (CAS). This agreement is meant to bridge research divides and create a stronger environment for academic collaboration and people-to-people exchanges between the institutions. In this context, the dynamics of Alaska-China cooperation are still in the hands of the people.

Conclusion

China is extensively involved in the Arctic. It continues to maintain a strong position in various economic ventures despite a lack of physical territory in the Arctic. It has found success in pursuing projects and initiatives of mutual interest between itself and Arctic partners. As with any significant global power, China's interests are many and varied, so it shares some interests with Arctic states. As such, China has found success in partnering with Arctic states and institutions for activities of mutual interest, including natural resource extraction, climate research, and infrastructure development. At the same time, China also suffers from failures in investment on infrastructure in the name of the Polar Silk Road and negative impacts imposed by the ongoing trade war. These are emerging tendencies, deserving more attention from the industrial arena and academic realm in particular.

Scholars continue to debate whether the international community should view China's increased engagement with the Arctic as an opportunity for collaboration or a challenge to cooperation.¹²⁷ This is because it is not clear if China is motivated by national interests, such as energy security and food security, or for the betterment of the global community, as in global climate research, or both. Undoubtedly, frequent and in-depth communications at a variety of levels between Alaska and China will give insight into answering this question. Therefore, in the case of Alaska, working with China on Arctic initiatives should be considered, but with great awareness of the potential geopolitical and economic risks.

References

- ¹ "About CIAO." Accessed January 27, 2020. Retrieved from: <https://karholl.is/en/>.
- ² Gørild Heggelund. "China's climate change policy: domestic and international developments." *Asian perspective* 31, no. 2 (2007): 155.
- ³ Luiza Ch. Savage. "The U.S. left a hole in leadership on climate. China is filling it." August 15, 2019. Politico. Retrieved from: <https://www.politico.com/story/2019/08/15/climate-china-global-translations-1662345>.
- ⁴ Ibid.
- ⁵ U.S. Climate Resilience Toolkit. Retrieved from: <https://toolkit.climate.gov/>
- ⁶ Kelly Sims Gallagher and Fang Zhang, "China is positioned to lead on climate change as the US rolls back its policies." September 12, 2019. The Conversation. Retrieved from: <http://theconversation.com/china-is-positioned-to-lead-on-climate-change-as-the-us-rolls-back-its-policies-114897>
- ⁷ Silong Piao, "The Impacts of Climate Change on Water Resources and Agriculture in China," *Nature* 467 (2010).
- ⁸ Hui-Jun Wang and Huo-Po Chen, "Understanding the Recent Trend of Haze Pollution in Eastern China: Roles of Climate Change," *Atmospheric Chemistry and Physics* 16 (2016).

-
- ⁹ Gong Daoyi and Wang Shaowu, "Influence of Arctic Oscillation on Winter Climate over China," *Journal of Geographical Sciences* 13, no. 2 (2003).
- ¹⁰ Fahu Chen Xunming Wang, Eerdun Hasi, and Jinchang Li, "Desertification in China: An Assessment," *Earth Science Reviews* 88, no. 3-4 (2008).
- ¹¹ Kai Sun, "Beyond the Dragon and the Panda: Understanding China's Engagement in the Arctic," *Asia Policy* (2014).
- ¹² Frederic Lasserre Linyan Huang, and Olga Alexeeva, "Is China's Interest for the Arctic Driven by Arctic Shipping Potential?," *Asian Geographer* (2014).
- ¹³ Daniel Ren, "China Has Six of the World's 10 Busiest Container Ports, Spurred by Booming Trade and a State Coffer That Invests in Public Works," *South China Morning Post*, 13 Apr 2019.
- ¹⁴ Xing Li and Bo Peng, "The Rise of China in the Emergence of a New Arctic Order" in *The Global Arctic Handbook*, ed. Matthias Finger and Lassi Heininen (Springer, 2019).
- ¹⁵ Rasmus Gjedssø Bertelsen and Vincent Gallucci, "The Return of China, Post-Cold War Russia, and the Arctic: Changes on Land and at Sea," *Marine Policy* (2016).
- ¹⁶ Kang Wu, "The Arctic in World Affairs", (paper presented at the North Pacific Arctic Conference, 2013).
- ¹⁷ Zhifu Mi, Jiali Zheng, Jing Meng, Yuli Shan, Heran Zheng, Jiamin Ou, Dabo Guan, and Yi-Ming Wei, "China's Energy Consumption in the New Normal," *AGU 100, Earth's Future*, pg. 1007-1016, retrieved from: <https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2018EF000840>
- ¹⁸ Rasmus Gjedssø Bertelsen and Vincent Gallucci, "The Return of China, Post-Cold War Russia, and the Arctic: Changes on Land and at Sea," *Marine Policy* (2016).
- ¹⁹ Wu, p. 195, 2013.
- ²⁰ The People's Republic of China. "China's Arctic Policy." edited by State Council Information Office. Beijing: Xinhua, 2018.
- ²¹ Anne-Marie Brady, *China as a Polar Great Power*, pg.22 (Cambridge University Press, 2017).
- ²² Dorothy J. Solinger, *China's Transition from Socialism? Statist Legacies and Market Reforms, 1980-90: Statist Legacies and Market Reforms, 1980-90*. Routledge, 2016.
- ²³ Caitlin Campbell. *China and the Arctic: objectives and obstacles*. US-China Economic and Security Review Commission, 2013.
- ²⁴ Gorbachev, M. 1987. "The Speech in Murmansk at the ceremonial meeting on the occasion of the presentation of the Order of Lenin and the Gold Star Medal to the city of Murmansk, October 1, 1987." *Novosti Press Agency*. Moscow, October 1, 1987. https://www.barentsinfo.fi/docs/Gorbachev_speech.pdf
- ²⁵ Humrich, Christopher. "The Arctic Council at twenty: Cooperation between governments in the global Arctic." In *Global Challenges in the Arctic Region: Sovereignty, environment, and geopolitical balance*, edited by Elena Conde and Sara Inglesias Sanchez, 149-164. New York: Routledge. 2016.
- ²⁶ Arctic Environmental Protection Strategy. 1991. Rovaniemi. *Declaration on the Protection of the Arctic Environment*.
- ²⁷ Koivurova, Timo. 2005. "Environmental protection in the Arctic and Antarctic: Can the polar regimes learn from each other." In *Int'l J. Legal Info*. 33: 204.
- ²⁸ The People's Republic of China. "China's Arctic Policy." edited by State Council Information Office. Beijing: Xinhua, 2018.
- ²⁹ The People's Republic of China. "China's Arctic Policy." edited by State Council Information Office. Beijing: Xinhua, 2018.
- ³⁰ The People's Republic of China. "China's Arctic Policy." edited by State Council Information Office. Beijing: Xinhua, 2018.
- ³¹ Anne-Marie Brady, *China as a Polar Great Power*, pg. 165 (Cambridge University Press, 2017).
- ³² The People's Republic of China. "China's Arctic Policy." edited by State Council Information Office. Beijing: Xinhua, 2018.
- ³³ Adam Lajeunesse Whitney Lackenbauer, James Manicom, and Frederic Lasserre, *China's Arctic Ambitions and What They Mean for Canada*, pg. 36 (University of Calgary Press, 2018).

-
- ³⁴ Elizabeth Wishnick, *China's Interests and Goals in the Arctic: Implications for the United States*, ed. U.S. Army War College (Carlisle, PA 2017).
- ³⁵ Marc Lanteigne and Mingming Shi. 2019.
- ³⁶ Definition from: <https://www.investopedia.com/terms/f/fdi.asp>
- ³⁷ Fengshi Wu, "China's Ascent in Global Governance and the Arctic," *Вестник СПбГУ* (2016).
- ³⁸ Fengshi Wu, 2016.
- ³⁹ World Maritime News, "China Buying Stake in Novatek's Arctic Lng 2," <https://worldmaritimenews.com/archives/275766/china-buying-stake-in-novateks-arctic-lng-2/>.
- ⁴⁰ Tsvetana Paraskova, "Russia's Novatek Hits Major Milestones in Arctic LNG Plans," OilPrice.com, July 22, 2019, retrieved from: <https://oilprice.com/Latest-Energy-News/World-News/Russias-Novatek-Hits-Major-Milestones-In-Arctic-LNG-Plans.html#>
- ⁴¹ Pierre-Louis Tetu and Frederic Lasserre, "Chinese Investment in Greenland's Mining Industry: Toward a New Framework for Foreign Direct Investment," *The Extractive Industries and Society* (2017);
Marc Lanteigne and Mingming Shi, "China Steps up Its Mining Interests in Greenland," *The Diplomat*, February 12, 2019.
- ⁴² Marc Lanteigne and Mingming Shi. 2019.
- ⁴³ Marc Lanteigne and Mingming Shi. 2019.
- ⁴⁴ Patrik Andersson, Jesper Willaing Zeuthen, and Per Kalvig, "Chinese Mining in Greenland: Arctic Access or Access to Minerals?" *Arctic Yearbook*, 2018.
- ⁴⁵ Lasserre, 2014.
- ⁴⁶ Undercurrent News, "China, Iceland sign trade deal on aquaculture goods, fishmeal." June 4, 2019. Retrieved from: <https://www.undercurrentnews.com/2019/06/04/china-iceland-sign-trade-deal-on-aquaculture-goods-fishmeal/>
- ⁴⁷ Embassy of the People's Republic of China in the Republic of Iceland. "Sino-Icelandic Economic and Trade Relationship." April 10, 2019. Retrieved from: <http://is.china-embassy.org/eng/zbqx/jmgx/t1653166.htm>
- ⁴⁸ Brady, 2017.
- ⁴⁹ Jesse Guite Hastings. "The rise of Asia in a changing Arctic: a view from Iceland." *Polar Geography* 37, no. 3 (2014): 215-233.
- ⁵⁰ Arctic Council Secretariat, "Kiruna Declaration," (Kiruna: Arctic Council, 2013).
- ⁵¹ Arctic Council, "Observer Manual for Subsidiary Bodies." 2013, retrieved from: https://oaarchive.arctic-council.org/bitstream/handle/11374/939/EDOCS-3020-v1B-Observer-manual-with-addendum-finalized_Oct2016.PDF?sequence=8&isAllowed=y
- ⁵² Arctic Council Secretariat, "China's Observer Activity Report" November 25, 2016, retrieved from: https://oaarchive.arctic-council.org/bitstream/handle/11374/1860/EDOCS-4018-v1-2016-11-26_China_Observer_activity_report.pdf?sequence=1&isAllowed=y
- ⁵³ Nong Hong, "China's Interests in the Arctic: Opportunities and Challenges," (Washington, D.C.: Institute for China-America Studies 2018).
- ⁵⁴ Tony Penikett, "China & the Arctic Council - Does China's Economic Clout Outweigh the Democratic Voices of American and Canadian Citizens, Even on Arctic Policy?," *Northern Public Affairs* December (2013).
- ⁵⁵ The People's Republic of China. "China's Arctic Policy." edited by the State Council Information Office. Beijing: Xinhua, 2018.
- ⁵⁶ The People's Republic of China. "China's Arctic Policy." section III, edited by the State Council Information Office. Beijing: Xinhua, 2018.
- ⁵⁷ Heather Conley, "China's Arctic Dream," (Washington, D.C.: Center for Strategic and International Studies 2018).
- ⁵⁸ Conley, 2018.

-
- ⁵⁹ Lonnie G. Thompson Tandong Yao, Volker Mosbrugger, Fan Zhang, Yaoming Ma, Tianxiang Luo, Baiqing Xu, Xiaoxin Yang, Daniel R. Joswiak, Weicai Wang, Meri E. Joswiak, Lochan P. Devkota, Shresth Tayal, Rahmatullah Jilani, and Radjabovich Fayziev, "Third Pole Environment (Tpe)," *Environmental Development* 3 (2012).
- ⁶⁰ Yao Tandong, "Tpe International Program: A Program for Coping with Major Future Environmental Challenges of the Third Pole Region," *Progress in Geography* 33, no. 7 (2014).
- ⁶¹ International Symposium on Remote Sensing and Global Change: The Antarctic, Arctic, and Tibetan Plateau. 2018. Retrieved from: https://www.igsoc.org/symposia/Flyers_etc/2018internationalsymposiumfirstcircular.pdf
- ⁶² International Symposium on Remote Sensing and Global Change, 2018.
- ⁶³ Institute of Tibetan Plateau Research. "Promote the TPE-Arctic Collaboration in 2018 Arctic Circle Assembly." Retrieved from: http://english.itpcas.cas.cn/ns/ra/201811/t20181116_201303.html
- ⁶⁴ Ibid.
- ⁶⁵ Bertelsen and Gallucci.
- ⁶⁶ Iselin Stensdal, "Asian Arctic Research 2005-2012," (Fridtjof Nansen Institute, 2013).
- ⁶⁷ China Nordic Arctic Research Centre, <https://www.cnarc.info>.
- ⁶⁸ China Nordic Arctic Research Centre.
- ⁶⁹ Chinese Academy of Sciences, "Chinese Universities to Work Together on Polar Research," news release, 2018, http://english.cas.cn/newsroom/china_research/201803/t20180309_190584.shtml.
- ⁷⁰ "Arctic Circle," <http://www.arcticcircle.org>.
- ⁷¹ "Arctic Circle China Forum 2019," <http://www.polar.org.cn/acforum2019/overview/>.
- ⁷² China-Nordic Arctic Research: <https://www.cnarc.info/symposia>
- ⁷³ CNARC, Call for Abstracts: https://www.cnarc.info/images/documents/symposia/7th/7th_China-Nordic_Arctic_Cooperation_Symposium_Call_for_Abstracts.pdf
- ⁷⁴ Arild Moe. "The Dynamics of Arctic Development." In *Asia and the Arctic: Narratives, Perspectives and Policies*. Springer. 2016. Retrieved from: <https://link-springer-com.proxy.library.uaf.edu/content/pdf/10.1007%2F978-981-10-2059-9.pdf>
- ⁷⁵ Campbell, Caitlin. *China and the Arctic: objectives and obstacles*. US-China Economic and Security Review Commission, 2013.
- ⁷⁶ Dittmer, Jason, Sami Moiso, Alan Ingram, and Klaus Dodds. "Have you heard the one about the disappearing ice? Recasting Arctic geopolitics." *Political Geography* 30, no. 4 (2011): 202-214.
- ⁷⁷ Ebinger, Charles K., and Evie Zambetakis. "The geopolitics of Arctic melt." *International Affairs* 85, no. 6 (2009): 1215-1232.
- ⁷⁸ Shiloh Rainwater, "Race to the North: China's Arctic Strategy and Its Implications," *Naval War College Review* 66, no. 2 (2013).
- ⁷⁹ Shi, Marc Lanteigne and Mingming. "China Steps up Its Mining Interests in Greenland." *The Diplomat*, February 12, 2019.
- ⁸⁰ J.P. to The Economist Explains, May 14, 2017, <https://www.economist.com/blogs/economist-explains/2017/05/economist-explains-11>.
- ⁸¹ Charlie Campbell, "The New Silk Road," *Time*, November 13, 2017 2017.
- ⁸² Yiping Huang, "Understanding China's Belt & Road Initiative: Motivation, Framework and Assessment," *China Economic Review* 40, no. September 2016 (2016).
- ⁸³ Campbell.
- ⁸⁴ Kong Soon Lim, "China's Arctic Policy & the Polar Silk Road Vision," *The Arctic Yearbook* (2018).
- ⁸⁵ Trym Aleksander Eiterjord, "The Growing Institutionalization of China's Polar Silk Road," *The Diplomat*, October 7, 2018 2018.
- ⁸⁶ Trym Aleksander Eiterjord, 2018.
- ⁸⁷ Dmirty Radushinsky, "The Evaluation of the Modernization Cost of the Transport Infrastructure of the Northern Sea Route in the Arctic Zone of the Russian Federation," *IOP Conf. Series: Earth and Environmental Science* 90 (2017).

-
- ⁸⁸ Xu, Hua, Dong Yang, and Jinxian Weng. "Economic feasibility of an NSR/SCR-combined container service on the Asia-Europe lane: a new approach dynamically considering sea ice extent." *Maritime Policy & Management* 45, no. 4 (2018): 514-529.
- ⁸⁹ Ibid.
- ⁹⁰ Trym Aleksander Eiterjord, "China's Busy Year in the Arctic," *The Diplomat* 2019.
- ⁹¹ Fedi, Laurent, Olivier Faury, and Daria Gritsenko. "The impact of the Polar Code on risk mitigation in Arctic waters: a "toolbox" for underwriters?." *Maritime Policy & Management* 45, no. 4 (2018): 478-494.
- ⁹² Gloria Dickie. "A Proposed Railway in the Arctic has investors excited – and indigenous groups terrified." *Pacific Standard*. Retrieved from: <https://psmag.com/environment/kirkenes-proposed-railway-from-europe-to-asia-investors-excited-indigenous-groups-terrified>.
- ⁹³ Lim, 2018.
- ⁹⁴ Arctic Corridor, retrieved from: <https://arcticcorridor.fi>.
- ⁹⁵ Lim, 2018.
- ⁹⁶ Arctic Corridor Website – see 68
- ⁹⁷ Arctic Corridor, retrieved from: <https://arcticcorridor.fi/wp-content/uploads/jkrautatiekiinascr02.pdf>
- ⁹⁸ Angus McNeicein London, "Finland touts 'Arctic Corridor' tunnel." *China Daily*. March 2, 2018. Retrieved from: <http://www.chinadaily.com.cn/a/201803/02/WS5a984a41a3106e7dcc13efe8.html>.
- ⁹⁹ Koivurova, Timo, Liisa Kauppila, Sanna Kopra, Marc Lanteigne, Mingming Shi, Malgorzata Smieszek, Adam Stepien et al. "China in the Arctic; and the Opportunities and Challenges for Chinese-Finnish Arctic Co-operation." (2019). retrieved from: http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161371/8-2019-China_Arctic_andFinland.pdf.
- ¹⁰⁰ The People's Republic of China. "China's Arctic Policy." edited by State Council Information Office. Beijing: Xinhua, 2018.
- ¹⁰¹ Alice Yan, "Young, rich... and cool: China's Gen Y travelers prefer Arctic Adventures to Asian holiday." *South China Morning Post*, May 31, 2016. Retrieved from: <https://www.scmp.com/news/china/money-wealth/article/1959677/young-rich-and-cool-chinas-gen-y-travellers-prefer-arctic>
- ¹⁰² Daniel Meesak, "Chinese Tourism to the Arctic is booming," *Skift*, <https://skift.com/2018/02/03/chinese-tourism-to-arctic-destinations-is-booming/>.
- ¹⁰³ Liangyu, "China to Promote Sustainable Arctic Tourism," http://www.xinhuanet.com/english/2018-01/26/c_136926314.htm.
- ¹⁰⁴ Pavel Toropov, "Ultimate Adventure: Wealthy Chinese Tourists Do the North Pole," *South China Morning Post* 2017.
- ¹⁰⁵ Atle Staalesen, "No Chinese resort in Svalbard, after all." *The Barents Observer*, October 21, 2016. Retrieved from: <https://thebarentsobserver.com/en/arctic/2016/10/no-chinese-resort-svalbard-after-all>
- ¹⁰⁶ Atle Staalesen, 2016.
- ¹⁰⁷ Tse-Kang Leng and Rumi Aoyama, eds. *Decoding the Rise of China: Taiwanese and Japanese Perspectives*. China's Arctic Diplomacy: Global and Regional Aspects. Springer. (2018)
- ¹⁰⁸ Sam Karson, "Caught between Superpowers: Alaska's Economic Relationship with China Amidst the New Cold War," *Alaska Law Review* 36, no. 1 (2019).
- ¹⁰⁹ Karson, 2019.
- ¹¹⁰ Office of the United States Trade Representative, "Alaska Report" 2018, Retrieved from: <https://ustr.gov/map/state-benefits/ak#>
- ¹¹¹ Laine Welch. "Season of Uncertainty: Alaska braces for seafood tariffs." *National Fisherman*. June 13, 2019. Retrieved from: <https://www.nationalfisherman.com/alaska/season-of-uncertainty-alaska-braces-for-seafood-tariffs/>.
- ¹¹² Jeremy Woodrow, "China Update, September 2019." *Alaska Seafood Marketing Institute*. September, 2019. Report. Provided by author.

-
- ¹¹³ Laine Welch, "Trump's trade war with China takes a big bite out of Alaska and US seafood sales. Anchorage Daily News. August 6, 2019. Retrieved from: <https://www.adn.com/business-economy/2019/08/06/trumps-trade-war-with-china-takes-a-big-bite-out-of-alaska-and-us-seafood-sales/>
- ¹¹⁴ Alaska Seafood Marketing Institute, "Alaska Seafood 2019 US/China Tariff Overview." Updated September 5, 2019.
- ¹¹⁵ Lim, 2018.
- ¹¹⁶ KTUU, "China Trade: Alaska's New Frontier," May 31, 2018. Retrieved from: <https://www.ktuu.com/content/news/China-Trade-Alaskas-New-Frontier-484218931.html>
- ¹¹⁷ KTUU, 2018.
- ¹¹⁸ Matt Schrader, "Is China Changing the Game in Trans-Polar Shipping?," *China Brief* 18, no. 7 (2018).
- ¹¹⁹ Elwood Brehmer, "AGDC president outlines path forward; China deal is dead." July 25, 2019. Anchorage Daily News. Retrieved from: <https://www.adn.com/business-economy/energy/2019/07/25/agdc-president-outlines-path-forward-china-deal-is-dead/>.
- ¹²⁰ Elwood Brehmer, 2019.
- ¹²¹ Liu Yinmeng, "Alaska natural gas export deal still on table" February 23, 2019. China Daily. Retrieved from: <http://www.chinadaily.com.cn/a/201902/23/WS5c70206aa3106c65c34eae2.html>
- ¹²² Alaska Seafood Marketing Institute, "China Update - September 2019." Data Courtesy of Jeremy Woodrow, Executive Director of Alaska Seafood Marketing Institute.
- ¹²³ Sam Karson, 2019.
- ¹²⁴ Spencer Kimball. "Trump says he doesn't want to do business with Huawei due to national security concerns." CNBC. August 18, 2019. Retrieved from: <https://www.cnbc.com/2019/08/18/trump-says-he-doesnt-want-to-do-business-with-huawei-due-to-national-security-concerns.html>.
- ¹²⁵ Peter Eavis, Alan Rappeport, and Ana Swanson. "What's in (and not in) the U.S.-China Trade Deal." The New York Times. January 15, 2020. Retrieved from: <https://www.nytimes.com/2020/01/15/business/economy/china-trade-deal-text.html>.
- ¹²⁶ Greg Wolf, Alaska and China: Ties between the Middle Kingdom and Great Land, *Alaska Business*, no. 2 (2019):62-65.
- ¹²⁷ Stronski, Paul, and Nicole Ng. *Cooperation and competition: Russia and China in Central Asia, the Russian Far East, and the arctic*. Vol. 28. Washington: Carnegie Endowment for International Peace, 2018.
- Li, Xing, and Bo Peng. "The Rise of China in the Emergence of a New Arctic Order." In *The Global Arctic Handbook*, pp. 197-213. Springer, Cham, 2019.
- Østhagen, Andreas. *The New Geopolitics of the Arctic: Russia, China, and the EU*. Wilfried Martens Centre for European Studies, 2019.