

BASKENT UNIVERSITY
INSTITUTE OF EUROPEAN UNION AND INTERNATIONAL
RELATIONS
DEPARTMENT OF POLITICAL SCIENCE AND
INTERNATIONAL RELATIONS
MASTER'S OF INTERNATIONAL RELATIONS WITH THESIS

THE POLAR SILK ROAD AND ITS IMPACTS ON
ECONOMIC SECURITY OF CHINA

MA THESIS

BY
ÖZGÜR TOPRAK

ANKARA – 2023

BASKENT UNIVERSITY
INSTITUTE OF EUROPEAN UNION AND INTERNATIONAL
RELATIONS
DEPARTMENT OF POLITICAL SCIENCE AND
INTERNATIONAL RELATIONS
MASTER'S OF INTERNATIONAL RELATIONS WITH THESIS

THE POLAR SILK ROAD AND ITS IMPACTS ON
ECONOMIC SECURITY OF CHINA

MA THESIS

BY
ÖZGÜR TOPRAK

SUPERVISOR
ASSOC. PROF. DR. HALUK KARADAG

ANKARA – 2023

BAŞKENT ÜNİVERSİTESİ

AVRUPA BİRLİĞİ VE ULUSLARARASI İLİŞKİLER ENSTİTÜSÜ

Siyaset Bilimi ve Uluslararası İlişkiler Anabilim Dalı Uluslararası İlişkiler Tezli Yüksek Lisans Programı çerçevesinde Özgür Toprak tarafından hazırlanan bu çalışma, aşağıdaki jüri tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.

Tez Savunma Tarihi: 19 / 04 / 2023

Tez Adı: The Polar Silk Road and Its Impacts on Economic Security of China

Tez Jüri Üyeleri (Unvanı, Adı - Soyadı, Kurumu)

İmza

Prof. Dr. Abdürreşit Celil Karluk, Hacı Bayram Veli Üniversitesi

.....

Doç. Dr. Haluk Karadağ, Başkent Üniversitesi

.....

Dr. Öğr. Üyesi Chan Dizdaroğlu, Başkent Üniversitesi

.....

ONAY

Prof. Dr. Menderes Çınar

Avrupa Birliği ve Uluslararası İlişkiler Enstitüsü Müdürü

Tarih: ... / ... /

BAŞKENT ÜNİVERSİTESİ
AVRUPA BİRLİĞİ VE ULUSLARARASI İLİŞKİLER ENSTİTÜSÜ
YÜKSEK LİSANS TEZ ÇALIŞMASI ORJİNALLİK RAPORU

Tarih: ... / ... /

Öğrencinin Adı, Soyadı: Özgür Toprak

Öğrencinin Numarası: 21920373

Anabilim Dalı: Siyaset Bilimi ve Uluslararası İlişkiler Anabilim Dalı

Programı: Uluslararası İlişkiler Tezli Yüksek Lisans Programı

Danışmanın Unvanı/Adı, Soyadı: Doç. Dr. Haluk Karadağ

Tez Başlığı: The Polar Silk Road and Its Impacts on Economic Security of China

Yukarıda başlığı belirtilen Yüksek Lisans tez çalışmamın; Giriş, Ana Bölümler ve Sonuç Bölümünden oluşan, toplam sayfalık kısmına ilişkin, ... / ... / tarihinde şahsım/tez danışmanım tarafından adlı intihal tespit programından aşağıda belirtilen filtrelemeler uygulanarak alınmış olan orijinallik raporuna göre, tezimin benzerlik oranı %'dır.

Uygulanan filtrelemeler:

1. Kaynakça hariç
2. Alıntılar hariç
3. Beş (5) kelimedenden daha az örtüşme içeren metin kısımları hariç

“Başkent Üniversitesi Enstitüleri Tez Çalışması Orijinallik Raporu Alınması ve Kullanılması Usul ve Esaslarını” inceledim ve bu uygulama esaslarında belirtilen azami benzerlik oranlarına tez çalışmamın herhangi bir intihal içermediğini; aksinin tespit edileceği muhtemel durumda doğabilecek her türlü hukuki sorumluluğu kabul ettiğimi ve yukarıda vermiş olduğum bilgilerin doğru olduğunu beyan ederim.

Öğrenci İmzası:

ONAY

Tarih: ... / ... /

Öğrenci Danışmanı Unvan, Ad, Soyad, İmza:

Doç. Dr. Haluk Karadağ

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	i
ÖZET.....	ii
ABSTRACT.....	iii
LIST OF FIGURES.....	iv
ABBREVIATIONS.....	v

CHAPTER 1. INTRODUCTION

1.1. Research Question and Overall Structure.....	6
1.2. Theoretical and Conceptual Framework.....	8
1.3. Historical Background of the Arctic.....	11

CHAPTER 2. KEY ACTORS IN THE ARCTIC

2.1. The Arctic Council.....	15
2.2. The Arctic States and Their Significance in the Polar Region.....	16
2.2.1. Canada.....	17
2.2.2. The Kingdom of Denmark.....	19
2.2.3. Finland.....	22
2.2.4. Iceland.....	23
2.2.5. Norway.....	25

2.2.6. The Russian Federation.....	28
2.2.7. Sweden.....	30
2.2.8. The United States of America.....	32
2.3. Permanent Participant Organizations of the Arctic Council.....	35
2.3.1. Aleut International Association.....	36
2.3.2. Arctic Athabaskan Council.....	38
2.3.3. Gwich'in Council International.....	40
2.3.4. Inuit Circumpolar Council.....	41
2.3.5. Russian Association of Indigenous Peoples of the North.....	42
2.3.6. Saami Council.....	45
2.4. Internationally Recognized Working Groups and Expert Groups in the Arctic.....	46
2.4.1. Arctic Contaminants Action Program.....	46
2.4.2. Arctic Monitoring and Assessment Programme.....	48
2.4.3. Conservation of Arctic Flora and Fauna.....	49
2.4.4. Emergency Prevention, Preparedness, and Response.....	51
2.4.5. Protection of the Arctic Marine Environment.....	52
2.4.6. Sustainable Development Working Group.....	53

2.5. Arctic Council Observers.....	54
2.5.1. Non-Arctic States.....	55
2.5.2. Intergovernmental and Interparliamentary Organizations....	56
2.5.3. Non-Governmental Organizations.....	58

CHAPTER 3. MELTING ARCTIC:

IMPACTS OF CLIMATE CHANGE ON THE POLAR REGION

3.1. Climate Change Overview.....	60
3.2. Impacts of Climate Change on the Arctic.....	63
3.3. Impacts of Climate Change on International Trade and Shipping...	66

CHAPTER 4. ECONOMIC SECURITY OF CHINA

4.1. Overview of China’s Economic Security.....	71
4.2. Assessment of China’s International Trade in the Context of Economic Security.....	74
4.3. Significance of the Shipping Routes for China’s Economic Security.....	78
4.4. Assessment of the Shipping Routes Currently Utilized by China.....	80

CHAPTER 5. THE POLAR SILK ROAD AND ITS UTILIZATION BY CHINA

5.1. The Arctic White Paper: An Overview of China’s Arctic Policy.....88

5.2. China’s Self-Proclaimed Arctic State Status.....92

5.3. Belt and Road Initiative.....96

**5.4. Assessing the Impact of the Polar Silk Road on the Economic Security
of China.....99**

• CONCLUSION.....107

• REFERENCES.....110

• APPENDIX – I: Arctic White Paper.....126

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my advisor, Dr. Karadag, for his invaluable guidance, support, and patience throughout the entire process of writing this thesis. Dr. Karadag's expertise, insights, and constructive feedback were crucial in shaping this work and improving its quality.

I would also like to acknowledge the support of my family and friends, who provided me with unwavering emotional support and encouragement throughout this challenging but rewarding journey. Their love, patience, and understanding made all the difference in helping me reach this significant milestone.

ÖZET

Ocak 2018’de Çin Halk Cumhuriyeti (bundan sonra “Çin” olarak anılacaktır) Devlet Konseyi Enformasyon Ofisi “Çin’in Arktik Politikası” başlıklı bir resmi rapor yayınladı (Bkz. Ek 1). Raporunda kendisini resmi olarak “Arktik Yakını Devlet” olarak ilan eden Çin, Kuzey Kutbu stratejilerini paylaşmaktadır. Rapor, Çin’in Kuşak Yol Projesi kapsamında Asya ile Avrupa arasındaki nakliye süresini ve maliyetini azaltacak olan “Kutup İpek Yolu” konseptini tanıtıyor. Ekonomisi büyük ölçüde uluslararası ticarete dayanan Çin, Kutup İpek Yolu sayesinde hem daha hızlı ve güvenilir, hem de büyük ölçüde Batı’nın kontrolünde olmayan bir uluslararası ticaret yoluna sahip olmayı hedeflemektedir. Kutup İpek Yolu halihazırda kullanılmakta olan Güney Çin Denizi, Malakka Boğazı ve Süveyş Kanalı gibi trafiğin yoğun olduğu ve gerek siyasi açıdan gerekse güvenlik açısından ciddi aksaklıkların olabildiği istikrarsız nakliye yollarına nazaran iyi bir alternatif olarak görülmektedir. Bununla beraber rapora göre Çin, Kutup İpek Yolu’nu sadece uluslararası ticaret yolu olarak kullanmakla kalmayıp, Kuzey Kutbu bölgesinde bilimsel araştırma yapmayı, doğal kaynakları keşfetmeyi ve bölgede kontrol sahibi olmayı amaçladığı da belirtilmektedir. Bu tez, Kutup İpek Yolu’ndan yararlanmanın Çin’in ekonomik güvenliği üzerinde göstereceği etkileri incelemektedir. Daha kısa bir ticaret yolunun elbette ekonomik güvenlik üzerinde olumlu etkileri olacağı beklenir. Öte yandan Çin kutup ülkesi olmayıp Arktik Konseyi üyesi de değildir. Dolayısıyla doğal kaynaklarla dolu Kuzey Kutbu’nda keşif yapması bölgede hak sahibi olan Arktik Konseyi üyesi ülkelerde gerilime neden olacaktır. Ayrıca Kutup İpek Yolu’nun aktif olarak kullanılması ile Çin ekonomisinin daha hızlı büyüyerek ABD ekonomisini yakalama ve geçme olasılığı da artacaktır. Bu nedenlerle Kutup İpek Yolu Çin’in ekonomik güvenliğini geliştirecek ve düşük maliyetlerle küresel ekonomiye de katkıda bulunacak alternatif bir uluslararası ticaret yolu olabileceği gibi; ABD, Çin ve Rusya gibi süper güçlerin karşı karşıya gelebileceği bir çatışma alanına da dönüşebilecek potansiyele sahiptir. Bu tezde sözkonusu olasılıklar Kopenhag Ekolü perspektifinden ele alınarak incelenip Kutup İpek Yolu’nun Çin’in ekonomik güvenliği üzerindeki olası etkileri değerlendirilmektedir.

Anahtar Sözcükler: Kutup İpek Yolu, Ekonomik Güvenlik, Kopenhag Ekolü, Arktik.

ABSTRACT

In January 2018, People's Republic of China (hereinafter referred to as "China") State Council Information Office released a White Paper titled, "China's Arctic Policy" (See Appendix 1). In the Arctic White Paper, China formally announced itself as a 'Near-Arctic State' and explained its aims in the Arctic. The Arctic White Paper introduced the 'Polar Silk Road' concept, which refers to China's ambitious plans to develop shipping lanes through the Arctic that would reduce shipping times and costs for trade between Asia and Europe. This would likely positively affect China's economic security by providing a faster and more reliable trade route, potentially reducing their dependence on the more congested and politically unstable shipping lanes through the South China Sea and the Suez Canal. The Arctic White Paper also indicated that China is not only aiming to leverage the shorter passage to Europe by the Polar Silk Road but also to do scientific research, explore natural resources, and implement governance in the Arctic region. This thesis concludes that although leveraging the Polar Silk Road will have significant positive effects on Chinese economic security; it will also present some serious risks such as governance issues in the Arctic, and international power conflict which may lead to political backlash and economic sanctions. Each of the advantages and risks has been examined and evaluated from the Copenhagen School perspective with an aim to predict how leveraging the 'Polar Silk Road' will impact the economic security of China.

Keywords: Polar Silk Road, Economic Security, Copenhagen School, Arctic.

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF FIGURES

Figure 1.1. Russian Tanker Christophe de Margerie.....	1
Figure 1.2. Shipping Routes Map.....	3
Figure 2.1. Map of the Arctic States.....	17
Figure 3.1. Global Warming Chart of NASA/Caltech Goddard Institute for Space Studies.....	62
Figure 3.2. UCLA Graph of Melting Ice.....	64
Figure 4.1. Economic Security Components.....	72
Figure 4.2. Map of the Main Shipping Routes Currently Utilized by China.....	80
Figure 4.3. Strait of Malacca Map From the U.S. Department of Defense.....	84
Figure 5.1. Map of the Polar Silk Road and Other BRI Routes.....	87
Figure 5.2. World Bank Chart of GDP per capita for China.....	90
Figure 5.3. Comparison of the Arctic distances between China and France.....	93
Figure 5.4. Traditional Shipping Route vs. Polar Silk Road Map.....	104

LIST OF ABBREVIATIONS

ACIA	Arctic Climate Impact Assessment
AIA	Aleut International Association
APIA	Aleutian Pribilof Islands Association
ANSARKO	Association of the Indigenous peoples of the North of the Aleut District of the Kamchatka Region of the Russian Federation
AAC	Arctic Athabaskan Council
ANWR	Arctic National Wildlife Refuge
ACAP	Arctic Contaminants Action Program
AEPS	Arctic Environmental Protection Strategy
AMAP	Arctic Monitoring and Assessment Programme
AINA	Arctic Institute of North America
ACOPS	Advisory Committee on Protection of the Sea
AINA	Arctic Institute of North America
AWRH	Association of World Reindeer Herders
BRI	Belt and Road Initiative
COSCO	China Ocean Shipping Company
CAFF	Conservation of Arctic Flora and Fauna
CATG	Council of Athabaskan Tribal Governments
CCU	Circumpolar Conservation Union
CNPC	Sovcomflot Group and China National Petroleum Company
EPPR	Emergency Prevention, Preparedness, and Response
GEF	Global Environment Facility
GDP	Gross Domestic Product
GCI	Gwich'in Council International
GTC	Gwich'in Tribal Council
IASC	International Arctic Science Committee
IASSA	International Arctic Social Sciences Association
IUCH	International Union for Circumpolar Health

IWGIA	International Work Group for Indigenous Affairs
ICS	International Circumpolar Surveillance
ICC	Inuit Circumpolar Council
IPO	Indigenous Peoples' Organization
ICES	International Council for the Exploration of the Sea
IFRC	International Federation of Red Cross & Red Crescent Societies
IMO	International Maritime Organization
IUCN	International Union for the Conservation of Nature
IPCC	Intergovernmental Panel on Climate Change
NATO	North Atlantic Treaty Organization
NCM	Nordic Council of Ministers
NEFCO	Nordic Environment Finance Corporation
NAMMCO	North Atlantic Marine Mammal Commission
NF	Northern Forum
NASA	United States National Aeronautics and Space Administration
NWP	Northwest Passage
NSR	The Northern Sea Route
NGO	Non-Governmental Organization
NDRC	National Development and Reform Commission
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
POP	Persistent Organic Pollutants
PAME	Protection of the Arctic Marine Environment
PRIC	Polar Research Institute of China
PCB	Polychlorinated Biphenyls
RAIPON	Russian Association of Indigenous Peoples of the North
SDWG	Sustainable Development Working Group

SCPAR Region	Standing Committee of the Parliamentarians of the Arctic
SOA	State Oceanic Administration
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UArctic	University of the Arctic
UNCLOS	United Nations Convention on the Law of the Sea
VGFN	Vuntut Gwitchin First Nation
WWF	World Wide Fund for Nature, Arctic Programme
WMO	World Meteorological Organization
WNC	West Nordic Council
WTO	World Trade Organization

THIS PAGE INTENTIONALLY LEFT BLANK

1. INTRODUCTION

“How the future of China will be determined by what happens in the Arctic in the coming decades, and what happens in the Arctic will be determined by the future of China.”

-Former Icelandic President Ólafur Ragnar Grimssón,
Opening Speech at the Arctic Circle China Forum,
Shanghai, China, 2019.¹

In 2017, a Russian tanker named Christophe de Margerie became the first vessel to complete its Arctic passage without using icebreakers.² This passage through the Arctic Ocean has been possible due to climate change reducing the amount of ice and providing a new shipping route that is considerably more feasible as it will shorten travel time by 30 percent compared to the traditional southern route through the Suez Canal.³

Figure 1.1. Russian Tanker Christophe de Margerie



¹ Ólafur Ragnar Grímsson, “Full Opening Speech at the Arctic Circle China Forum”, *YouTube video*. Accessed November 21, 2022. <https://youtu.be/BByASgDkb7c>.

² “Russia's Icebreaker Tanker, 'Christophe de Margerie,' Makes Arctic History.” *The New York Times*, August 25, 2017. <https://www.nytimes.com/2017/08/25/world/europe/russia-tanker-christophe-de-margerie.html>.

³ Karadag Haluk. “Enhancing Economic Security of China Thorough the Strategic Cooperation in the Arctic: The Polar Silk Road Initiative”, *Doğu Asya Araştırmaları Dergisi Volume 4/8 (2021):16*.

In 2018 a commercial ship named Tian'en belonged to China Ocean Shipping Company (COSCO) sailed the same route traveling to Rotterdam from Shanghai. Tian'en was able to cut several thousand miles off (approximately 30 percent shorter compared to the Suez Canal) the journey reaching its target ahead of schedule also due to considerably less traffic.⁴ Thus emerged the "Polar Silk Road", the shortest and the fastest shipping route from the East China Sea to Europe provided by global warming. Although it's not a fully developed trade route yet, challenges like harsh weather and under-developed infrastructure still make it risky and not a preferable choice to most ships, the Polar Silk Road has the capacity to substantially accelerate Chinese economic growth as it significantly shortens the distance between Asia and Europe for shipping, reducing transit time and costs. Furthermore, from the Chinese perspective, the Polar Silk Road is not only a shorter and therefore more feasible route for transportation but also a safer and more controllable alternative compared to the traditional shipping route currently being used. China is already the second-largest economy of the world⁵ and therefore an economic superpower. By leveraging the Polar Silk Road, China may become the world's largest economy overtaking the United States.

⁴ "Arctic Ice Route is China's New Maritime Silk Road to Europe." Asia Times, September 3, 2018.

⁵ International Monetary Fund. "World Economic Outlook Database." Accessed November 22, 2022. <https://www.imf.org/en/Publications/WEO/weo-database/2022/>.

Figure 1.2. Shipping Routes Map

China outlines 'Polar Silk Road'



Source: FT research
© FT

As the Chinese economy is based mainly on international trade, keeping the shipping routes functioning safely and efficiently is a matter of economic security for the Republic of China.

It shall be seen on the map that the traditional shipping route is much longer, and there are considerably more states to pass by which means more procedures to follow for each and every ship. There is incomparably more traffic, particularly in the Strait of Malacca and the Suez Canal, and other dangers such as piracy. Moreover, China needs an alternative shipping route in case one of these passages gets blocked purposely or by accident. In March 2021, the Suez

Canal was blocked by a container ship named Ever Given, and in less than a week a queue of at least 369 emerged, and this prevented approximately 10 billion US Dollars worth of trade.⁶

The Strait of Malacca is one of the busiest and most important shipping lanes in the world, connecting the Indian Ocean to the South China Sea. It is a narrow water passage separating the Malay Peninsula (West Malaysia and Southern Thailand) from the Indonesian island of Sumatra. It links Asia with Europe, Africa, and America, which makes the Strait of Malacca arguably the most critical global gateway for international trade, especially for oil and LNG. More than 80 percent of all world trade passes through this Strait. Thus, it is certainly one of the most strategic locations in the world. Yet, it is quite a vulnerable passage as during periods of low water levels the strait is as narrow as 20 miles wide at some points.⁷

Hence, the United States has already deployed advanced weaponry and other military equipment in Singapore around the Strait of Malacca to prevent China from shipping and even more importantly from reaching crucial energy resources in case of conflict.⁸ In other words, it is a matter of survival for the Republic of China to establish an alternative shipping route for importing energy and raw materials as well as exporting goods.

Even though the United States stationed cutting-edge military hardware near the Strait of Malacca, no attempt has yet been made to block the strait. The Strait of Malacca is an international waterway and is considered to be part of the

⁶ “Container Ship Facts: Egypt’s Suez Canal Blocked by Massive Boat.” Newsround, BBC, March 25, 2021.

⁷ U.S. Department of Energy Energy Information Administration, “Strait of Malacca - World Oil Transit Chokepoints.” Archived November 22, 2014, at the Wayback Machine.

⁸ Israel Defense. “The Strait of Malacca: China between Singapore and the United States” Accessed November 23, 2022. <https://www.israeldefense.co.il/en/node/46689>.

global commons, meaning it is open to ships from all nations and cannot be blocked or closed off by any one country at least legitimately.

However, in times of war or military conflict, the US Navy may be called upon to protect US interests and secure sea lanes of transportation, including the Strait of Malacca. In such a scenario, the US Navy could again deploy naval assets, such as battleships and aircraft, to the region in order to monitor and potentially interdict ships. On the other hand, the United States has economic and security interests in the region, and therefore a blockade would mean economic and social issues for the United States itself. A more rational way would be to have bilateral or multilateral discussions with littoral states in the region to secure their trade and interest in this vital waterway rather than to freeze all economic activity. Even so, the probability of the interdiction of Chinese ships from the Strait of Malacca would massively damage the Chinese economy, and therefore it is an enormous risk to take for China. Thus, having an alternative shipping route is the best solution for China to avoid such a scenario.

The Belt and Road Initiative (hereinafter referred to as “BRI”) was first officially announced in 2013. It is the ultimate alternative to the traditional shipping routes as a global trade development strategy of China. The BRI is a vast infrastructure development project aiming to connect countries in Asia, Europe, the Middle East, Africa, and Oceania through the construction of a vast network of railways, roads, ports, and other infrastructure. The initiative is comprised of two main components: The “Silk Road Economic Belt”, which focuses on land-based trade and transportation connections, and the “Maritime Silk Road” containing the aforementioned “Polar Silk Road” which focuses on sea-based trade and transportation connections. The BRI has been met with mixed reactions from the international community, with some countries and organizations seeing it as an opportunity for economic development, while others have expressed concerns about the initiative’s potential geopolitical

implications, the debt risks for participating countries, and lack of transparency in the project.⁹

China is taking its BRI strategies forward, aiming to have more influence in the Arctic. Arguably the best source to study China's policy towards the Arctic is the Arctic White Paper the Chinese State Council Information Office released in January 2018 titled, China's Arctic Policy (See Appendix 1).¹⁰ Even though China is not considered an Arctic state by the West, as its coasts do not border the Arctic Sea; China declared itself as a "Near-Arctic State" in the Arctic White Paper. There are mainly four objectives stated in the Arctic White Paper, which shall be assessed thoroughly in this study:

1. Scientific research and environmental protection (particularly the effects of global warming on the region) will be examined.
2. Exploration of oil, gas, mineral, and other non-living natural resources.
3. Shipping routes, and resource utilization for international trade and tourism.
4. Arctic governance.

In this thesis, we shall examine and evaluate the impact of the Polar Silk Road on China's economic security by adopting the Copenhagen School perspective.

1.1. Research Question and Overall Structure

The main research aim of this thesis is to evaluate the impacts of the Polar Silk Road on the economic security of China. In the aforementioned Arctic White Paper, it is clear that the Chinese Arctic Policy is based on leveraging

⁹ Council on Foreign Relations. "China's Massive Belt and Road Initiative." Council on Foreign Relations, 2021, <https://www.cfr.org/backgrounders/chinas-massive-belt-and-road-initiative>.

¹⁰ "Arctic White Paper of China." Last modified January 26, 2018. https://english.www.gov.cn/archive/whitepaper/2018/01/26/content_281476026660336.htm.

alternative trade routes, particularly the Polar Silk Road. It will provide more efficient transportation of goods by lowering the shipping duration, costs, and energy consumption; as well as it is more controllable and safer compared to the traditional shipping routes.

This thesis aims to bring more focus to the area as well as to provide more analytic information and an objective evaluation that is neither defending nor attacking the Polar Silk Road initiative of China. The first hypothesis is that Polar Silk Road will have a considerable positive impact on China's economic security. The hypothesis centers on the notion that China's Arctic strategy is primarily driven by a pragmatic and opportunistic pursuit of economic gains. However, the research question cannot be simply answered by claiming the Polar Silk Road will only have positive effects on Chinese economic security due to the emerging risk of disputes in the Arctic and in the international arena with the application of this initiative.

A second hypothesis emerges to explain the consistency of Chinese aims in the Polar region. Evidently, China is not only seeking to reduce shipping costs, but they also have geopolitical aims such as exploring and controlling natural resources and new shipping routes while seeking Arctic governance. The initiative will bring China into the sphere of superpowers in the Polar region, Russia and the United States. The risk of disputes with these superpowers might be too much of a price to pay to reduce the cost of shipping. On the other hand, it has also been revealed in the Arctic White Paper that reducing the shipping costs by utilizing the Polar Silk Road is not the only goal of China in the polar region. Their secondary aim is to explore natural resources. Considering the rich natural resources of the Arctic, this action will with no doubt increase the risk of international dispute or even hot conflict. "The United States Geological Survey estimates that 22 percent of the world's oil and natural gas could be

located beneath the Arctic.”¹¹ Such rich and practically untouched natural resources seem to be extremely profitable. Thus, the the Arctic being full of underground treasures consists another reason why China aims to utilize the Polar Silk Road. Then again, claiming the resources over and under the Arctic will certainly cause a significant amount of backlash from the Arctic States, particularly the United States. China is geographically located 7426 kilometers away from the Arctic. In other words, China is not any closer to the Arctic than France or Germany is. However, in the aforementioned Arctic White Paper, China has been declared to be a “Near-Arctic State”. Furthermore, in 2014 President of China Xi Jinping revealed in his speech that China itself aims to become a “polar great power”.¹² In the 2019 Arctic Council meeting, the Secretary of the United States Michael Pompeo remarked that “Both Russia and China have shown aggressive policies in the Arctic deserve the special attention of this Council”.¹³ Although, since then there is only a few academic articles and almost no books to review the Arctic Policy of China, particularly the Polar Silk Road.

Overall, this thesis aims to evaluate the possible impacts of the Polar Silk Road on the economic security of China. The potential advantages and disadvantages of utilizing the Polar Silk Road will be thoroughly assessed and analyzed in the context of Chinese economic security.

1.2. Theoretical and Conceptional Framework

The main concept we focus on in this thesis is economic security as it is a matter of survival for a state. Without economic security being sustained, all other aspects of any state are at risk. This concept is concerned with ensuring the stability and sustainability of

¹¹ US Congressional Hearing. “Strategic Importance of the Arctic in US Policy.” 2018. Page 15.

¹² Brady, Anne-Marie. China as a Polar Great Power. Cambridge: Cambridge University Press, 2017.

¹³ Michael R. “Looking North: Sharpening America's Arctic Focus.” May 6, 2019.

national and global economic systems. Political stability, social welfare, and international peace cannot be sustained without economic security. It is a complicated and multifaceted subject that incorporates a number of variables, including financial stability, trade, and economic growth.

Economic security is essential in promoting growth and development as only a stable and secure economic system provides the necessary conditions for global investment. In order to maintain the economic stability of a country or an international institution, it is necessary to ensure economic growth, job creation, wealth distribution, access to resources, and defense against external and internal threats. It is a broad concept that covers a range of issues, including environmental sustainability, trade, investment, energy security, food security, and economic development. Without economic security, it is close to impossible to reduce poverty and inequality. Economic security is therefore essential for improving national economic well-being and is a key element of global growth.

Economic security has a significant impact on global politics as well, and therefore it is a fundamental component of international relations. Only economically stable nations are able to advance their national goals and uphold political stability. Political stability requires economic security since it lowers the likelihood of social unrest and violence. As a result, economic security is an essential part of both national and international security.

Our world is more interconnected and economically interdependent than ever before. Thus, economic security has become a more critical global issue and it is having a greater impact on all countries than it has ever been.

This thesis focuses on the economic security of China utilizing the Polar Silk Road, and how it affects global politics and the welfare of other nations. We have chosen the Copenhagen School theory as a theoretical framework to analyze the economic security of China. “The Copenhagen School theory in international relations places particular emphasis on the non-military aspects of security, representing a shift away from traditional

security studies.”¹⁴ Economic security is one of the main aspects the school focuses on. The Copenhagen School argues that states must be aware of their economic interests when engaging in international relations, as these interests are often more important than military or political considerations.

In the context of Chinese economic security, the Copenhagen School framework can be used to examine how non-military threats, such as economic interdependence and globalization, impact China’s ability to protect its economic security. This approach has been used to analyze a variety of topics, including trade agreements, foreign policy decisions, and global governance structures. Therefore, focusing on China’s economic security, the application of the Copenhagen School theory provides us the opportunity to evaluate the subject from a broader vision. Its innovative methodology combines traditional approaches to security studies with a more critical approach to understanding international relations. This approach emphasizes the importance of understanding how states interact with each other, as well as how non-state actors influence international politics. It also stresses the importance of understanding how various levels of analysis interact, such as domestic politics, regional dynamics, and global trends.

The Copenhagen School argues that security is not an objective condition but rather a subjective one and that it can be constructed through discourse. This means that security is not something that exists independently from human action, but rather something that is created through language and communication. The school also emphasizes the importance of understanding how different actors interpret security differently and how this affects their behavior. This theory posits that economic interdependence can lead to greater international security, as the Polar Silk Road initiative increasing economic interdependence between China and other states, could potentially contribute to greater security in the region and even in the globe. From a Realist approach, achieving such a result would have been considered unattainable in the past. However, it is now widely

¹⁴ Collins, Alan, ed. *Contemporary Security Studies*. 4th ed. Oxford, United Kingdom: Oxford University Press, 2016.

understood, particularly in the realm of international trade, that the actors involved can reach the ‘Nash Equilibrium’, which presents a mutually beneficial outcome and is, without a doubt, the optimal solution. One aspect of the study shall be to examine the degree of economic interdependence between China and other states along the Polar Silk Road, such as Russia, Canada, and Iceland, and how this interdependence may affect the security dynamics in the region. But it is not limited to those states only as the outcome of utilizing the Polar Silk Road will also affect other countries, particularly the European states. The cost of export and import between Europe and China will significantly be reduced, and this will not only improve the standards of living in those countries, but it will also strengthen the economic interdependence between the East and the West. This can very well lead to greater economic cooperation and joint development projects, such as infrastructure and natural resource extraction.

Conflict is always a possibility as well as peace. The Copenhagen School theory serves perfectly well to also examine the possible challenges and obstacles facing the implementation of the Polar Silk Road, such as geopolitical conflicts, territorial disputes, and environmental concerns. Leveraging the Polar Silk Road will fasten the growth of the Chinese economy, which may also turn into a risk as this could be considered a threat, particularly by the United States.

Overall, the Copenhagen School theory provides a holistic and comprehensive approach to analyze how the development of the Polar Silk Road may affect complex and interrelated issues that shape the economic security dynamics of China.

1.3. Historical Background of the Arctic

The Arctic is a vast and extremely cold region located at the northern part of the globe, also referred to as the polar region. It consists of the Arctic Ocean, adjacent seas, and these countries which we call the Arctic States: Russian Federation, Canada, Denmark (Greenland and Faroe Islands), Sweden, Iceland, Finland, Norway, and the United States.

It has been shaped by a combination of geological processes, climate change, and human activity, with each era leaving its mark on the region for thousands of years.¹⁵

The Arctic is known for its harsh and challenging environment, with strong winds, heavy snowfall, and long periods of darkness during the winter months. It is one of the coldest regions on Earth. In some areas of the Arctic, temperatures can plummet to below -40 degrees Celsius in some areas, particularly during winter months. The main form of precipitation is snow, which can be whipped up into a constant flurry by strong winds. Despite being the second coldest area on the planet (after Antarctica), the Arctic is experiencing increasingly noticeable effects of global warming with each passing year. The Arctic sea ice is shrinking, the Greenland ice sheet is diminishing, and temperatures are rising at a considerable speed.¹⁶

To explore the historical background of the Arctic we shall begin with its earliest inhabitants, the indigenous peoples who have lived in the polar region for thousands of years: Inuit, Yupik, Aleut, Sami, and others. Each of these groups of indigenous peoples had its unique culture, language, belief systems, and way of life. They developed sophisticated technologies to survive the harsh conditions of the Arctic environment. They were the only people in the Arctic until the 16th century, as the polar region was largely unknown. In the 16th century, European explorers started to search for a Northwest Passage to Asia and discovered the region. English explorer Martin Frobisher made the first recorded attempt to find the passage in 1576, followed by John Davis, and William Baffin, but all of the attempts resulted in failure. The first successful European exploration of the Arctic came in the early 17th century by a Dutch explorer named Willem Barents, who discovered the largest island in the Svalbard archipelago named Spitsbergen. The Dutch

¹⁵ National Geographic Education. "Arctic." National Geographic Education, 2021, <https://education.nationalgeographic.org/resource/arctic/>.

¹⁶ Hansen, Jim. "The Planet in Peril - Part I." *Yale Center for the Study of Globalization*, October 19, 2006. Accessed October 15, 2022. <http://web.archive.org/web/20091015102057/http://www.ycsg.yale.edu:80/papers/HansenWeb.pdf>.

soon established whaling stations on the island, and other European nations followed, leading to the mass exploitation of the region's rich resources.¹⁷

In the 18th century, the Russian Empire began to expand into the Arctic region with the establishment of trading posts and settlements along the coast of Siberia. The Russian presence kept on spreading, leading to conflicts with Europeans including the Danish and the British. During the USSR era, the Asian side of the Arctic region has been explored, and the Soviet and international polar crews established scientific research settlements in the region starting from 1937 to our day.¹⁸

One of the most strategic locations the Russian explorers began to establish settlements was Alaska. In the 19th century, the Arctic became a center of interest for natural resource exploitation. The discovery of gold in the Yukon territory in 1896 led to a gold rush in the region, with thousands of prospectors from various nations flocking to the Yukon region and Alaska. The development of fishing, whaling and fur trade as well as other industries also led to the utilization of the resources in the region. Although the Russians missed the importance of the region, and their settlements were used primarily for the fur trade. The sale of Alaska to the United States by the Russian Empire occurred in 1867 at a price of \$7.2 million, in a deal called the Alaska Purchase. Following the transaction, Alaska was transferred to the United States through a treaty which was later ratified by the US Senate. At the time, the purchase was considered a waste of money by some, but over time, Alaska proved to be a valuable acquisition for the US, with its vast natural resources and strategic location. The purchase not only added 586,412 sq mi (1,518,800 km²) of new territory to the United States for the cost of \$7.2 million but also added a great amount of natural resources including oil.¹⁹

¹⁷ Small, Margaret. "From Thought to Action: Gilbert, Davis, and Dee's Theories behind the Search for the Northwest Passage." *The Sixteenth Century Journal* 44, no. 4 (2013): 1041-1058. Accessed November 1, 2022. doi:10.2307/24246301.

¹⁸ "North Pole Drifting Stations (1930s-1980s)." Woods Hole Oceanographic Institution. Accessed December 24, 2022. <http://www.whoi.edu/northpole/>.

¹⁹ "Treaty with Russia for the Purchase of Alaska." Primary Documents in American History. The Library of Congress, April 25, 2017. Accessed November 29, 2022. <https://www.loc.gov/rr/program/bib/ourdocs/Alaska.html>.

In the 20th century, the Arctic has gone through a period of swift transformations with the growth of industrialization, climate change, and geo-political tensions reshaping the region. During World War II, after the Japanese bombed the Aleutian Islands, Alaska became a vital strategic location for military operations. Therefore, the United States and its allies started establishing military bases in Alaska and some other parts of the polar region. With the war, significant changes such as the construction of military bases and rapid growth of population took place in the region. In 1959, Alaska was granted statehood, making it the 49th state of the United States. Statehood brought new opportunities and challenges for Alaska, with the development of new industries as well as the expansion of the state's infrastructure. The Cold War between the United States and the Soviet Union also significantly impacted the Arctic. The region became a major front in the arms race, with both nations building military installations and conducting surveillance operations in the region. The Soviet Union also began establishing settlements in the Arctic, including the city of Norilsk, which later on become a major center of industry and mining.

In the 21st century, the Arctic remains a vital and dynamic region with growing importance in international relations. Among the rich natural resources including oil, natural gas, fish, and minerals; with the utilization of the Polar Silk Road the Arctic is even more significant and dangerously attractive to superpowers.

2. KEY ACTORS IN THE ARCTIC

“The community and interrelationship of the interests of our entire world is felt in the northern part of the globe, in the Arctic, perhaps more than anywhere else.”

-Mikhail Gorbachev, 1987

In order to gain a thorough understanding of the intricate dynamics in the Arctic region, it is essential to examine the main stakeholders operating within it. The following chapter will provide an analysis and assessment of these key actors, which encompass the Arctic states, indigenous communities, international and multinational organizations, as well as non-governmental organizations, working groups, expert groups, and observers.

2.1. Arctic Council

The Arctic Council is an intergovernmental platform aiming to promote cooperation, coordination, and interaction among the Arctic states and the indigenous peoples of the Arctic region. The criteria to be considered as an Arctic State has been defined at the Ottawa Declaration and all eight of the Arctic states are members of the Arctic Council. There are eight Arctic states with a coastline or landmass inside the Arctic Circle. These states are Canada, Denmark (through Greenland), Finland, Iceland, Norway, Russia, Sweden, and the United States (through Alaska). The Arctic Council defines itself as the following on its official website: “The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination, and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic. It was formally established in 1996.” Arctic Council decisions and statements are established via consensus of the eight Arctic States. These states have the right to exploit the reserves over and under the Arctic and are responsible for over four million people’s health and well-being located in the Arctic. In addition to the eight Arctic States,

the Arctic Council also includes six permanent participant organizations, six internationally recognized working groups, and observers from outside the Arctic. The Council meets every two years at the ministerial level to review progress and set priorities for future cooperation.²⁰

With the Arctic region undergoing a period of change, the importance of the Arctic Council has increased significantly in the present time. In May 2019 speaking to the Arctic Council, Michael Pompeo, the Secretary of State of the United States, stated: “The region has become an arena for power and for competition, and the eight Arctic states must adapt to this new future.”²¹

The Arctic Council provides its members an efficient platform to collaborate on a variety of concerns, such as climate change, Arctic science and research, resource exploration and management such as petrol and gas, shipping, and the preservation of the region’s natural heritage. Additionally, the Council offers an opportunity for Arctic Indigenous peoples to engage in the processes of decision-making.

2.2. Arctic States and Their Significance in the Polar Region

This chapter will provide a brief evaluation of the importance of the eight Arctic states, namely Canada, Denmark (via Greenland), Finland, Iceland, Norway, Russia, Sweden, and the United States (via Alaska).

²⁰ Arctic Council. “About the Arctic Council.” Accessed November 14, 2022. <https://www.arctic-council.org/en/about-us>.

²¹ Pompeo, Michael R. “Looking North: Sharpening America’s Arctic Focus,” U.S. Department of State, May 6, 2019, <https://www.state.gov/looking-north-sharpening-americas-arctic-focus/>

Figure 2.1: Map of the Arctic States



2.2.1. Canada

Canada is the second-largest country in our planet, located in North America with a territory of nearly 10 million square kilometers. Canada's territory reaches all the way from the Atlantic to the Pacific and northward in the Arctic with nearly 40 percent of its

land takes place in the polar region. Although Canada's territory in the Arctic is quite massive, less than one percent of Canadians are located there, which makes up about 150,000 people. More than half of this population is indigenous including mainly Inuit and Métis communities. Despite the fact that only a small percentage of Canadians live in the polar region, it is a very important national identity component for Canada. Similarly, despite being sparsely populated, the region boasts abundant natural resources like oil, gas, minerals, and seafood. As the impacts of global warming make the Arctic more accessible, Canada's interest in the area is growing stronger.²²

Canada's Arctic strategy is centered on three major goals: Protecting the country's security and sovereignty, fostering social and economic advancement, and maintaining the delicate ecosystem of the region. The Canadian government has created a comprehensive strategy that combines collaboration with indigenous peoples, other Arctic states, and international organizations in order to accomplish these aims. According to Heidi Kutz, Senior Arctic Officer of the Arctic Council, Canada has been a successful leader in Arctic governance, playing a key role in the Arctic Council as well as other international forums. Canada served as the inaugural Chair of the Arctic Council from 1996 to 1998, and subsequently held the position again from 2013 to 2015. During these periods, Canada has been successful in providing an opportunity to shape the council's agenda and priorities. Another key initiative of Canada in the Arctic has been its 'Northern Strategy'. This initiative was launched in 2009, aiming to strengthen Canada's presence in the polar region and promote economic growth and social development. The strategy entailed funding for infrastructure projects like airports and harbors, as well as research and development efforts, such as programs focused on observing and analyzing the effects of climate change on the Arctic ecosystem.²³

On the other hand, Canada's Arctic strategies have not been fully successful so far. Particularly in the climate change issue, there has not been any significant success in for

²² International Monetary Fund, "World Economic Outlook Database" (April 2023), accessed December 11, 2022. <https://www.imf.org/en/Publications/WEO/weo-database/2023/April>.

²³ Arctic Council, "Canada," accessed November 26, 2022, <https://arctic-council.org/about/states/canada/>.

instance stopping the ice from melting rapidly. An additional concern has been the significant socioeconomic disparity, also known as the social and economic inequality, between the indigenous communities of the Arctic and other Canadians. While the effects of global warming, such as the melting of the ice altering the biology of the ocean, the traditional way of life of the indigenous peoples have gotten more and more difficult to sustain. Canada's attempts to lower carbon emissions and such cannot be overlooked, whereas, it takes not just a few countries but the whole world's cooperation to tackle a giant issue such as climate change.²⁴

In conclusion, Canada is a critical actor in the Arctic that plays a significant role in managing and developing the polar region. Whereas, the challenges posed by global warming and socio-economic inequality cannot be overcome by any one country. They require continued cooperation and action from international society, not only the Canadian government and its partners in the region. The Arctic has enormous richness, and by working together with indigenous peoples, and taking good care of the environment, it is possible to achieve long-term sustainability and prosperity in the polar region.

2.2.2. The Kingdom of Denmark

The Kingdom of Denmark is made up of three components, namely Denmark, Greenland, and the Faroe Islands. Greenland's strategic location as a coastal state in the Arctic implies specific obligations and rights in the region. At present, both Greenland and the Faroe Islands enjoy extensive self-rule. Since 1948 and 1979, respectively, the Faroe Islands and Greenland have been granted home rule, and these arrangements have been continually modernized. Although each of the three components of the Realm has a unique identity, they also share a common set of values and interests and take responsibility for

²⁴ United Nations Development Programme, "Human Development Report 2021/2022" (PDF) (September 8, 2022), accessed September 28, 2022. <https://hdr.undp.org/en/content/human-development-report-2021-2022>.

the Arctic region. The Kingdom of Denmark speaks with a unified voice in the Arctic Council, reflecting the equal partnership between the three components.²⁵

Denmark's presence in the Arctic begins in the 10th century with the colonization of Greenland. Since then, Denmark has had a strong presence in the polar region. Greenland is the largest island in the world and it is located in the polar region, which makes the Kingdom of Denmark a major player in the Arctic. In the 21st century, the Kingdom of Denmark focuses on mainly three aims in the Arctic: Economic growth, social welfare, and environmental protection.²⁶

In terms of economic security, Denmark and Greenland have been cooperating in developing Greenland's vast natural resources which include precious rare earth metals, uranium, and petrol. The Faroe Islands also contribute to the economic development with its fishing industry as they have arguably the richest fishing grounds on earth.²⁷

According to Jon Rahbek-Clemmensen, Associate Professor at Royal Danish Defense College, Denmark has no economic gain from Greenland. In his article "Denmark in the Arctic: Bowing to three masters", he argues that all those natural resources are not viable till at least 2030, and the wealth gained from them will be considerably less in comparison to the expenditure made by Denmark for the welfare of Greenland.²⁸

The Kingdom of Denmark places a high premium on social welfare in the Arctic. The Faroe Islands' and Greenland's indigenous populations are a major focus of Danish initiatives in the area.

²⁵ "Denmark." CIA World Factbook. Last modified October 30, 2022. <https://www.cia.gov/the-world-factbook/countries/denmark/>.

²⁶ "Denmark Country Profile." BBC News, 2 December 2022. <https://www.bbc.com/news/world-europe-17955470>.

²⁷ Nielsen, Jørgen S. "Denmark's Path to Modernity: Rural Society and Urban Development." *Scandinavian Journal of History*, vol. 37, no. 3, 2012, pp. 322-337.

²⁸ Rahbek-Clemmensen, Jon. "Denmark in the Arctic: Bowing to Three Masters." *Atlantisch Perspectief*, vol. 35, no. 3, 2011, pp. 9-14. Accessed December 19, 2022. JSTOR, <https://www.jstor.org/stable/48580871>.

Denmark is responsible for ensuring that the social and economic requirements of these groups are satisfied, and the nation has put policies in place to further their well-being, such as spending on infrastructure, healthcare, and education. Even so, judging by the massive land and vast resources of Greenland, Rahbek-Clemmensen's argument seems to be invalid. Moreover, with the newly opening shipping routes and increasing economic activity, Greenland is on the way to becoming one of the significant hubs of global trade. Of course, colonizing Greenland without social responsibilities as it happened during the 10th century shall be incomparably more high-yielding, yet unacceptable for countless reasons. Furthermore, it is yet impossible to claim that indigenous peoples are fully satisfied as problems like racism and socio-economic inequality still exist despite all the efforts.

When it comes to environmental protection, it is fair to say the Kingdom of Denmark is doing its part. Then again, similarly to Canada's situation, it takes more than one country to tackle a gigantic issue such as climate change. As we will cover in the following chapters, global warming is having significant effects on the Arctic region, and the Kingdom of Denmark has been addressing this issue in the Arctic Council as well as its domestic and international politics repeatedly. In 2020, Denmark released a new Arctic policy that places an emphasis on international cooperation, sustainable development, and environmental conservation. Infrastructural investments and research and development projects targeted at observing and researching climate change and its effects on the Arctic environment and communities are part of the strategy.

The Kingdom of Denmark served as Chairman of the Arctic Council from 2009 to 2011. This period has been quite significant, particularly for Greenland and the Faroe Islands. In 2011, a permanent secretariat for the Arctic Council was established in Tromsø, Norway. A task force was established to create a tool to avert and handle probable oil spills that may occur in the Arctic, and the Nuuk Declaration was adopted at the Ministerial

Meeting in Nuuk, which outlined the main role and requirements for admission of new observers.²⁹

In conclusion, The Kingdom of Denmark, being a major player in the Arctic, has a substantial influence on how the area will develop in the future. Denmark has been an active player in international efforts to address climate change and promote sustainable development in the region. As a member of the Arctic Council, Denmark always served as a forum for Arctic states to discuss matters of shared interest. The Arctic will need to be protected from exploitation and developed sustainably for many generations to come, thus the Kingdom's continuous dedication to these causes is essential.

2.2.3. Finland

Finland is a major actor in the Arctic in terms of location, politics, and economics. Located in Northern Europe, Finland has a long coastline on the Gulf of Bothnia, an arm of the Baltic Sea, and shares an 833-mile border with Russia. Finland actively supports sustainable development in the polar region. The proactive stance Finland takes on Arctic policy is exemplary in the context of environmental awareness. Finland has actively contributed to the development of the Arctic Council's policies and is dedicated to fostering collaboration among the Arctic nations.³⁰

In the Arctic Council's official webpage, it says that "While Finland's Strategy for the Arctic Region 2013 defines the entire country as Arctic, nearly one-third of the country's land mass lies above the Arctic Circle in the province of Lapland. Despite its vast size, Lapland is sparsely populated with just under 180,000 inhabitants, while Finland's total population exceeds 5,500,000."³¹ This is mainly because Finland, just like

²⁹ Arctic Council. "Denmark." Accessed December 26, 2022. <https://arctic-council.org/about/states/denmark/>.

³⁰ "Finland Country Profile." BBC News, 2 December 2022, <https://www.bbc.com/news/world-europe-17211464>.

³¹ Arctic Council. "Finland." Accessed December 26, 2022. <https://arctic-council.org/about/states/finland/>.

all other Arctic and some Non-Arctic countries, is aiming to utilize the rich natural resources of the region as well as the newly opening shipping routes. The Arctic may not have meant much in the past as it did not offer all the riches it does in the 21st century.

Finland's Arctic strategy places a high priority on sustainable development and ethical resource utilization. To guarantee that any commercial development in the area does not endanger the delicate Arctic ecosystem, the nation has strong environmental restrictions in place. Moreover, Finland is actively pushing the utilization of renewable energy sources in the North, particularly wind and bioenergy. Finland's expertise in Arctic technology is one of their most important contributions to the region. Icebreakers, or boats made especially for sailing through ice-covered waters, have been created and manufactured in Finland for a very long time. Finnish businesses design and build offshore structures, such as oil rigs, that can resist harsh Arctic conditions, making the nation a global leader in arctic engineering. Finland's Arctic policy also highlights the value of the regional scientific study. Several research centers have been built in the nation to study the Arctic ecology, climate change, and the impacts of human activity in the area. Finland has made significant educational investments in the Arctic, and several universities now provide specific programs and courses in Arctic studies.³²

In conclusion, Finland is one of the major players in the Arctic due to its strategic location, expertise in Arctic technologies, and dedication to scientific study and sustainable development. Finland's proactive stance toward Arctic policy will be essential in determining the future of the region as it still remains impacted by climate change.

2.2.4. Iceland

Iceland is an Arctic state with a population of over 365,000 people. It is located in the North Atlantic Ocean, between Norway and Greenland. In fact, Iceland is

³² Helle, Knut. *The Cambridge History of Scandinavia, Vol. 1: Prehistory to 1520*. Cambridge University Press, 2003.

geographically outside of the Arctic Circle. Whereas, it is regarded as an Arctic state because the Arctic Circle passes via Grimsey Island, which is located 40 kilometers off the country's northern shore.³³

Iceland faces rather unique difficulties and opportunities as an arctic nation. The temperature of the island is influenced by both the warm Gulf Stream and the freezing Arctic waters, which results in a singular environment that is both harsh and abundant in species. This unique environmental situation has influenced Iceland's history and culture, and it still has a significant impact on the nation's economy and identity. As an Arctic state, one of the most important challenges Iceland faces is climate change. The Arctic is warming a lot more quickly compared to the rest of the world, which will be elaborated in the following chapters in detail. This rapid warming and the melting of the Arctic ice are putting Iceland in danger which is more fatal than most other countries. For Iceland, global warming is more than a mild threat, it is a matter of existence. Rising sea levels, more intense and frequent storms, and changes in the distribution of plant and animal species have all been brought on by the melting of glaciers and sea ice. Since Iceland's economy is primarily dependent on fishing and tourism, these changes will have a huge impact on Iceland's economic security.³⁴

Despite these challenges, Iceland embraces its position as an Arctic state and the benefits it presents. The nation is a part of the Arctic Council and an active member contributing to fostering collaboration between Arctic nations on matters such as environmental preservation, sustainable development, and scientific research. Iceland has been actively involved in Arctic research, particularly in the areas of climate change and oceanography. Besides the scientific and diplomatic efforts, Iceland has also been investing in its Arctic infrastructure. Since the northern passage is opening up to newly emerging sea routes because of global warming, more and more infrastructure such as ports

³³ "Iceland." CIA World Factbook. Last modified October 30, 2022. <https://www.cia.gov/the-world-factbook/countries/iceland/>.

³⁴ Friðriksson, Jón. "Iceland's Energy Security and Geopolitical Interests." *Journal of Energy Security* 6, no. 2 (2013): 33-46.

will be needed around the Arctic shores. Iceland has built new ports and airports in remote regions, making it easier to access and transport goods and people. Iceland is also actively working on exploring the potential for renewable energy in the Arctic, particularly through the development of geothermal energy. In fact, the usage of geothermal energy is already at significant levels in Iceland. Iceland's unique culture and history reflect countless elements of its Arctic identity. The nation has a long history of literature and folklore, most of which has roots in the harsh nature of its environment. Iceland has produced numerous eminent writers and poets, and its isolation as an island up north, and harsh climate have influenced its language and literature. Iceland's Viking heritage also plays a significant role in its national identity, and many Icelanders take pride in their country's seafaring and exploratory past. Iceland is the only Arctic State that does not have an indigenous population. Throughout its history, from the 9th century AD to the present times, the majority of Iceland's inhabitants have originated from Northern Europe.³⁵

In conclusion, Iceland's status as an Arctic state presents both challenges and opportunities. The impacts of climate change on the environment and economy of Iceland will arguably be more severe than almost any other country in the world. Then again, the potential have an impact in shaping the future of the Arctic region through scientific research, infrastructure development, and diplomacy are significant opportunities for Iceland. As new sea routes are opening in the Arctic, Iceland shall become a significant hub for international trade, which will be a threat to its fragile environment while this may arguably be the greatest opportunity for Iceland in terms of its economic security.

2.2.5. Norway

Norway is an Arctic State located in the western half of the Scandinavian Peninsula. Half of Norway's landmass falls within the Arctic region, encompassing areas such as Nordland and the Troms and Finnmark counties on the mainland, as well as the Svalbard

³⁵ Arctic Council. "Iceland." Accessed December 26, 2022. <https://arctic-council.org/about/states/iceland/>.

archipelago and Jan Mayen island. This area is home to roughly 490,000 people, which is one-tenth of Norway's population. Additionally, Norway's Arctic maritime region spans approximately 1,500,000 square kilometers, equivalent to the combined land area of France, Germany, and Spain. Svalbard, an archipelago located halfway between mainland Norway and the North Pole, is partially covered in ice with approximately half of its land area. The largest island, known as Spitsbergen, was previously used as the name for the entire archipelago until 1925. The administrative center of Longyearbyen, as well as other inhabited areas of the archipelago, are situated on this island. Svalbard's primary industries have been coal mining, tourism, and research since the 2000s.³⁶

In 2013, Secretary General of the North Atlantic Treaty Organization (NATO) and Former Prime Minister of Norway Jens Stoltenberg noted:

“However, the Arctic is changing rapidly. The melting of the sea ice has thrust the region into the global spotlight as world leaders seek to assess both the environmental threats and economic opportunities of a smaller northern ice cap. Norwegians have long balanced a fierce commitment to environmental protection with our substantial Arctic economic interests, and we are eager to help devise responses to the worrying changes we have all observed.”³⁷

Norway is one of the leading countries in climate change research. One of the most important institutions doing intensive scientific studies about climate change is the Arctic University of Norway, which is also the world's northernmost university located in Tromsø. For centuries, the economy of Northern Norway relied heavily on fishing and marine resources, as well as livestock husbandry. However, the current economy has become much more diversified. Since the 2000s, the key industries have been more diversified. Fisheries and aquaculture remain as Norway is the largest marine products exporter in the Arctic region. Sustainable energy, mainly hydropower and wind power

³⁶ “Norway.” CIA World Factbook. Last modified November 2, 2022. <https://www.cia.gov/the-world-factbook/countries/norway/>.

³⁷ “Managing the Arctic: A Norwegian Perspective,” Harvard International Review, accessed December 27, 2022. <https://hir.harvard.edu/managing-the-arctic-a-norwegian-perspective/>.

have made Norway one of the largest energy producers in Europe. There is more interest in Norway in our times than ever has been as tourism has become one of the biggest income sources of the country. Mining and liquefied natural gas also contribute quite extensively to the Norwegian economy. Norway has a long history of exploration and resource extraction in the Arctic. Whereas, lately Norway also takes its responsibilities as an Arctic state seriously, and has been working to address issues such as indigenous rights, and environmental protection.³⁸

Global warming is a more severe problem for Norway compared to most other places on earth. Rising sea levels pose a great deal of threat as most of the country might end up underwater. Norway has been taking steps to address this issue by reducing its carbon footprint, promoting sustainable development, investing in research and development of new technologies and practices, and mitigating the impacts of climate change. In addition to its environmental efforts, as a member of the Arctic Council, Norway has been working to support the rights of indigenous peoples in the Arctic and has made significant progress in promoting their cultural heritage and traditional ways of life.³⁹

Norway remains seriously threatened by global warming. Then again, it is this challenge that forced Norway to play a significant role in shaping the future of the Arctic region through sustainable development and environmental protection. There is still a long way ahead in this area, as well as some other challenges for Norway to overcome such as racism, high cost of living, and an aging population.

³⁸ Norwegian Ministry of Foreign Affairs. "Norwegian Policy on the Arctic." Government.no. Accessed December 27, 2022. <https://www.regjeringen.no/en/topics/foreign-affairs/norwegian-policy-on-the-arctic/id2481349/>.

³⁹ Arctic Council. "Norway." Accessed December 27, 2022. <https://arctic-council.org/about/states/norway/>.

2.2.6. Russian Federation

As the Arctic region becomes increasingly accessible due to melting ice caps, global powers including the Russian Federation are taking notice of the potential for trade and resource exploitation.

Approximately one-fifth of Russia's enormous landmass consists of the north of the Arctic Circle, which is also called the 'Russian Arctic' or 'Arctic Russia'. The coastline is an immense territory that is over 24150 kilometers wide and it includes the whole of the Murmansk Region, the Nenets, Yamal-Nenets, Chukotka Autonomous Okrugs, and the Komi Republic. Russia is one of five littoral states bordering the Arctic Ocean. Almost half of the 4 million inhabitants of the Arctic are located in Arctic Russia, which makes the Russian Federation the most populous nation in the Polar region.⁴⁰

The key factors of the Russian Arctic strategy are to utilize the natural resources in the Arctic more efficiently, protect its ecosystems, and use the Polar route as a means of transit while ensuring that the Arctic remains "a region of peace and cooperation". Among potential natural resources, Russia is interested in the energy reservoirs the most, particularly the natural gas reserves in Yamal. Russia's energy assets are diminishing, thus the rich energy resources in the region will provide Russia to keep its position as an oil and natural gas powerhouse which they use as a tool for foreign policy. As a result, the region is becoming a main point for a resurgence of geopolitical struggle among the major powers due to the interaction of economics and geopolitics.⁴¹

As an Arctic State Russia has quite a lot of challenges as well as opportunities in the polar region. With a significant amount of its land situated there, Russia has always been one of the most significant actors in the Arctic. Strategies for the nation's economic

⁴⁰ Arctic Council. "Russian Federation." Accessed December 29, 2022. <https://arctic-council.org/about/states/russianfederation/>.

⁴¹ Ahmad, Shaheer and Mohammad Ali Zafar. "Russia's Reimagined Arctic in the Age of Geopolitical Competition." *Journal of Indo-Pacific Affairs*, March 9, 2022, Air University Press.

security in the Arctic have been in place for several years, with an emphasis on resource extraction and building out the necessary transit systems. Particularly after the harsh sanctions applied by the West, Russia needs more resources than ever before. Thus, focusing more on the resource-rich polar region seems more than reasonable. However, it comes with some considerable risks, particularly for a country with an army that is preoccupied. Utilizing resources of the Arctic comes with the likelihood of increased rivalry. The region is packed with natural resources such as natural gas, oil, mineral resources, and fisheries. The exploitation of these resources will exacerbate tensions among nations vying for them. Although Russia already has a significant presence in the Arctic, rising competitiveness may result in conflicts with other Arctic countries.

Russia has taken action to fortify its position in the Arctic in response to the potential risks and challenges. They made investments in military technology and infrastructure, including the deployment of new icebreakers and the enlargement of its northern military stations. In an effort to foster peaceful coexistence in the region, Russia has also developed diplomatic ties with other Arctic countries, such as the United States and Canada.⁴²

Whereas, all these efforts mean so little after the Russian invasion of Ukraine in 2022. After the invasion, Russian diplomatic relations with the West have become worse than ever, the military is preoccupied with the ongoing conflict, and the economy is in a poor state. Following the invasion, many Western countries imposed economic sanctions on Russia, which have had a major impact on its economic security. Russia's aggressive actions in Ukraine have also raised concerns among other Arctic nations about its behavior in the region. Many have criticized Russia for its militarization of the Arctic, including the deployment of troops and military hardware to the region. The United States and other NATO countries have increased their activity levels in the Arctic in response to Russia's actions, leading to a potential escalation of tensions in the region. And finally,

⁴² Brekke, Torkjell and Rob Huebert. "Russia in the Arctic: A Good Partner or a Dangerous Rival?" *Arctic Review on Law and Politics*, Vol. 8, No. 2, 2017, pp. 96-114.

Scandinavian countries particularly Finland and Sweden took action to join NATO. Since Russia considers that ‘casus belli’, as it happens to be Russia’s primary reason for attacking Ukraine, there is an increasing threat of conflict in the Arctic region which the international community and the United Nations cannot afford to overlook. Whereas, the situation in Ukraine had an impact on Russia’s ability to fully exploit the potential and defend its privileges in the Arctic. The Russian army is not only preoccupied but also at the edge of a moral meltdown. Sanctions imposed by Western countries have limited Russia’s access to technology and investment, which has slowed down the development of Arctic infrastructure. In addition, concerns about Russia’s behavior in the region have led to increased scrutiny and regulation of its activities by other Arctic nations.⁴³

Russia’s position as an actor in the Arctic is quite complicated, and the situation in Ukraine has had a significant impact on its role in the region. While it remains a significant player in terms of geopolitics, it is no longer the superpower that practically controls most of the Arctic region due to its economic security in jeopardy and seriously tested militaristic ability to keep investing and/or dominate in such a big territory. The situation is likely to remain a point of tension between Russia and other Arctic nations particularly the United States for the foreseeable future.⁴⁴

2.2.7. Sweden

Sweden is an Arctic state, with one-third of its territory located within the Arctic Circle. Västerbotten, Norrbotten, and Jämtland, Sweden’s three most northerly counties are considered to be its Arctic territory. Even though this area makes up a significant portion of Sweden’s total territory, it is considerably less populous than the southern

⁴³ Center for Strategic and International Studies. “The Ice Curtain: Russia's Arctic Military Presence.” March 26, 2020. Accessed December 29, 2022. <https://www.csis.org/analysis/ice-curtain-russias-arctic-military-presence>.

⁴⁴ Stephan, Ingo. “Russia and the Arctic: Opportunities and Challenges for the West.” Canadian Foreign Policy Journal, Vol. 23, No. 1, 2017, pp. 1-12.

regions of the nation. The total population of Sweden's Arctic territory is slightly over 500,000 people.⁴⁵

The Arctic area is inhabited by indigenous communities and supports a wide range of plant and animal life, including several distinct species that have adapted to the severe Arctic conditions. Sweden's Arctic ecosystem is particularly important for reindeer, which are an essential part of Saami culture and livelihoods. Later on, we will delve into further detail about the Saami or Sami people who inhabit the northernmost regions of Norway, Sweden, Finland, and Russia. The number of Saami people is estimated to be between 50,000 and 80,000, with 20,000 to 50,000 of them residing in Sweden. Although there are serious issues of discrimination being reported, the Swedish government works to give indigenous peoples in the Arctic more opportunities to protect and develop their identity, culture, and traditional industries.⁴⁶

Sweden's Arctic region is quite significant for its economic security. The territory is quite rich in mineral resources, including iron, copper, and gold. These resources have played a very important role in Sweden's economic security, particularly in the early 20th century when the country's mining industry was developing rapidly. The Arctic remains to be a significant source of natural resources for Sweden, with fishery, mining, and forestry, being major industries in the region, plus the newly opening sea routes.⁴⁷

The commitment of Sweden to sustainability and environmental protection is also inextricably linked to its Arctic character. For many years, Sweden has been a pioneer in environmental legislation, and this dedication extends to its Arctic area. In an effort to reduce greenhouse gas emissions and shift towards a more sustainable economy, the Swedish government has established ambitious targets. This dedication to sustainability is especially crucial in the Arctic, where climate change is severely affecting the ecosystem

⁴⁵ Arctic Council. "Sweden." Accessed December 29, 2022. <https://arctic-council.org/about/states/sweden/>.

⁴⁶ Tynkkynen, Nina. "Sweden's Arctic Identity and Its Environmental Diplomacy." *Environmental Politics*, Vol. 26, No. 5, 2017, pp. 841-861.

⁴⁷ Lundmark, Linda and Sverker Sörlin. "Sweden's Arctic Footprint: A Comparative Analysis of Sweden's Arctic Policies and Research Interests." *Arctic Yearbook*, Vol. 2013, 2013, pp. 61-81.

of the area and the people who depend on it, particularly the indigenous peoples. When it comes to Sweden's Arctic governance and its involvement in the Arctic Council, we see that Sweden is able to influence laws and policies that have an impact on the area, particularly those pertaining to resource management, climate change, and indigenous rights.⁴⁸

According to the Arctic Council during Sweden's first Arctic Council chairmanship from 2011-2013, Sweden's priority has been environmental protection, particularly to slow down global warming and lowering pollution emissions. Sweden has been an active supporter of the indigenous communities in the Arctic, promoting initiatives for gender equality, economic development, language preservation, and food security. It has also contributed to strengthening the Arctic Council by developing a strategic communication plan, establishing a permanent secretariat, and organizing meetings for sectoral ministers.⁴⁹

In conclusion, the Arctic region of Sweden is crucial to the nation's culture, economic security, and identity. Sweden's history and future are strongly influenced by the region's distinctive ecosystem, natural resources, and indigenous culture. Sweden is in a good position to keep taking the lead in determining the future of the Arctic as a dedicated member of the Arctic Council.

2.2.8. The United States of America

The United States has become an Arctic nation after acquiring Alaska in 1867. The North Slope Borough, the Northwest Arctic Borough, and the Nome Census Area are territories located in the Arctic Circle. The United States' largest and least densely populated state is Alaska. The state has a population of approximately 737,400 people,

⁴⁸ Tynkkynen, Nina. "Sweden's Arctic Identity and Its Environmental Diplomacy." *Environmental Politics*, Vol. 26, No. 5, 2017, pp. 430-480.

⁴⁹ Gerhardt, Holger. "Sweden's Arctic Policy: An Emerging Engagement." *Arctic Yearbook*, Vol. 2015, 2015, pp. 186-201.

and half of this population lives in its two largest cities, Anchorage and Fairbanks. Mining and petroleum extraction have historically been Alaska's two main industries. Fishing and tourism are two additional well-known businesses that are expanding in significance and demand. Every year, about two million visitors visit Alaska to see its extensive glaciers, mountains, and wildlife.⁵⁰

In the 21st century, the Arctic region has grown in importance both geopolitically and economically as access to hitherto unexplored resources and new shipping routes due to the decreasing levels of ice caused by climate change. The United States will probably have the most considerable impact in shaping the future of the Arctic, being arguably the most significant actor in the Polar region.

While the Arctic territory of the United States is relatively small, its influence in the region is enormous. The United States has a variety of interests in the Arctic, including “promoting cooperation and collaboration with other Arctic nations”, environmental protection, sustainable development, including indigenous peoples in decision-making processes about the region, and supporting and promoting scientific research throughout the polar region. The United States aims to have a peaceful, stable region where its interests are upheld, its homeland is protected, and the Arctic States cooperate to tackle common problems. The most current revision to US Arctic policy, made in May 2013, supports National Security Presidential Directive-66 and Homeland Security Presidential Directive-25 from 2009.⁵¹

The geopolitical and strategic significance of the Arctic makes the region extremely important for the United States. The territory provides a critical gateway between Europe and Asia, which is highly significant in the aspect of national and economic security. The United States has increased its military presence in the Arctic in recent years, particularly after the Russian invasion of Ukraine. The Arctic strategy released in 2018 highlights the

⁵⁰ Arctic Council. “The United States.” Accessed December 29, 2022. <https://arctic-council.org/about/states/the-united-states/>.

⁵¹ National Security Presidential Directive 66. “Subject: Arctic Region Policy.” Federation of American Scientists, May 12, 2009. <https://fas.org/irp/offdocs/nspd/nspd-66.htm>.

significance of upholding a robust military presence in the Polar region. In addition to security concerns, the United States is also interested in promoting economic development in the Arctic. As we covered in the previous chapters, the region has very rich natural resources, including petrol, natural gas, minerals, and fisheries. The United States has taken steps to invest more in the region, including opening up new areas for oil and gas exploration and promoting the development of new shipping routes that are opening due to the melting of the ice as a result of global warming.⁵² However, these efforts have been met with resistance from environmental groups arguing that increased infrastructural and commercial activity in the region will have negative impacts on the fragile Arctic ecosystem which is already under the threat of climate change. Whereas, the United States has taken steps to reduce its carbon footprint and support international efforts to address climate change. Furthermore, the United States has worked with other Arctic states to establish regulations and guidelines for sustainable resource development and environmental protection in the polar region. A number of policy documents serve as guidelines for the engagement of the United States in the Arctic region. That includes the Arctic Research and Policy Act, the National Strategy for the Arctic Region, and the National Security Presidential Directive on Arctic Area Policy. These policies place a strong emphasis on the value of collaboration with indigenous groups and other Arctic governments, as well as the necessity of maintaining a balance between economic development and environmental protection.⁵³

The United States managed to achieve significant improvements in the Arctic region as a member of the Arctic Council. Some of the most significant of these achievements include the following:

⁵² “The Epoch Times.” Biden Administration Releases National Arctic Strategy to Counter China and Russia, March 29, 2021. https://www.theepochtimes.com/biden-administration-releases-national-arctic-strategy-to-counter-china-and-russia_3752108.html.

⁵³ The White House. “Fact Sheet: The United States National Strategy for the Arctic Region,” Statement, October 7, 2022. Accessed December 29, 2022. <https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/07/fact-sheet-the-united-states-national-strategy-for-the-arctic-region/>.

- The United States, along with the other seven Arctic states, established the International Circumpolar Surveillance (ICS) system for disease surveillance across the region, led by the U.S. Centers for Disease Control and Prevention.
- The United States began the Arctic Climate Impact Assessment (ACIA) under Iceland’s leadership in 2004, which is the first-ever comprehensive scientific evaluation of the effects of climate change.
- The “Agreement on Enhancing International Arctic Scientific Cooperation”, which was signed by foreign ministers at the Arctic Council Ministerial meeting on May 11, 2017, in Fairbanks, Alaska, is one of the most significant accomplishments of a special task force on science cooperation that the United States and Russia co-chaired under the direction of the Arctic Council.
- The United States served as chair of both Expert Groups to implement the “Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic” which was signed in 2013, and the “Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic” which was signed in 2011.⁵⁴

In conclusion, the United States arguably plays the most significant role in the Polar region as an Arctic state in terms of national and economic security. Its policies are guided by a commitment to cooperation, environmental protection, and sustainable resource management. The involvement of the United States will be crucial in shaping the future of the region.

⁵⁴ Arctic Council. “The United States.” Accessed December 29, 2022. <https://arctic-council.org/about/states/the-united-states/>.

2.3. Permanent Participant Organizations of the Arctic Council

There are six participant organizations that represent Arctic Indigenous peoples. These organizations that we are going to briefly examine, have been granted permanent status in the Arctic Council, which implies that they are entitled to complete participation in the Council's activities and meetings.

2.3.1. Aleut International Association (AIA)

The Aleut International Association (AIA) is a non-profit organization that advocates for the rights of indigenous peoples of Aleut ancestry in both the United States and the Russian Federation. Its establishment was a collaboration between the Aleutian Pribilof Islands Association (APIA) and the Association of the Indigenous Peoples of the North of the Aleut District of the Kamchatka Region in the Russian Federation (ANSARKO). The AIA was established in 1973 and its main goal is to advocate for the rights and interests of the Aleut people and to promote the preservation of their cultural heritage. In 1998, the AIA was admitted as a permanent member of the Arctic Council.⁵⁵

The Aleut (also called the Unangan) people have a long and rich history in the North Pacific region, dating back nearly 10,000 years. They are located in the Aleutian Islands region of southwestern Alaska. They relied heavily on hunting and fishing. The enormous Bering Sea, the North Pacific, and the cultural customs that have allowed the Aleut people to exist in the Aleutian Islands have brought Russian and American Aleuts together despite their geographic separation. However, the Aleut people have also faced significant challenges over the centuries, including colonization, forced relocation, assimilation policies, and lately global warming. Like many indigenous peoples around the world, the Aleut language and culture are at risk of being lost as younger generations

⁵⁵ Aleut International Association. n.d. "About Us." Accessed April 27, 2023. <https://www.aleutinternational.org/about-us>.

adopt more mainstream lifestyles. The AIA is working on the preservation of Aleut culture and language by promoting of teaching and usage of the Aleut language, and ensuring that traditional knowledge and cultural practices are passed on to future generations.^{56 57}

The AIA plays a significant role in representing the Aleut people in international forums, particularly the Arctic Council. The AIA works to promote the interests of the Aleut people in issues related to sustainable development, environmental protection, and the preservation of their unique culture. They also work to promote the economic development of Aleut communities and to strengthen their capacity to participate in decision-making processes.

James Gamble, the executive director of the Aleut International Association published an article titled “Many Arctics: The Aleut International Association and the Arctic Council” at the 20th anniversary of the Arctic Council. The article included valuable information about international organizations and working groups in the Arctic as well as the Arctic becoming one of the leading shipping routes for global trade.

Gamble states: “It is sometimes said that the Aleuts are ancient people living in modern times, and despite the isolation of their island homes, they also live on one of the busiest shipping routes in the world. The North Pacific Great Circle Route is the course of choice for cargo vessels traveling between the Pacific Northwest of North America and Asia. Ships following the curvature of the earth make about 3,000 westward transits each year, passing within 75 miles of the Aleutian shores, and an equal number of eastward transits passing within 200 miles. This enormous amount of traffic combined with the region’s notoriously bad weather has resulted in numerous accidents and near misses over the years, and one accident in December 2004 resulted in the second-largest oil spill in Alaska history.”

⁵⁶ Nabokov, Peter. “Aleut Story.” *Common Knowledge* 11, no. 3 (2005): 8-34.

⁵⁷ Dirks, Nicholas B. *The Vanishing Horizon: The Alaska Highway and the Indian Problem*. Chicago: University of Chicago Press, 2008.

Gamble is actively leading all other internationally recognized organizations and some of the working groups that we are going to cover and putting incredible effort to raise awareness about the ongoing transformation in the Arctic.

Gamble concludes: “With the Great Circle Route so deeply integrated with the world economy, the vessels that use it flagged by numerous nations, and the principle of “innocent passage” applied when transiting U.S. waters, how can a small indigenous population like the Aleuts have a say in its operations? The route is governed by far-away entities, yet it has the potential to affect the Aleut people directly as do other global processes like cross-border pollution, climate change, and globalization. Having access to decision-making bodies that influence these issues could be a key factor in protecting the Aleut culture and way of life.”

Gamble emphasizes the Arctic’s emergence as a key global trade route will present significant environmental obstacles that could jeopardize not only the region’s delicate ecosystem but also the distinctive cultures that call it home. The AIA was granted Special Consultative Status by the Economic and Social Council of the United Nations in 2004. As of 2023, AIA still functions as an accredited Non-Governmental Organization (NGO) with the United Nations Framework Convention on Climate Change (UNFCCC) and the Global Environment Facility (GEF).⁵⁸

2.3.2. Arctic Athabaskan Council (AAC)

The Arctic Athabaskan Council is a local indigenous organization representing the Athabaskan peoples of Alaska, Canada, and Russia. AAC’s main goals are to establish community-to-community relations, networks, and partnerships to carry the Athabaskan cultural, social, economic, and environmental interests on the international level while promoting the common interests of Athabaskan communities in the Arctic and protecting

⁵⁸ Gamble, James. Aleutians, Gilberts and Marshalls, June 1942-April 1944. Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1950.

their rights and traditional way of life. On the official website of the organization, the council has been defined as follows: “The Arctic Athabaskan Council was founded in 2000. At that time it represented approximately 32,000 indigenous peoples of Athabaskan descent. Today there are council members in Alaska (including fifteen traditional villages), the Yukon (the Council of Yukon First Nations), and the Northwest Territories (Dene Nation), spanning 76 communities and representing approximately 45,000 people.”⁵⁹

The AAC promotes laws that encourage sustainable development and protection of the region’s natural resources in order to defend the rights of Athabaskan communities while protecting the environment. Additionally, they work to promote the preservation of indigenous languages, cultures, and traditional knowledge. The organization has played a key role in revitalizing indigenous languages and promoting cultural exchange and understanding. One of the key issues that the AAC focuses on is the impact of climate change on the Arctic. Global warming is rapidly altering the environment of the polar region. While it opens up new shipping routes, which may be good for global trade, it is destroying the unique culture and lifestyle of indigenous peoples. The organization has been active in promoting awareness of the issue and advocating for policies that address the impact of climate change on Athabaskan communities and the environment.⁶⁰

Through its advocacy and outreach work, the AAC has played a key role in raising awareness of the challenges facing indigenous communities in the Arctic and promoting policies that support their rights and way of life.

⁵⁹ Arctic Athabaskan Council. “About AAC.” Arctic Athabaskan Council. n.d. Accessed December 28, 2023. <https://arcticathabaskancouncil.com/about-aac>.

⁶⁰ University of Alaska Fairbanks. “Treaty of the Arctic Athabaskan Council.” Center for Alaska Native Policy and Strategy. Last modified October 11, 2016. Accessed December 28, 2023. https://uaf.edu/caps/resources/policy-documents/aac-Treaty%20of%20the%20AAC%20_%20Arctic%20Athabaskan%20Council.pdf.

2.3.3. Gwich'in Council International (GCI)

The Gwich'in Council International (GCI) is a non-profit regional indigenous organization representing about 9000 Gwich'in citizens of Alaska, Canada, and the Northwest Territories of Canada. The organization was established in 1988 to promote the common interests of Gwich'in communities in the Arctic and to protect their rights and traditional way of life. According to the official website of the organization: "GCI's membership consists of two representative bodies in Canada and one in the United States: Gwich'in Tribal Council (GTC), who represents the beneficiaries of the Gwich'in Land Claims Settlement Act in NWT; the Vuntut Gwitchin First Nation (VGFN), which is a self-governing First Nation in Old Crow, Yukon; and the Council of Athabaskan Tribal Governments (CATG), for the eight Gwich'in communities in Alaska – Fort Yukon, Venetie, Arctic Village, Chalkyitsik, Birch Creek, Circle, Canyon Village, and Beaver. GCI is governed by a volunteer Board of Directors, composed of four members from Canada and four from Alaska. Canada and Alaska each appoint a co-chair from its members."⁶¹

Similarly to other indigenous organizations in the region, the GCI aims to preserve the environment and protect the rights of Gwich'in communities by advocating for policies that support sustainable development and safeguard the natural resources of the region. They also work to promote the preservation of indigenous languages, cultures, and traditional knowledge. One of the key issues that the GCI focuses on is the protection of the Arctic National Wildlife Refuge (ANWR) in Alaska. The organization has been active in opposing oil and gas drilling in the ANWR, which is a critical habitat for the Porcupine caribou herd, a vital subsistence resource for the Gwich'in people.⁶²

⁶¹ Gwich'in Council International. "About Us." Gwich'in Council International. n.d. Accessed December 30, 2022. <https://gwichin.org/about-us>.

⁶² Hensel, Chase. "The Gwich'in First Nation and the Arctic National Wildlife Refuge: Challenges and Opportunities in the Politics of Energy and the Environment." *Review of Policy Research* 25, no. 3 (2008): 235-56. <https://doi.org/10.1111/j.1541-1338.2008.00318.x>.

2.3.4. Inuit Circumpolar Council

“The Inuit Circumpolar Council (ICC), formerly Inuit Circumpolar Conference, is a multinational non-governmental organization (NGO) and Indigenous Peoples’ Organization (IPO) representing the 180,000 Inuit, Yupik, and Chukchi peoples (sometimes referred to as Eskimo) people living in Alaska (United States), Canada, Greenland (Kingdom of Denmark), and Chukotka (Russia). ICC was ECOSOC-accredited and was granted special consultative status (category II) at the UN in 1983.”⁶³

The Inuit Circumpolar Council (ICC) is another regional indigenous organization that plays a significant role in the Arctic. The ICC represents the Inuit peoples of Alaska, Canada, Greenland, and Chukotka (Russia). The organization was established in 1977 mainly to promote the common interests of Inuit communities in the Arctic and to protect their rights and traditional way of life. Like most other international organizations in the Arctic, one of the main issues that the ICC focuses on is the impact of climate change on the Arctic. The organization has been actively involved in negotiating international agreements related to climate change and environmental protection in the Arctic. According to its official website, the ICC defines itself as follows: “We call our homeland Inuit Nunaat. Within Canada we call our region Inuit Nunangat, which includes the Inuvialuit Settlement Region, Nunavut, Nunavik, and Nunatsiavut. Surrounding the centre, we list the issues that we bring to important global forums. The issues come from the Declarations adopted at the ICC General Assemblies, held every four years.”⁶⁴

The ICC is actively working with other international organizations to address the issues in the polar region. The ICC’s aim is best defined in its motto: “Bringing the United Inuit Voice to the World”.

⁶³ Indigenous Culture and Conservation Alliance. “About Us.” Indigenous Culture and Conservation Alliance. n.d. Accessed April 28, 2023. <https://iccalaska.org/about/>.

⁶⁴ Inuit Circumpolar Council. “Home.” Inuit Circumpolar Council. Accessed January 3, 2023. <https://www.inuitcircumpolar.com/>.

“We bring these issues to the Arctic Council, the United Nations, Government, and Civil Society forums. We are guided by Inuit, represented by elected Inuit leaders and delegates who attend our General Assemblies and Summits.”⁶⁵

Overall, the Inuit Circumpolar Council is another important indigenous in the Arctic. Through its advocacy and outreach work, the ICC has played a key role in raising awareness of the challenges facing indigenous communities in the region and promoting policies that support their rights and way of life. The organization’s work has helped to build bridges between Inuit communities in different countries and to promote cooperation and collaboration in addressing common challenges in the Arctic.

2.3.5. Russian Association of Indigenous Peoples of the North (RAIPON)

The Russian Association of Indigenous Peoples of the North (RAIPON) is a non-profit regional organization in the Arctic with a mission to defend the rights of all people and the interests of the indigenous, sparsely populated peoples of the Russian Far East, Siberia, and the North, as well as to solve social and economic issues and protect the environment. On its official website, the organization is defined as follows: “The RAIPON was founded in March 1990 at the First Congress of the Peoples of the North. The first name was ‘Association of the Peoples of the North of the USSR’, which united 26 Peoples. On November 24, 1993, it was registered as a socio-political movement ‘Association of Indigenous Small-numbered Peoples of the North, Siberia and the Far East of the Russian Federation’ (RAIPON). In July 1999, the Association was re-registered in the Ministry of Justice of the Russian Federation as an all-Russian public organization. As of 2023, RAIPON represents 41 indigenous peoples, with a population of over 250,000. RAIPON consists of many organizations each representing a nationality including the Inuit, Saami,

⁶⁵ Inuit Circumpolar Council. “ICC Political Universe.” Inuit Circumpolar Council. Accessed January 3, 2023. <https://www.inuitcircumpolar.com/about-icc/icc-political-universe/>.

Nenets, Chukchi, and 37 others. The organization is governed by a general assembly, which meets every four years and is composed of representatives from each of the member organizations. The general assembly elects a president and executive committee, responsible for the organization's strategies and activities. The nations represented in RAIPON live in more than half of the whole Russian Federation territory, including the North, Siberia and the Far East.⁶⁶

The Arctic region is home to a diverse group of indigenous peoples, including the Inuit, Saami, Nenets, and Chukchi, among others. These peoples have lived in the Arctic for centuries, developing unique cultures and traditions that are deeply intertwined with the region's natural environment. However, particularly in the 21st century, the Arctic has undergone significant changes due to climate change, globalization, and increased industrial activities, and it is more likely than not to continue this process of transformation even more rapidly. These changes have had a profound impact on the lives of indigenous peoples in the region, threatening their traditional way of life, culture, and livelihoods. Therefore, it is now more vital than ever to have organizations such as RAIPON representing the rights and interests of indigenous peoples in the Arctic. Since its inception in 1990, RAIPON has played a significant role in promoting and protecting the cultural, social, and economic well-being of indigenous peoples. The RAIPON aims to conserve the unique culture, the original habitat, and the traditional way of life of the indigenous people of Russia, as well as to ensure their right to self-government in conformity with domestic and international legal norms.⁶⁷

Rebecca Sommer, a German journalist, and human rights activist stated:

“RAIPON has in its more than 20 years of its existence worked actively to protect indigenous peoples' human rights and legal interests, as well as to promote their right to

⁶⁶ Russian Association of Indigenous Peoples of the North. “About the Association.” RAIPON. Accessed January 3, 2023. <https://en.raipon.info/association/index>.

⁶⁷ Russian Association of Indigenous Peoples of the North. “RAIPON History.” RAIPON. Accessed January 3, 2023. <https://en.raipon.info/history/index>.

self-governance. RAIPON represents 40 groups of Indigenous peoples inhabiting huge Arctic territories of the Russian Federation from Murmansk to Kamchatka.”⁶⁸

Another human rights activist Pavel Vasilievich Sulyandziga, a Russian citizen of Udege nationality reported a similar statement:

“Taking into account the input of indigenous leaders, the Coordination Council members have sanctioned the following as the baseline directions of RAIPON activities: Law-making and guarantees of a legal position; health protection of indigenous peoples; preservation and development of culture; upbringing and education; establishment of traditional subsistence territories (territories of traditional use of natural resources) and development of traditional forms of economic activity; and youth policy.”⁶⁹

RAIPON has been one of the most significant organizations in the Arctic with many achievements. One of RAIPON’s significant achievements is addressing the impact of climate change on the economic security of the indigenous peoples in the polar region. Another example among many significant achievements is the adoption of the Declaration on the Rights of Indigenous Peoples by the United Nations General Assembly in 2007. RAIPON was instrumental in the development and adoption of the declaration, which recognizes the rights of indigenous peoples to self-determination, traditional lands, territories, and resources, and to maintain and develop their cultures, languages, and traditional knowledge.⁷⁰

⁶⁸ Sommer, Rebecca. “The Sámi People of Lapland.” *Cultural Survival Quarterly* 15, no. 4 (1991).

⁶⁹ “RAIPON: National Representation, Advocacy, and Hope.” *Cultural Survival Quarterly*, December 21, 2015. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/raipon-national-representation-advocacy-and-hope>.

⁷⁰ Kulchitsky, Anatoly. “The Situation of Indigenous Peoples in the Russian Federation.” RAIPON. Accessed January 4, 2023. <https://en.raipon.info/documents/index>.

2.3.6. Saami Council

The Saami Council is a local non-profit, and non-governmental indigenous organization in the Arctic that represents the interests of the Saami (or Sami) people, who live in the northern parts of Norway, Sweden, Finland, and Russia. The organization was established in 1956 to promote the rights and interests of the Saami people and to protect their unique culture and life form. The Saami Council has been actively involved in international negotiations related to indigenous peoples' rights and environmental protection in the Arctic. The organization has played a key role in promoting cross-border cooperation and collaboration among indigenous communities in the polar region. The operational procedure of the council is defined as: "The Saami Council's work is based on the decisions, statements, declarations and political programmes of the Saami Conference. Saami Council renders opinions and makes proposals on questions concerning Saami people's livelihoods, rights, language and culture and especially on issues concerning Saami in different countries."⁷¹

There are no available statistics about the exact population of the Saami people, although over 100,000 is the estimate that is most often used by international organizations including the United Nations. There are nine Saami languages still spoken in our century. With frequent contributions to Chairmanship work plans, the Saami Council interacts with Arctic States, Working Groups, and other Permanent Participants addressing circumpolar relations. Environmental preservation and sustainable development in the Arctic are of great importance to the Saami Council.⁷²

⁷¹ Saami Council. "The Saami Council." Accessed January 4, 2023. <https://www.saamicouncil.net/en/the-saami-council>.

⁷² Jernsletten, Jørn, and Mikkel Nils Sara. "Indigenous Knowledge and Climate Change: The Role of the Saami Council." *Arctic Review on Law and Politics* 9, no. 2 (2018).

2.4. Internationally Recognized Working Groups and Expert Groups in the Arctic

The Arctic region is of increasing importance due to its rapidly changing environment, rich resources, and its geopolitical significance. In order to protect the region, international organizations, working groups, and expert groups are crucial. The Arctic Council's activities are conducted in six working groups. The working groups are responsible for executing the programs and projects mandated by the Arctic Council. Working groups bring together experts from a range of disciplines, including science, policy, and indigenous knowledge, to address the complex challenges of the polar region. Their work covers a range of topics, including climate change, sustainable development, resource management, and cultural preservation. The findings and recommendations of these groups are highly regarded and are often used to inform policy and decision-making at the national and international levels.⁷³

2.4.1. Arctic Contaminants Action Program (ACAP)

The Arctic Contaminants Action Program (ACAP) is a global initiative established by the Arctic Council in 1998 to prevent and reduce pollution and environmental risks in the Arctic. The main issue they aim to fix is the persistent organic pollutants (POPs) and other contaminants in the Arctic. ACAP's mission is to protect the Arctic environment and the health of the Arctic people by promoting cooperation among Arctic countries and other stakeholders to reduce the release and impact of these contaminants. ACAP mainly works on strengthening policies and taking action to reduce pollutants and establish a clean environment. "In order to achieve that aim, ACAP has many demonstration projects to

⁷³ Arctic Council. "Expert Groups." Accessed January 5, 2023. <https://arctic-council.org/en/about/expert-groups/>.

raise awareness and show possibilities to cut pollution in the Arctic as well as to clean up the existing contaminants.”⁷⁴

Due to its isolated location and extremely cold weather, the Arctic has a unique and delicate ecosystem that is susceptible to environmental toxins. POPs are hazardous compounds that can build up in the food chain and endanger both the environment and human health. These pollutants can travel great distances through air and sea currents to reach the Arctic and are released from sources like industrial activities, transportation, and agriculture. ACAP’s initiatives include promoting the use of alternative and cleaner technologies, supporting the development of national and regional contaminant inventories, and raising awareness among Arctic communities about the risks of POPs and other contaminants. In order to minimize the use and release of POPs internationally, the program also supports the implementation of international agreements such as the Stockholm Convention on Persistent Organic Pollutants. Fortunately, ACAP’s efforts have resulted in significant reductions in the release and impact of contaminants in the Arctic. For instance, the program has contributed to the elimination of the use of PCBs (polychlorinated biphenyls) in the Arctic and the reduction of mercury emissions from coal-fired power plants in Russia. These achievements made the Arctic and the whole world a cleaner and safer environment for all living beings.⁷⁵

The mission of ACAP is crucial and has resulted in substantial advancements toward tackling environmental concerns in the Arctic. Nevertheless, there remains a considerable amount of work to be accomplished to safeguard the Arctic ecosystem’s enduring well-being and viability.

⁷⁴ International Arctic Science Committee. “Working Groups.” Accessed January 5, 2023. <https://iasc.info/working-groups>.

⁷⁵ United Nations Environment Programme. “Arctic Monitoring and Assessment Programme (AMAP).” Accessed January 5, 2023. <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/science-policy-assessment/arctic-monitoring-and-3>.

2.4.2. Arctic Monitoring and Assessment Programme (AMAP)

As we explained earlier, the Arctic region is undergoing rapid and unprecedented changes due to climate change. These changes have significant effects on the environment, biodiversity, and human populations living in the polar region.

In order to address the aforementioned environmental and social issues in the Polar Region, the Arctic Monitoring and Assessment Programme (AMAP) was established in 1991 by the Arctic Council. AMAP's primary goal is to observe and evaluate the condition of the Arctic environment and furnish policymakers with the scientific data required to make knowledgeable choices to protect the Arctic. AMAP is led by a Chair, elected by the Arctic Council for a two-year term. The Chair is supported by a Secretariat, based in Oslo, Norway, which provides administrative and technical support to AMAP. Their work is carried out by a network of experts from the eight Arctic countries and other relevant organizations. These experts are appointed by their respective governments and serve as members of AMAP working groups, which focus on specific areas of research, such as contaminants, biodiversity, and climate change. The working groups produce scientific assessments, which are reviewed by independent experts and approved by AMAP's Steering Committee, composed of representatives from the Arctic Council member states.⁷⁶

Since it was founded, AMAP has produced many reports based on scientific research on various aspects of the Arctic environment. These reports contributed significantly to advance the international agreements and policies, such as the Stockholm Convention on Persistent Organic Pollutants, the Minamata Convention on Mercury, and the Paris Agreement on Climate Change. Because Global Warming is the ultimate enemy of the Arctic, it has been AMAP's most prioritized aim to focus on the impacts of climate change in the Arctic. The Arctic Climate Impact Assessment was the first comprehensive assessment of climate change in the Arctic region and AMAP's reports based on scientific

⁷⁶ AMAP. "AMAP 2022-2026 Strategic Plan." Arctic Council, 2022. <https://www.amap.no/documents/doc/amap-2022-2026-strategic-plan/2365>.

research they carried out contributed significantly to this assessment. AMAP has also conducted extensive research and assessments of the state of Arctic biodiversity, including the impacts of climate change and contaminants. AMAP's work has contributed to the development of the Arctic Biodiversity Assessment, which provides a comprehensive overview of the state of biodiversity in the Arctic region.⁷⁷

In conclusion, the Arctic Monitoring and Assessment Programme (AMAP) has been playing a significant role in monitoring and assessing the state of the Arctic environment and providing policymakers with accurate scientific data. As the Arctic continues to undergo rapid changes due to climate change, the role of AMAP in observing and evaluating the condition of the Arctic environment has become more important than ever. Since the world gives more attention to the Arctic, the work of AMAP will remain critical in understanding and addressing the complex environmental issues facing this unique, rich, and vulnerable region.

2.4.3. Conservation of Arctic Flora and Fauna (CAFF)

The Conservation of Arctic Flora and Fauna (CAFF) was established in 1992 as a working group to promote the protection and sustainable utilization of Arctic biodiversity by the Arctic Council following the signing of the Arctic Environmental Protection Strategy (AEPS) in 1991. The AEPS was the first international agreement to address environmental protection in the Arctic region. CAFF's main goal is to "address the conservation of Arctic biodiversity, to ensure that the diversity of Arctic flora and fauna and their ecosystems are maintained as an integral part of the Earth's heritage." Since it has been founded, CAFF has produced a series of reports and projects aimed at promoting the conservation and sustainable use of Arctic biodiversity.⁷⁸

⁷⁷ WMO Library. "Byrd Polar and Climate Research Center." Accessed January 6, 2023. https://library.wmo.int/index.php?lvl=author_see&id=8890.

⁷⁸ CAFF - Conservation of Arctic Flora and Fauna. Accessed January 8, 2023. <https://www.caff.is/>.

The Arctic area is currently attracting unprecedented interest due to its swiftly evolving environment, abundant resources, and geopolitical importance, particularly with the emergence of new sea routes. Unfortunately, more human activity means more pollution. The environmentally vulnerable Arctic region is already facing significant threats from climate change. This region is home to a diverse and unique range of flora and fauna, including endangered Arctic foxes, polar bears, various species of seals, whales, and an enormous variety of fish. CAFF works in addressing these challenges, taking them to the attention of international organizations, contributing scientific research, and conducting solutions. It provides a platform to battle against the environmental issues in the Arctic by serving and work on ecosystem management and protection, share data with other organizations and initiatives, and facilitate more informed decision-making. CAFF's organization is no different from other working groups of the Arctic Council. The Chair of CAFF is chosen by the Arctic Council to serve a two-year term. A Secretariat, situated in Akureyri, Iceland, which supports CAFF administratively and technically, supports the Chair. A network of specialists from the eight Arctic nations and other pertinent organizations carry out the activities of CAFF. These specialists are members of CAFF working groups that concentrate on particular areas of research, such as terrestrial ecosystems, marine ecosystems, and protected areas which are appointed by their respective countries. The working groups generate scientific reports that are evaluated by outside specialists and authorized by the Steering Committee of CAFF, which is consisted of members from the Arctic Council member states.⁷⁹

Finally, some of CAFF's significant achievements are as follows:

- CAFF produced the first comprehensive assessment of Arctic biodiversity, which provided a very significant source and base for further scientific environmental research in the Arctic.

⁷⁹ CAFF. "Arctic Migratory Birds Initiative." Accessed January 8, 2023. <https://www.caff.is/ambi>.

- CAFF has worked to promote the establishment and management of protected areas in the Arctic, including the Arctic Marine Protected Areas Network, which aims to protect marine biodiversity in the Arctic.
- In addition to developing guidelines for the sustainable use of Arctic fish stocks and promoting sustainable tourism in the Arctic, CAFF has supported the sustainable use of Arctic biodiversity and set an example for the entire world in environmental protection.⁸⁰

2.4.4. Emergency Prevention, Preparedness, and Response (EPPR)

The Emergency Prevention, Preparedness, and Response (EPPR) working group is an important component of the Arctic Council dedicated to enhancing emergency response capabilities in the Arctic region, with a focus on environmental emergencies and search and rescue operations. EPPR's main aim is identifying and assessing potential risks and hazards, developing best practices and guidelines, and providing training and capacity-building to member states and relevant organizations. In particular, EPPR has focused on improving response capabilities in the event of an oil spill, which could have significant environmental and economic consequences in the Arctic region.⁸¹

Severe weather and harsh conditions of the Arctic make search and rescue operations more crucial and difficult. EPPR has played a significant role in enhancing search and rescue capabilities by working to improve communication and cooperation among member states and pertinent organizations, thus it has produced standards and best practices for search and rescue operations in the Arctic region.⁸²

⁸⁰ CAFF - Conservation of Arctic Flora and Fauna. Arctic Council. Accessed January 8, 2023. <https://arctic-council.org/about/working-groups/caff/>.

⁸¹ EPPR. "Emergency Prevention, Preparedness, and Response (EPPR)." Arctic Council. Accessed January 8, 2023. <https://arctic-council.org/about/working-groups/eppr/>.

⁸² EPPR. "Arctic Search and Rescue (ASR) Agreement." Arctic Council, 2011. <https://oaarchive.arctic-council.org/handle/11374/1659>.

Overall, EPPR’s work is crucial for building resilience in the Arctic region by ensuring profound emergency procedures, preparedness, and response measures to protect the people and environment of the Arctic.

2.4.5. Protection of the Arctic Marine Environment (PAME)

As previously mentioned, the Arctic is a distinct and delicate ecosystem that is undergoing swift transformations as a caused by climate change, which has been exacerbated by increased human activity in recent times. Acknowledging this fact, the Protection of the Arctic Marine Environment (PAME) working group was established under the Arctic Council in 1991.⁸³

As the Arctic is becoming more and more popular for international shipping due to climate change emerging of new shipping routes in the Northern Passage, the risk of contamination in the Arctic is rising rapidly. Climate change is already a fatal threat to the delicate nature of the polar region and with more human activity, environmental pollution makes the situation considerably worse. Only through organized initiatives will it be possible to protect the Arctic. PAME is one of the platforms where people can come together, assess strategies, and implement them in order to establish that protection.

PAME is a forum of the Arctic Council that focuses on the preservation and sustainable utilization of the Arctic marine ecosystem. Its responsibilities include formulating policies and directives, performing analyses and research, and fostering collaboration between Arctic nations and stakeholders. The main priority of PAME is to develop and implement measures to reduce the impact of shipping on the Arctic marine environment. This includes creating standards for safe and environmentally friendly shipping procedures, determining and minimizing the risks and effects of shipping

⁸³ Arctic Council. “Protection of the Arctic Marine Environment (PAME).” Arctic Council. Accessed January 8, 2023. <https://arctic-council.org/about/working-groups/pame/>.

operations, and enhancing the response to environmental catastrophes such as oil spills. PAME is attempting to solve the problem of marine debris in the Arctic. This entails creating a thorough plan to lessen marine litter as well as encouraging global cooperation to address the problem. Another important focus of PAME is to assess the impact of climate change on the Arctic marine environment and develop adaptation measures. Monitoring the changing Arctic ecosystem, developing strategies to mitigate the impacts of climate change, and promoting the use of sustainable technologies and practices are among its initiatives. PAME is composed of representatives from Arctic countries, indigenous peoples' organizations, and observer states and organizations. This diversity of perspectives and expertise ensures that PAME's work is profound, comprehensive, effective, and responsive to the needs and concerns of all parties.⁸⁴

PAME's activity contributes to the preservation of the marine environment in the Arctic and the advancement of regional sustainable growth. Its efforts are essential to ensure that the Arctic stays a clean, distinctive, and vital environment for future generations.

2.4.6. Sustainable Development Working Group (SDWG)

As we covered, the Arctic is a vast and complex region that is home to unique ecosystems and diverse communities. In recognition of the importance of sustainable development in this region, the Arctic Council established the Sustainable Development Working Group (SDWG) in 1996. The main priorities of the SDWG include promoting socio-economic security and development in the Arctic while preserving the region's unique environment and cultural heritage. SDWG focuses on developing sustainable tourism strategies, promoting sustainable energy and infrastructure development, and supporting indigenous peoples' economic and social progress. Besides the economic

⁸⁴ Arctic Council. 2015. Protection of the Arctic Marine Environment (PAME) Work Plan 2015-2021. Tromsø: PAME Secretariat. <https://oaarchive.arctic-council.org/handle/11374/968>.

assessments, SDWG works on developing educational opportunities, human health, infrastructure, reduction/elimination of inequalities, scientific research, sustainable business development, sustainable energy, water and sanitation services, and transportation in the Arctic region.⁸⁵

Another important focus of the SDWG is to address the issue of food security in the Arctic. In order to achieve this goal, SDWG works on developing strategies to promote sustainable fishing and aquaculture, supporting local food production and traditional knowledge, and addressing the impacts of climate change on Arctic ecosystems and sources that provide food. The SDWG is also quite diversified. It is composed of representatives from Arctic countries, indigenous peoples' organizations, and observer states and organizations. Through its diversified and profound structure, SDWG has been quite successful in helping to ensure that the Arctic remains a vibrant and sustainable region for years to come.⁸⁶

2.5. Arctic Council Observers

As previously discussed, the Arctic Council is a distinctive international forum that unites the Arctic States and the Arctic's indigenous peoples to identify and address issues of mutual interest in the region.

In addition to the members, the Arctic Council also includes a category of observers from outside the Arctic region. Observers are non-Arctic states, intergovernmental organizations, non-governmental organizations, as well as other entities that have an interest in Arctic issues in which the Arctic Council has granted permission to participate in its meetings and activities. There are currently 13 observer states, including China, and

⁸⁵ Sustainable Development Working Group (SDWG). "Sustainable Development Working Group." Arctic Council, accessed January 9, 2023. <https://sdwg.org/>.

⁸⁶ SDWG. 2018. Arctic Human Development Report II: Regional Processes and Global Linkages. Copenhagen: Nordic Council of Ministers. <https://www.arctic-council.org/en/resources/publications/arctic-human-development-report-ii-regional-processes-and-global-linkages>.

13 international organizations, including the International Maritime Organization, and the World Wildlife Fund. The role of observers in the Arctic Council is primarily to provide expertise and perspective on issues related to the Arctic and to promote cooperation and collaboration among Arctic stakeholders. Observers are invited to attend meetings of the Arctic Council and its working groups; thus, they can participate in discussions, offer input, and share information. Whereas, it is important to note that observers do not have decision-making authority in the Arctic Council, they are only allowed to participate in the process and contribute by presenting information and other input. The decision-making authority is solely reserved for the member states and Indigenous Permanent Participants that we covered. “Decisions at all levels in the Arctic Council are the exclusive right and responsibility of the eight Arctic States with the involvement of the Permanent Participants.” “Observers are also expected to respect the principles and values of the Arctic Council, including the recognition of the rights of indigenous peoples, environmental protection, and sustainable development.”⁸⁷

The Arctic Council observers play quite a significant role in the forum by bringing diverse perspectives and expertise to discussions as well as contributing to building partnerships and collaborations among Arctic stakeholders. Their participation in the Arctic Council brings international cooperation; it affirms to ensure that the Arctic remains a region of peace, the indigenous people’s rights are protected, and stability is maintained.⁸⁸

⁸⁷ Arctic Council. “Observers.” Arctic Council, accessed January 9, 2023. <https://arctic-council.org/about/observers/>.

⁸⁸ Hamilton, L.C., J. Brakke, and A. Cahill. 2018. “Observer states and non-Arctic actors in the governance of the Arctic.” In *Handbook of the Politics of the Arctic*, edited by L.C. Hamilton and W.E. Hall, 187-208. Cheltenham, UK: Edward Elgar Publishing.

2.5.1. Non-Arctic States

The non-Arctic state observers of the Arctic Council are countries that do not have a coastline on the Arctic Ocean, which have a demonstrated interest in Arctic issues and are committed to contributing to the work of the Arctic Council.

There are currently 13 non-Arctic state observers of the Arctic Council, which are: China, France, Germany, India, Italy, Japan, the Netherlands, Poland, Singapore, South Korea, Spain, Switzerland, and the United Kingdom. These observer countries participate in the meetings and activities of the Arctic Council, including the Ministerial Meetings and the Senior Arctic Officials meetings, and contribute to the work of the Council through their expertise and financial support.⁸⁹

2.5.2. Intergovernmental and Interparliamentary Organizations

Since its establishment in 1996, the Arctic Council has always been open to organizations as participants and outside observers. The participation of observer organizations contributes significantly to the Council's work and promotes international cooperation on Arctic issues. One of the key types of observers of the Arctic Council is intergovernmental organizations, which are organizations that are composed of member states and are established through treaties or other international agreements. Intergovernmental organizations that are observers of the Arctic Council such as the United Nations, and the International Maritime Organization provide expertise and resources on a range of issues. Some of the issues addressed by intergovernmental organizations include climate change, shipping, and environmental protection. They work closely with Arctic

⁸⁹ Arctic Council. "Observers." Arctic Council. Accessed January 9, 2023. <https://arctic-council.org/about/observers/>.

states and indigenous peoples to promote sustainable development and protect the fragile Arctic environment.⁹⁰

In addition to intergovernmental organizations, the Arctic Council also includes the participation of interparliamentary organizations as observers. Interparliamentary organizations are composed of elected representatives from national parliaments, and they work to promote dialogue and cooperation on issues of mutual concern. Interparliamentary organizations that are observers of the Arctic Council include the Nordic Council and the Parliamentary Assembly of the Council of Europe. These organizations provide a valuable platform for parliamentarians to discuss Arctic issues and raise awareness among their constituents about the importance of the Arctic region. The participation of intergovernmental and interparliamentary organizations as observers of the Arctic Council reflects the global significance of the Arctic region and the need for international cooperation to address the complex and interconnected challenges facing the Arctic. Through their participation, these organizations bring valuable expertise, resources, and perspectives to the Arctic Council, and they help to promote international cooperation and understanding on issues related to the Arctic environment and sustainable development. As the Arctic region continues to face new and complex challenges, the participation of intergovernmental and interparliamentary organizations as observers of the Arctic Council will remain a crucial element of international cooperation on Arctic issues.

“There is a total of 13 intergovernmental and interparliamentary organizations as of 2023, which are:

- International Council for the Exploration of the Sea (ICES)
- International Federation of Red Cross & Red Crescent Societies (IFRC)
- International Maritime Organization (IMO)
- International Union for the Conservation of Nature (IUCN)
- Nordic Council of Ministers (NCM)

⁹⁰ Arctic Parliamentary Conference. “About the Arctic Parliamentary Conference.” Arctic Parliamentary Conference. Accessed January 9, 2023. <https://arcticparliament.org/about/>.

- Nordic Environment Finance Corporation (NEFCO)
- North Atlantic Marine Mammal Commission (NAMMCO)
- OSPAR Commission
- Standing Committee of the Parliamentarians of the Arctic Region (SCPAR)
- United Nations Development Programme (UNDP)
- United Nations Environment Programme (UNEP)
- World Meteorological Organization (WMO)
- West Nordic Council (WNC)”⁹¹

2.5.3. Non-Governmental Organizations (NGOs)

Non-governmental organizations (NGOs) are non-profit organizations that operate independently of governments and are often focused on specific issues such as human rights, children, hunger, or environmental protection. NGOs such as World Wildlife Fund and the Arctic Institute have played a significant role as participants and observers of the Arctic Council since its establishment in 1996. The participation of NGOs as observers of the Arctic Council reflects the recognition of the importance of civil society in shaping public policy and the need for diverse voices to be heard in the decision-making process. NGOs bring valuable expertise, resources, and perspectives to the work of the Arctic Council, and they play a significant role in promoting sustainable development and environmental protection in the Arctic region. NGOs often work closely with indigenous peoples’ organizations and other observer organizations to identify areas of concern and develop policy recommendations for the Arctic Council.⁹²

NGOs that are observers of the Arctic Council participate in a range of activities, including working groups, expert meetings, and conferences. They also provide input and

⁹¹ Arctic Council. “Observers.” Arctic Council. Accessed January 9, 2023. <https://arctic-council.org/about/observers/>.

⁹² Arctic NGO Forum. “About the Arctic NGO Forum.” Arctic NGO Forum. Accessed January 9, 2023. <https://www.arcticngoforum.org/about-us/>.

advice to the Arctic Council on issues related to environmental protection, climate change, and sustainable development. NGOs have been particularly active in promoting the adoption of sustainable development goals for the Arctic region and in advocating for increased cooperation among Arctic states to address the complex challenges facing the region.

“There are 12 NGOs that are observers of the Arctic Council as of 2023, which are:

- Advisory Committee on Protection of the Sea (ACOPS)
- Arctic Institute of North America (AINA)
- Association of World Reindeer Herders (AWRH)
- Circumpolar Conservation Union (CCU)
- International Arctic Science Committee (IASC)
- International Arctic Social Sciences Association (IASSA)
- International Union for Circumpolar Health (IUCH)
- International Work Group for Indigenous Affairs (IWGIA)
- Northern Forum (NF)
- Oceana
- University of the Arctic (UArctic)
- World Wide Fund for Nature, Arctic Programme (WWF)”⁹³

⁹³ Arctic Council. “Observers.” Arctic Council. Accessed January 9, 2023. <https://arctic-council.org/about/observers/>.

3. MELTING ARCTIC:

IMPACTS OF CLIMATE CHANGE ON THE POLAR REGION

3.1. Climate Change Overview

Climate change refers to the long-term alteration in the usual weather found in a place. This could be a change in temperature, wind patterns, precipitation, etc. In the context we use today, climate change refers to an alteration in Earth's climate as in a change in Earth's usual temperature due to human activities, particularly the burning of fossil fuels, deforestation, and other industrial processes. United States National Aeronautics and Space Administration (hereinafter referred to as "NASA") defines climate change as: "The long-term heating of Earth's surface observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere."⁹⁴ In other words, it is the rise of average temperatures in the planet's atmosphere and oceans, which is mostly brought on by the burning of fossil fuels and deforestation, which release greenhouse gases into the atmosphere and trap solar heat.⁹⁵

The Earth's climate has been constantly changing throughout its history. Whereas, the current rate of change is unprecedented, with temperatures rising faster than any level in the last thousand years. There is a scientific consensus that the increase in the speed of alteration of Earth's climate is caused by human activities, particularly the burning of fossil fuels like coal, oil, and gas, which release large amounts of carbon dioxide and other greenhouse gases into the atmosphere. These gases trap heat from the sun, leading to an

⁹⁴ "Global Warming vs. Climate Change." Climate Change: Vital Signs of the Planet. National Aeronautics and Space Administration, n.d. Accessed January 11, 2023. <https://climate.nasa.gov/global-warming-vs-climate-change/>.

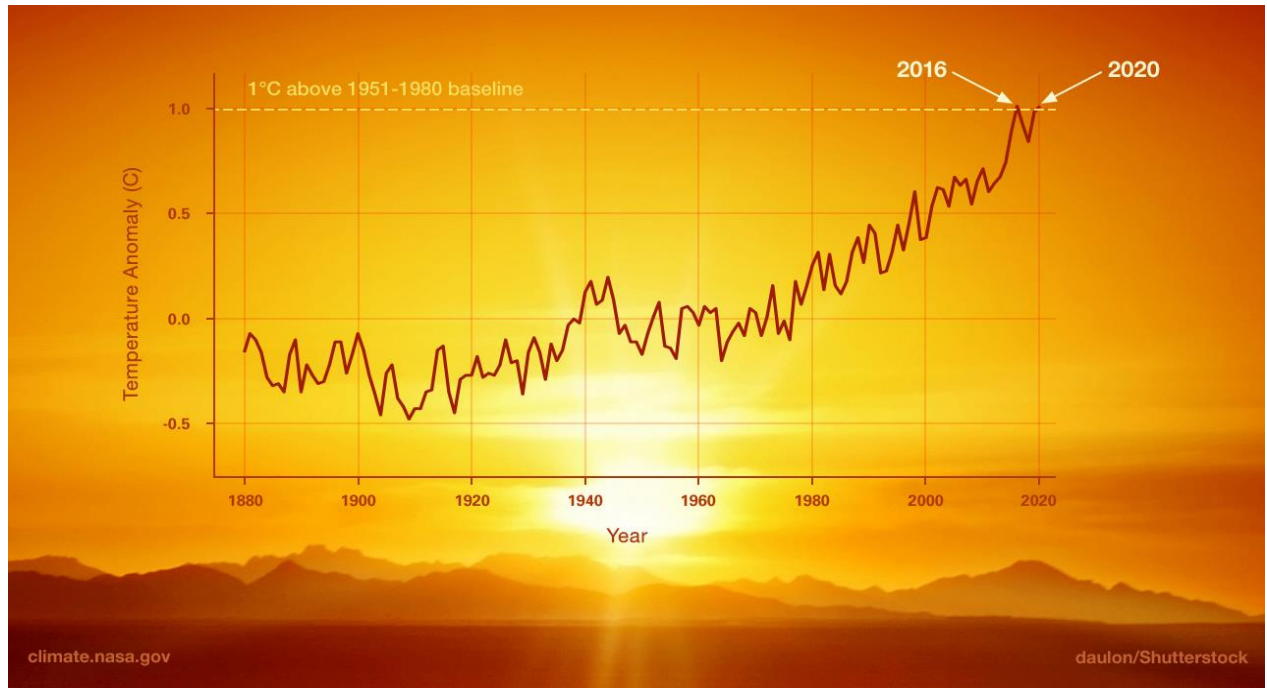
⁹⁵ National Aeronautics and Space Administration (NASA). Climate Change: How Do We Know?. Accessed January 11, 2023. <https://climate.nasa.gov/evidence/>.

overall warming of the planet, hence global warming. This phenomenon is also called “Global Warming”. This increase in temperature is causing countless negative impacts on the environment throughout the planet but more severely in the polar region with the melting of polar ice caps. Global warming’s impacts are already being felt on a worldwide scale. Since the beginning of the 21st century, more frequent and intense heatwaves, storms, shifts in plant and animal distributions, and droughts occurred than ever been observed before. Thus, it would be fair to claim that climate change is arguably the most important problem humanity is facing today. In addition to increasing the frequency and severity of heatwaves, droughts, and wildfires, rising temperatures are also contributing to the melting of glaciers and sea ice, which raises sea levels and intensifies storms and floods. These effects are having an impact not only on the environment but also on people’s health, way of life, and economies.⁹⁶

It is essential to increase the amount of forests and reduce greenhouse gas emissions by transitioning to cleaner sources of energy, such as wind and solar power in order to combat climate change and save the planet. Otherwise, the consequences of not taking action on climate change will be severe, with impacts ranging from increased risk of natural disasters to threats to global food and water security. If steps are not taken to minimize greenhouse gas emissions, the effects of global warming are likely to worsen in the future. According to the Intergovernmental Panel on Climate Change (IPCC), the planet’s ecosystems and human societies could suffer irreparable harm if global temperatures increase by up to 4.8°C by the end of the 21st century.

⁹⁶ United States Environmental Protection Agency (EPA). Climate Change Indicators: Climate Forcing. Accessed January 11, 2023. <https://www.epa.gov/climate-indicators/climate-forcing>.

Figure 3.1. Global Warming Chart of NASA/Caltech Goddard Institute for Space Studies



“The graph above illustrates the change in global surface temperature relative to 1951-1980 average temperatures, with the year 2020 tying with 2016 for hottest on record” NASA points out the increasing rate of temperature rise, particularly in the last 20 years. This graph shows that if we as humanity do not present a serious combat against the climate change, the Earth will reach a “tipping point” in which it becomes uninhabitable for humans and many other species.⁹⁷

Fortunately, countries all across the world are acting to reduce their greenhouse gas emissions and switch to a low-carbon economy in order to combat global warming. Aiming to keep global warming well below 2°C over pre-industrial levels and pursuing initiatives to keep the temperature increase to 1.5°C, the Paris Agreement was signed in

⁹⁷ NASA Goddard Institute for Space Studies. “GISTEMP Surface Temperature Analysis (GISTEMP v4).” Accessed January 11, 2023. https://data.giss.nasa.gov/gistemp/graphs_v4/.

2015. As part of the agreement, nations agreed to set their own goals for reducing emissions and to update the world on how well they are doing. The world is still not on schedule to reach the goals of the Paris Agreement, despite these efforts. The United Nations Framework Convention on Climate Change (UNFCCC) has cautioned that the level of current commitments would only limit global warming to around 3°C, far above the target of 1.5°C. Meeting the objectives of the Paris Agreement requires all nations and corporations to intensify their endeavors to decrease emissions and shift towards a low-carbon economy. Investments in renewable energy, energy-efficient technology, and low-emission transportation are essential, as are laws and policies that encourage emissions reductions and prohibit high-emission activities. On the other hand, it will be crucial to adapt to the effects of climate change that are occurring already and are anticipated to get worse in the future in addition to lowering emissions. This can entail taking precautions against increasing sea levels by constructing sea barriers, breeding crops that can withstand droughts, and enhancing water management systems.⁹⁸

Global challenges like the combat against climate change require global cooperation. To address this challenge and secure a sustainable future for future generations, it is vital that nations and corporations collaborate on a reliable scientific strategy.

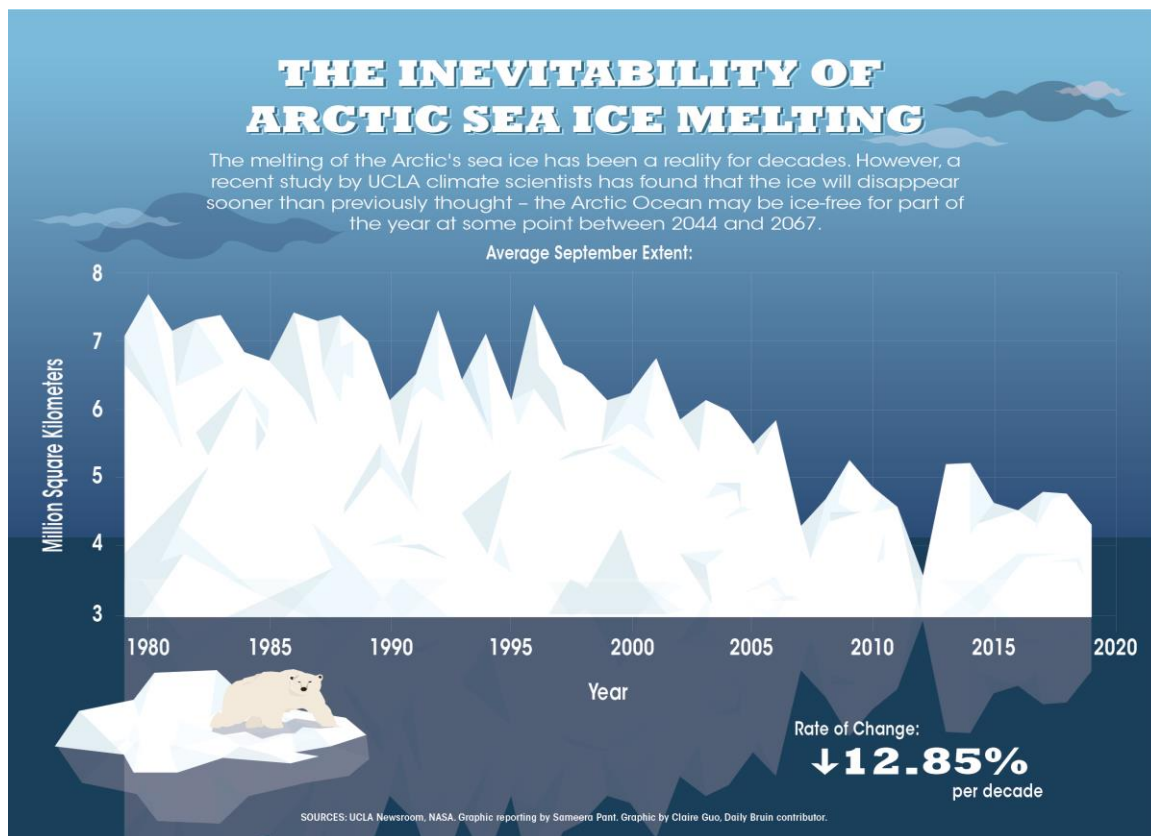
3.2. Impacts of Climate Change on the Arctic

The negative effects of climate change in the Arctic are far-reaching and diverse, affecting both the ecosystem and the human societies that depend on it. The melting of sea ice is a clear and evident consequence of climate change in the Arctic. The Arctic sea ice has been shrinking rapidly particularly since the year 2000, with the extent of sea ice in the summer months reaching record lows. This melting of sea ice not only increases the sea

⁹⁸ Intergovernmental Panel on Climate Change (IPCC). Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, 2013.

levels but also has a considerable impact on the Arctic ecosystem, as many species, such as polar bears and seals, rely on the sea ice for their survival. Furthermore, the melting of sea ice affects the Earth's ecosystem as a whole as the Arctic is an important regulator of the Earth's climate. Alterations in the Arctic ecosystem result in global consequences. For example, melting sea ice results in a change in the salt level of the ocean, which affects the entire marine biology.

Figure 3.2. UCLA Graph of Melting Ice



The image illustrates that the volume of ice is changing at a rate of more than 10% per decade. The melting of sea ice is causing the Arctic Ocean to absorb more solar radiation, resulting in a feedback loop of increased warming and further ice melting. Therefore, the rate is predicted to grow even bigger over time and keep on accelerating. According to the

Norwegian Polar Institute, which runs management-oriented scientific research in the Arctic and the Antarctic: “The Arctic is warming three times as fast as the global average. This is mainly because the melting of snow and ice exposes a darker surface and increases the amount of solar energy absorbed in these areas (albedo effect). This significant regional warming leads to continued loss of sea ice, melting of glaciers and of the Greenland ice cap.”⁹⁹ Scientific research indicates that the Arctic is at a greater risk from climate change compared to other regions across the globe. “Several points in the Arctic are warming up to four times as fast as other regions in the world, according to research undertaken by a team of climate scientists, with a recent study predicting summer sea ice could disappear entirely as early as 2035.”^{100 101}

According to the Intergovernmental Panel on Climate Change (IPCC), the amount of ice in the Arctic Sea has been declining each year making up to approximately 75% meltdown from 2004 to 2019. The remaining ice happens to be thinner and easier to melt. Furthermore, the melting of the ice is so severe that killer whales once blocked by the ice are now able to move in and threaten the ecosystem up and down the food chain.¹⁰²

Another impact of climate change on the Arctic is the thawing of permafrost. Permafrost is a layer of soil that remains frozen year-round, and it covers much of the Arctic. With the rising temperature via global warming, the permafrost is thawing, releasing large amounts of toxic gases into the atmosphere. Melting permafrost releases carbon dioxide, methane, and black carbon which not only pollute the air; but also create a vicious circle causing further exacerbating global warming. Climate change is also having

⁹⁹ “Climate Change in the Arctic.” Norwegian Polar Institute. Accessed January 12, 2023. <https://www.npolar.no/en/themes/climate-change-in-the-arctic/#toggle-id-5>.

¹⁰⁰ Borunda, Alejandra. “Climate Change Is Having Widespread Health Impacts, Report Says.” National Geographic, March 4, 2021. <https://www.nationalgeographic.com/environment/2021/03/climate-change-is-having-widespread-health-impacts-report-says/>.

¹⁰¹ Voosen, Paul. “The Climate Solution Actually Adding Millions of Tons of CO2 Into the Atmosphere.” Science Magazine, March 22, 2021. <https://www.sciencemag.org/news/2021/03/climate-solution-actually-adding-millions-tons-co2-atmosphere>.

¹⁰² Purtill, James. “What Would Happen if the World Reacted to Climate Change Like It's Reacting to the Coronavirus?” BBC Future, April 22, 2020. <https://www.bbc.com/future/article/20200422-what-would-happen-if-the-world-reacted-to-climate-change-like-it-is-to-coronavirus>.

an impact on the human societies that live in the Arctic. Many indigenous communities in the Arctic rely on hunting and fishing for their subsistence, and changes in the Arctic ecosystem are having a significant impact on their way of life, economic security, and well-being. For example, as the sea ice melts, it becomes more difficult for hunters to access traditional hunting grounds. Survival becoming even harder for a place with such harsh conditions means emigration, and unfortunately, that usually means vanishing unique cultures through assimilation.¹⁰³

In conclusion, climate change is having a significant impact on the Arctic region, both in terms of its natural environment and its human societies. As we covered previously, there are Arctic countries, international and multinational as well as non-governmental organizations, and other initiatives in the Arctic Council that combats climate change in order to preserve the indigenous societies located in the Arctic region. Although, it would be impossible to win that war without the committed participation of the entire world society. The melting of sea ice, the thawing of permafrost, and changes in the Arctic ecosystem are all having severe and diverse impacts. It is clear that urgent action is needed to address the root causes of climate change and to mitigate its impacts on the Arctic and the Earth as a whole.

3.3. Impacts of Climate Change on International Trade and Shipping

As previously explained, climate change is having far-reaching impacts on many aspects of world society, including international trade. The impacts of climate change on international trade are complex and multifaceted, and they are likely to get worse in the future decades as the effects of climate change intensify. One of the main effects of climate change on international trade is the disruption of global supply chains. Climate change is leading to more frequent and severe weather events, such as floods, hurricanes, and

¹⁰³ Shankman, Sabrina. "There's a Very Simple, No-brainer Solution to Climate Change. It's Called Trees." NBC News, September 17, 2019. <https://www.nbcnews.com/mach/science/there-s-very-simple-no-brainer-solution-climate-change-it-ncna1057371>.

droughts, which significantly disrupt and damage the production process of goods as well as infrastructure and transportation. This can lead to delays in the delivery of goods and services, and it increases the cost of transportation and logistics. Another impact of climate change on international trade is the shift in demand for certain products and services. As the climate changes, consumers are becoming more aware of the environmental impacts of the products they purchase, as a result, they tend to start demanding products that are produced sustainably and with low carbon footprints. This is leading to a shift in demand away from certain products, such as fossil fuels, and toward products that are produced sustainably, such as renewable energy technologies.

Climate change is also affecting the agricultural sector, which is one of the most important components of international trade networks. Alterations in temperature and precipitation patterns are leading to reduced yields and lower quality crops in many regions, which can lead to food shortages and price increases. This can have significant impacts on global food markets, and it can lead to trade imbalances and increased volatility in commodity prices. Evidently, climate change is one of the most challenging issues world society is facing today. It has become increasingly clear that the effects of climate change are not limited to the environment but also have significant economic and social implications. One industry that has been severely impacted by climate change is international shipping. Changes in weather patterns significantly disrupt international shipping. Extreme weather events such as hurricanes, typhoons, and cyclones are becoming more frequent and intense due to climate change. These events can cause serious damage to shipping vessels and infrastructure, disrupt supply chains, and lead to increased costs for the shipping industry. While global warming is evidently an accelerating global issue that is altering and threatening the environment of the entire world, the effects of it are more severe in the regions around the North Pole as we covered.¹⁰⁴

¹⁰⁴ Irwin, D., & Rada, N. (2018). Climate change and international trade: implications for agriculture. In *Handbook on Trade and the Environment* (pp. 305-324). Edward Elgar Publishing.

Another way in which climate change affects international shipping is through rising sea levels. As sea levels continue to rise, ports and other coastal infrastructure may become inundated and unusable. Furthermore, rising sea levels make navigation more challenging and increase the risk of accidents. In 2020, approximately 21000 tons of oil spilled from a storage tank in Siberia at the power plant belonging to a Russian nickel and palladium mining and smelting company named Nornickel. Investigators reported that the tank sank because of the melting permafrost due to global warming weakening the tank's support.¹⁰⁵

In response to these challenges, the shipping industry has begun to take action to reduce its carbon footprint and mitigate the impacts of climate change. One approach is to reduce emissions from shipping vessels through the use of cleaner fuels or the adoption of new technologies such as wind and solar power. Another approach is to optimize shipping routes and schedules to reduce fuel consumption and emissions.¹⁰⁶

As the Arctic region is experiencing the effects of climate change more rapidly than any other region on the planet, the temperatures continue to rise, and the Arctic sea ice is melting at an unprecedented rate. While this presents the negative impacts we covered so far on the environment and world society, it also creates new opportunities for international shipping. Due to the melting of the ice in the Arctic Ocean, new shipping routes have become available for commercial usage. The Northern Sea Route (NSR) and the Northwest Passage (NWP) are two of the main shipping routes that are being used more and more frequently every passing year. Although these routes are more challenging than the traditional shipping routes, they offer significant cost and time savings compared to the Suez Canal or the Panama Canal for instance. Shipping companies are increasingly

¹⁰⁵ Khurshudyan, Isabelle and Andrew Freedman. "An oil spill in Russia's Arctic exposes problems with Moscow's big plans for the far north." Washington Post, July 28, 2020. <https://www.washingtonpost.com/climate-environment/2020/07/28/an-oil-spill-russias-arctic-exposes-problems-moscows-big-plans-far-north/>.

¹⁰⁶ International Maritime Organization (IMO). (2018). Initial IMO strategy on reduction of GHG emissions from ships. IMO. <https://www.imo.org/en/OurWork/Environment/Pages/IMO-Strategy-on-reduction-of-GHG-emissions-from-ships.aspx>

interested in using these routes to transport goods between Asia, Europe, and North America.¹⁰⁷

Particularly for China, the newly emerged shipping routes in the Northern Sea have become a state strategy that will shape the future of international shipping. The Polar Silk Road is a term used to describe China's strategic vision to develop shipping routes and infrastructure in the Arctic region that have recently emerged due to climate change. This initiative is part of China's Belt and Road Initiative (BRI), which we will evaluate in detail in the following chapters. One could argue that the most notable effect of climate change on global trade and shipping is the emergence of the Polar Silk Road. This newly established sea route is perceived as an alternative for China to secure its energy supply, enhance trade, and extend its worldwide influence in the Arctic region. As much as the increased shipping activity in the Arctic could have negative impacts on Arctic ecosystems, which are already vulnerable due to climate change, it presents a golden opportunity for the Arctic states in the context of economic security. In other words, the opening of new shipping routes in the Arctic due to climate change presents both opportunities and challenges for the shipping industry and the societies of the Arctic. While these routes offer significant cost and time savings, the environmental and social impacts must be carefully considered and mitigated.¹⁰⁸

In conclusion, international trade and shipping are significantly affected due to climate change. The impacts of climate change are likely to become more severe and thus more pronounced in the coming decades. Disruptions in global supply chains, shifts in demand for certain products and services, and changes in agricultural production are all likely to affect international trade networks in diverse ways. As such, it is important for policymakers and business leaders to develop strategies that mitigate the impacts of climate change on international trade and foster sustainable trade practices. While the effects of

¹⁰⁷ Ng, A. K. Y., & Chen, L. (2019). Trade and Environment in the WTO Era. In *Routledge Handbook of the Economics of Climate Change Mitigation* (pp. 139-155). Routledge.

¹⁰⁸ Berritella, M., & Zhang, J. (2010). The impact of climate change on international seaborne trade: A review of the literature. *Transportation Research Part D: Transport and Environment*, 15(5), 281-294. doi:10.1016/j.trd.2010.02.005

climate change in the Arctic are without a doubt, causing an overwhelming environmental crisis that is threatening the entire world, the declining sea ice also means the Arctic Ocean is becoming more and more feasible every day for commercial shipping as the opening of new routes shortens the distance between Asia and Europe. Through the cooperation of shipping companies, governments, and international organizations it shall be possible to ensure that international shipping via newly opening shipping routes in the Arctic is safe, sustainable, and socially responsible.

4. ECONOMIC SECURITY OF CHINA

4.1. Overview of China's Economic Security

Economic security refers to the ability of a country to follow its choice of policies and protect its economic interests while sustaining economic development, particularly in the face of external threats such as economic crises, trade disputes, and geopolitical tensions. It encompasses a range of factors, including macroeconomic stability, energy security, food and water security, technology security, and national defense. Economic security is essential for maintaining social stability, promoting sustainable development, and ensuring a state's competitiveness in the global platform.¹⁰⁹

According to former Secretary of State for Business and leader of the Liberal Democrat Party in Britain Sir Vince Cable, economic security can be described as the ability of a nation to obtain the resources and products it requires to keep its economic activities operating efficiently and safeguard itself from economic shocks or vulnerabilities. In other words, the ability of a nation to safeguard its own economy against the detrimental impacts of economic policies or actions done by other nations is referred to as economic security in the context of international relations.¹¹⁰

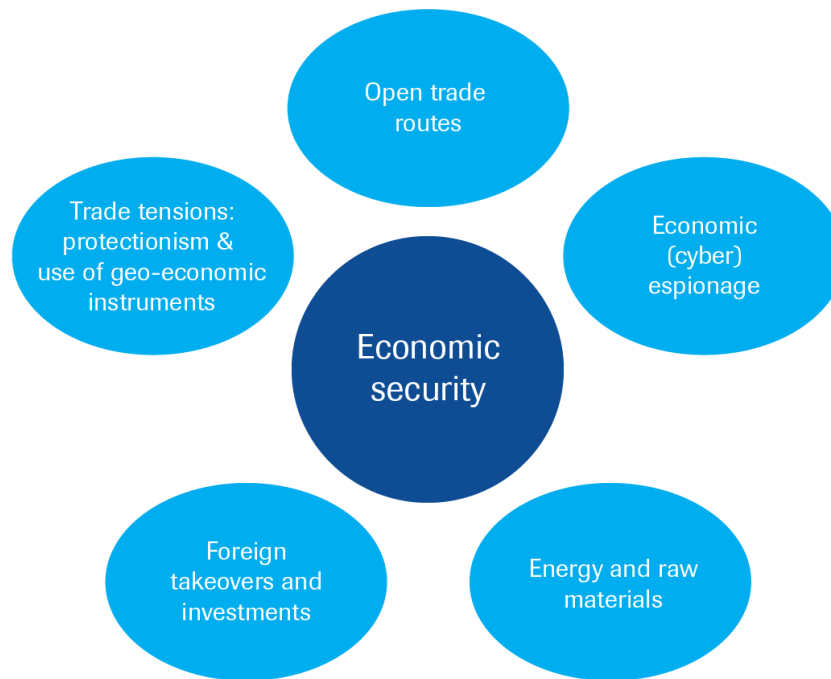
“The maintenance of economic security essentially entails achieving these five objectives”¹¹¹ (see Figure 4.1.):

¹⁰⁹ Oxhorn, P. (2003). Economic security: conceptual clarity and policy implications. *Canadian Journal of Political Science*, 36(4), 845-864.

¹¹⁰ Cable, Vincent. “What Is International Economic Security?” *International Affairs* 71, no. 2 (1995): 305-324. Accessed January 25, 2023. doi:10.2307/2623436.

¹¹¹ “The Economic Security with Chinese Characteristics.” *Clingendael Strategic Monitor 2019-2020*, Clingendael Institute, 2019, www.clingendael.org/pub/2019/strategic-monitor-2019-2020/economic-security-with-chinese-characteristics/.

Figure 4.1. Economic Security Components



Despite grappling with various economic security challenges, China, as an economic superpower, is making remarkable advancements across all five components. China has experienced phenomenal economic growth, particularly since 2000. However, in the 2020s, it is confronting various domestic and international economic perils that jeopardize its stability and progress. These risks include the ongoing impacts of the COVID-19 pandemic, increasing trade tensions with the United States and other countries, rising debt levels, the real-estate crisis, and a shifting global economic landscape. In order to address these challenges and maintain its economic security, China has implemented various policies and strategies. These include promoting innovation and technological advancement, increasing domestic consumption, and expanding as well as securing its volume of international trade as the Chinese economy is mainly based on it.¹¹²

¹¹² Acharya, A., & Chen, X. (2019). China's economic security: domestic and international implications. *International Affairs*, 95(4), 757-776.

Without international partnerships particularly with western countries, it is quite challenging to protect let alone improve the global trade volume for any state. There are also concerns that China's economic policies and practices, such as its state-led model of economic development and its ambitious global infrastructure projects, could pose risks to the environment, and the stability of the global economy. Some countries, like the United States and Canada, have expressed concerns about China's commercial practices, citing instances of "intellectual property theft, forced technology transfer, and subsidies to state-owned enterprises".¹¹³ Meanwhile, there are more severe territorial disputes with other countries such as Taiwan and the Philippines, as China asserts its claim over a portion or the entirety of their sovereign land. Economic security is a vital aspect of China's overall security and development in the end. Chinese leaders recognize the importance of economic security and are implementing a range of policies and strategies to address the challenges it faces. However, given the complex and evolving nature of the global economic landscape, continued vigilance and adaptability will be necessary to ensure China's long-term economic security and stability.¹¹⁴

The economic security of a small nation may be regarded as a regional concern, however, for major economic powers such as the United States and China, it is viewed as a matter of global significance and an important factor in the field of international relations.

China's rapid economic development over the recent decades has made China the world's leading trading nation. Due to its vast commercial output, China has emerged as a major global economic force and is currently ranked as the world's second-largest economy, following the United States, which positions China as an economic superpower. Hence, China's significant economic presence on the global stage, the issue of its economic security has become a matter of global concern, particularly in today's highly

¹¹³ Carnegie Endowment for International Peace. "Countering Unfair Chinese Economic Practices and Intellectual Property Theft." Accessed February 25, 2022. <https://carnegieendowment.org/2022/04/25/countering-unfair-chinese-economic-practices-and-intellectual-property-theft-pub-86925>.

¹¹⁴ Brødsgaard, K. E. (2020). Economic security and the Belt and Road Initiative. In *China's Belt and Road Initiative and Its Impacts on the World* (pp. 63-81). Palgrave Macmillan, Cham.

interconnected financial system. Given that the Chinese economy is heavily reliant on its global trade, the economic security of China is inextricably linked to the volume and security of its international trade.¹¹⁵

4.2. Assessment of China's International Trade in the Context of Economic Security

The Chinese economy is mostly based on exports and places a strong emphasis on manufacturing and industry, has been expanding at an unprecedented rate, making it arguably the most significant player in global trade. Yet, this quick expansion has also brought about a lot of difficulties, both nationally and globally. China's international trade has played the most significant role in its economic growth and development over the past few decades. As China's economy has become more interconnected with the global economy, it has simultaneously increased the country's vulnerability to risks that may affect its economic security. Today, the volume and security of China's international trade is arguably the most significant component of China's economic security.¹¹⁶

China has faced a range of challenges and risks to its economic security in the context of its international trade. These include trade tensions with major trading partners, rising debt levels, slowing economic growth, and environmental degradation. The current trade tensions between China and the United States, in particular, have had a significant impact on China's economic security. The two countries have imposed tariffs on billions of dollars worth of goods, causing uncertainty in global markets and impacting businesses and consumers worldwide. Moreover, the significant environmental toll of China's swift economic expansion cannot be ignored with pollution and resource depletion posing serious threats to the country's long-term economic security.

¹¹⁵ Lu, D., & Teng, F. (2020). From efficiency to resilience: Towards a new framework for China's economic security in the era of COVID-19. *China Economic Journal*, 13(3), 347-370

¹¹⁶ Huang, Jing. "Economic Security and the Chinese Experience." *Journal of Strategic Studies* 26, no. 4 (2003): 73-100. Accessed January 30, 2023. <https://doi.org/10.1080/01402390312331281280>.

As international trade is arguably the most critical component of the China's economic development and security the Chinese government has taken various measures to enhance the security of its international trade to address these challenges and risks. These include strengthening domestic industries, promoting innovation and technological development, and increasing investment in environmental protection and sustainable development. As China continues to navigate its economic and commercial relationships with the rest of the world, it will be important to balance economic growth with social, environmental, and financial sustainability.

Hence, disregarding the most recent years of the global COVID-19 pandemic, the Chinese economy demonstrated a significant growth rate of almost 9% in GDP each year since 1978. The trade volume has dramatically expanded since it joined the World Trade Organization (WTO) in 2001, making it the world's largest exporter of products. China has been able to increase its position within global value chains and diversify its export markets as a result. China's economic expansion, which has elevated it to the second-largest economy, was mostly fueled by massive international trade, a vast population that provided labor at a reasonable cost, and a thriving manufacturing sector. This rapid expansion has resulted in a considerable decline in the number of people living in poverty in China, which went from over 60% in the early 1980s to less than 2% at the present.¹¹⁷

China is without a doubt one of the most significant players in international trade as the second-largest importer of products and the top exporter of goods, with exports accounting for more than 20% of its GDP. China exported about \$2 trillion worth of manufactured goods in 2020, mainly electronics, textiles, and machinery. Meantime, China imported primarily petrol, semi-finished goods, raw materials, and industrial equipment.¹¹⁸

¹¹⁷ Gupta, S. (2021). The rise of the Chinese economy: A review of the literature. *International Journal of Business and Management*, 16(5), 21-32.

¹¹⁸ International Monetary Fund. "World Economic Outlook Database October 2022." [imf.org](https://www.imf.org/en/Publications/WEO/weo-database/2022/October..). Accessed January 29, 2023. <https://www.imf.org/en/Publications/WEO/weo-database/2022/October..>

According to Eurostat data, China is Europe's biggest source of imports, accounting for 22% in 2021.¹¹⁹ This data proves China to be the most significant trade partner for Europe. The situation is similar with the United States as well. China has the third-largest share of international trade with the United States following Mexico and Canada.¹²⁰

Another very important advantage China has is its enormous foreign exchange reserves which have surpassed 3 trillion US dollars. It is evidently one of the main contributors to China's economic security. By using its substantial foreign exchange reserves to sustain its currency and prevent a sharp depreciation of the Chinese yuan, China can use this enormous reserve to better manage its economy and lessen external economic pressures. China also has over two thousand tons of gold reserves. This not only contributes to its economic security but also protects its currency since China officially assured to provide as much gold as demanded to be exchanged for the Chinese yuan. In other words, it backs up the Chinese currency and thus creates trust in the international arena for the renminbi.¹²¹

The Chinese economy also has a number of flaws and vulnerabilities such as the enormous need of energy and raw materials, the substantial wealth disparity between the rich and the poor that continues to grow bigger every year, and the real estate market that is at the edge of collapsing. Significantly high level of bad loans, lack of transparency, a lack of funds in many real estate and finance companies, and unfinished yet overpriced projects quite similar to the 2008 real estate bubble burst in the United States which then evolved into a global economic crisis. And last but not least, there is a high level of pollution in China due to the high levels of manufacturing which has led to significant environmental problems and health concerns. Among these issues, as we see from the

¹¹⁹ "China-EU - International trade in goods statistics." Statistics Explained, Eurostat. Accessed January 29, 2023. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=China-EU_-_international_trade_in_goods_statistics.

¹²⁰ "2021 Statistical Analysis of U.S. Trade with China." Bureau of Industry and Security, U.S. Department of Commerce. Accessed January 30, 2023. <https://www.bis.doc.gov/index.php/country-papers/2971-2021-statistical-analysis-of-u-s-trade-with-china/>.

¹²¹ Xu, Chenggang. "The Fundamental Institutions of China's Reforms and Development." *Journal of Economic Literature* 49, no. 4 (2011): 1076–151. Accessed January 30, 2023. <https://www.jstor.org/stable/23071664>.

information presented so far, the Chinese economy depends mainly on international trade, which cannot exist without foreign demand. This means sanctions and tariffs that can be implemented (and have already been implemented) by the United States and the EU will heavily impact the economic security of China negatively. Because of the ongoing trade tensions also called the “Trade War” among the United States and China, there have already been harsh tariffs implemented on a number of Chinese goods. The ongoing trade spat between China and the United States is one of the biggest obstacles. Since 2018, the two nations have been involved in a tit-for-tat tariff war that has had a considerable negative impact on international trade and economic expansion. In addition, the COVID-19 epidemic has slowed down international trade and disrupted global supply lines, adding to China’s and other nations’ difficulties. Another vulnerability is related to the safety and efficiency of shipping routes, which makes the Polar Silk Road, which we will evaluate in detail in the upcoming chapters, not only advantageous but crucial for China’s economic security.¹²²

China has been working on alternative options in order to further advance its economic stability and sustainable growth to address these issues. As an illustration, China has signed multiple free trade agreements with different nations and areas and has been actively engaged in international trade negotiations. To lessen its reliance on exports, China has also been concentrating on strengthening its home market, particularly the service industry.¹²³

In conclusion, China’s economic security is closely tied to its international trade volume and security. While China has made significant progress in diversifying its trade affairs and reducing its dependence on foreign resources, it still faces several challenges related to trade tensions and disruptions in the global supply chain. Going forward, ensuring its economic security will require continued efforts to strengthen economic ties

¹²² Hua, Huang. “The Market Economy in China.” *Security Dialogue* 24, no. 2 (1993): 175-179. doi:10.1177/0967010693024002009.

¹²³ Yu, J. (2022). China’s efforts towards sustainable economic growth: An overview. *Journal of Economic Development*, 47(1), 45-58.

with other countries, develop domestic industries, and navigate tensions with major trading partners. The Chinese economy has both strengths and issues, including high levels of debt and a lack of transparency in the financial system. China's economic security and its involvement in global commerce are intertwined and crucial for the growth and further development of the nation's economy. Its strengths include technology, a massive manufacturing capacity, and a robust and diversified global trade. China has been taking aggressive steps to manage risks and challenges while fostering sustainable economic growth. The protection and enhancement of shipping routes is considered to be the ultimate means of achieving a more profound economic security for China, as international trade serves as the foundation of the country's economic security. Hence, the BRI and the Polar Silk Road are unquestionably huge steps toward protecting and expanding global trade routes and their connectivity would foster a more profound global trade. The international society must engage in constructive cooperation and communication as long as China continues to play a prominent cooperative role in the global economy in order to guarantee that everyone benefits from the ongoing economic globalization.

4.3. Significance of the Shipping Routes for China's Economic Security

As we have explained in the previous chapters, China's economic security relies heavily on its international trade volume. On the other hand, global economic security is also closely linked to the volume of international trade made with China in our interconnected economic system as China has become a global economic powerhouse. This is largely due to its massive capacity of production, strategic location, and vast network of shipping routes that connect it to the rest of the world.

Approximately 90% of all global trade is transported by sea, therefore, maritime transport is undeniably one of the most crucial elements of both global and Chinese economic security. Therefore, China's maritime routes are a critical component for global

economic security, because they enable the nation to transport commodities to markets all over the world efficiently and affordably.¹²⁴

In recent years, China has been investing heavily in the expansion and modernization of its port infrastructure to ensure the smooth flow of goods through its shipping routes. With the existing shipping routes as well as the developing BRI, which aims to build a network of land and sea channels linking China with markets in Asia, Europe, and Africa, China has recently made considerable investments in its shipping infrastructure and routes. This includes the development of new ports, the expansion of existing ones, and the improvement of transport links to and from these ports. These investments have helped to increase China's economic competitiveness and secure its position as a major player in the global economy. The protection and enhancement of shipping routes is crucial for China's economic security. Any disruption to the flow of goods through these routes could have a significant impact on the country's economy. For example, geopolitical tensions or conflicts in key shipping routes such as the South China Sea could disrupt China's access to vital resources and markets, leading to a decline in economic growth and stability.¹²⁵

In conclusion, shipping routes are of great significance to China's economic security. The protection and enhancement of these shipping routes are crucial for ensuring the smooth flow of goods and securing China's position as a major player in the global economy and its national economic security. In the upcoming chapters, we shall assess the significance of shipping routes for China's economic security in more detail while we evaluate the current and planned shipping routes.

4.4. Assessment of the Shipping Routes Currently Utilized by China

¹²⁴ Wang, Y. (2021). Maritime transport and global economic security: A case study of China's maritime routes. *Journal of International Trade and Economic Development*, 30(3), 325-341.

¹²⁵ Li, J. (2022). China's investment in port infrastructure and its impact on the global economy. *Journal of Transport Economics and Policy*, 56(3), 432-447.

Prosperity and economic security of China are closely linked to its ability to transport goods efficiently and securely as a significant portion of its economy relies on exports and imports. Therefore, the security and efficiency of the shipping routes that China currently utilizes play a crucial role in its economic security.

China's reliance on maritime trade has increased significantly over the years, making shipping routes crucial to the country's economic growth. More than 90% of China's imports and exports are transported via shipping routes, with most of them passing through the South China Sea, the Suez Canal, the Strait of Malacca, and the Indian Ocean. These routes are considered vital for China's economic security since they provide access to markets in Asia, Europe, and Africa not only to export goods but also to import raw materials and energy that are absolutely essential for the Chinese economy.¹²⁶

Figure 4.2. Map of the Main Shipping Routes Currently Utilized by China



¹²⁶ Chen, X. (2021). The importance of maritime trade routes for China's economic growth. *Journal of Contemporary China*, 30(127), 523-538.

International trade of China is facilitated through three primary shipping routes, namely the Atlantic, Indian Ocean, and Pacific. These shipping lanes are color-coded on the map above and they serve as the main channels that connect China to the world. With the trend toward new routes as China's trade expands and diversifies, we can anticipate more investments, particularly in infrastructure and shipping lanes, with a special focus on boosting its footprint in emerging nations.¹²⁷

When we go into more detail, we shall assess five major shipping routes that are currently utilized by China:

- 1. Asia-Europe Route:** This route connects China's major ports on the Pacific Ocean to ports in Europe, passing through the Indian Ocean, the Suez Canal, and the Mediterranean Sea. The Asia-Europe route can be considered the most significant shipping route for Chinese economic security as the volume of trade is the highest (Nearly 850 billion dollars according to CIA).¹²⁸ The major ports along this route include Shanghai, Ningbo, Qingdao, and Tianjin in China, and Rotterdam, Hamburg, and Antwerp in Europe; with Shanghai and Rotterdam being the ports with the highest trade volume.
- 2. Asia-America Route:** This route connects Chinese ports to ports in North and South America, passing through the Pacific Ocean. With the second-highest trade volume, the Asia-America route is one of the most significant shipping routes for Chinese economic security. The major ports along this route include Los Angeles, Long Beach, and Oakland in the United States, and Manzanillo, Balboa, and Cartagena in South America.

¹²⁷ "Map of China's Trading Partners." The Heritage Foundation, 2018. Accessed February 1, 2023. <https://www.heritage.org/international-economies/commentary/chinas-trade-policies-are-threatening-its-global-interests>.

¹²⁸ CIA World Factbook. Accessed February 1, 2023. <https://www.cia.gov/the-world-factbook/countries/china/#transportation>.

- 3. China-Africa Route:** This route connects China's ports to African ports, passing through the Indian Ocean. The major ports along this route include Durban, Cape Town, and Mombasa in Africa.
China has the highest volume of international trade with Africa, and it is still increasing through trade and investment, particularly in the areas of infrastructure, energy, and natural resources.
- 4. Intra-Asia Route:** This route connects China's ports to ports in other Asian countries, passing through the South China Sea, the East China Sea, and the Sea of Japan. The major ports along this route include Hong Kong, Busan, and Singapore.
- 5. China-Australia Route:** This route connects Chinese ports to Australian ports, passing through the South China Sea, the Java Sea, and the Pacific Ocean. The major ports along this route include Sydney, Melbourne, and Brisbane in Australia.

These are the main international shipping routes that China currently uses for global trade. However, it is important to note that the specific routes and ports used by China varies depending on the type of goods being transported, the destination, and other factors such as meteorological conditions and safety.¹²⁹

The advantages these routes offer in terms of trade and economic growth are likely to assure their sustained importance in the years to come. Whereas, despite the considerable benefits offered by these shipping routes, they are also associated with significant risks and hazards. Hence, in March 2021, the Suez Canal was blocked by a container ship named Ever Given, and in less than a week a queue of at least 369 emerged, and this prevented approximately 10 billion US Dollars worth of trade.¹³⁰ This incident certainly had significant implications for international economic security. The Suez Canal is a critical waterway that connects the Mediterranean Sea to the Red Sea and provides a vital trade

¹²⁹ CIA World Factbook. Accessed February 1, 2023. <https://www.cia.gov/the-world-factbook/countries/china/#transportation>.

¹³⁰ "Container Ship Facts: Egypt's Suez Canal Blocked by Massive Boat". Newsround, BBC. 25 March 2021.

route between Europe and Asia. The canal handles roughly 12% of global trade and plays a crucial role in the transportation of oil and gas.¹³¹

The grounding of the Ever Given caused a major disruption to global trade, with hundreds of vessels being stuck on either side of the canal for several days. This disruption led to a backlog of cargo, delays in delivery times, and an increase in shipping costs, as vessels were forced to take longer routes around the southern tip of Africa to reach their destinations. The incident highlighted the vulnerability of global supply chains and the potential impact of a single disruption on the entire system. It also emphasized the need to explore and improve alternative shipping routes, as the already overcrowded Suez Canal appears to be insufficient to meet the capacity that will be needed in the near future for the growing volume of global trade. Furthermore, the Suez Canal incident emphasized the geopolitical tensions that can arise from the control of critical transportation routes. The incident occurred amidst rising tensions between Egypt and Ethiopia over the Grand Ethiopian Renaissance Dam, which has the potential to impact the flow of water downstream to the Nile Delta.¹³²

In summary, the Suez Canal incident demonstrated the significance of the canal as a vital trade route and the potential impact of a single disruption on the global economy without alternative trade routes being utilized.

The Strait of Malacca is another vital shipping route utilized by China, and it is arguably the most significant one for China's economic security, as more than 80% of its crude oil is imported through this passage. The Strait of Malacca, connecting the Indian Ocean to the South China Sea, is a vital shipping lane and one of the busiest in the world. It is a quite narrow body of water separating the Malay Peninsula (West Malaysia and Southern Thailand) from the Indonesian island of Sumatra, serving as a crucial link

¹³¹ "The Maritime Silk Road." China Daily, September 22, 2016. http://www.chinadaily.com.cn/silkroad/2016-09/22/content_26810823.htm.

¹³² Barron, Liza Lin and Costas Paris. "Ever Given Freed, but Shipping Will Be Snarled for Weeks." The Wall Street Journal, March 29, 2021. <https://www.wsj.com/articles/ever-given-freed-but-shipping-will-be-snarled-for-weeks-11617034797>

between Asia, Europe, Africa, and America, particularly for oil and LNG transportation. The strait sees over 80% of global trade passing through it, making it one of the most significant locations worldwide. However, its strategic value is juxtaposed with its vulnerability, as during periods of low water levels, the strait narrows down to 20 miles at certain points.¹³³

Any disruption to shipping in the Strait of Malacca could cause severe economic damage to China, as due to the strait's strategic location, ships are unable to navigate through any other areas in the region if it were to become blocked. There are concerns about the heavy traffic and vulnerability of this route due to piracy and potential territorial disputes between China and other countries in the region. An incident such as the grounding of the Ever Given over the Suez Canal will seriously threaten the economic security of China.

Figure 4.3. Strait of Malacca Map From the U.S. Department of Defense



¹³³ Strait of Malacca - World Oil Transit Chokepoints. Archived October 22, 2014. Wayback Machine, Energy Information Administration, U.S. Department of Energy.

From the Chinese perspective, another highly significant vulnerability of the Strait of Malacca is the potential for it to be deliberately blocked instantly by Western powers, particularly the United States, in the event of a conflict. Hence, the United States has already stationed sophisticated weapons and other military equipment in Singapore, in the vicinity of the Strait of Malacca, to deter China from using the shipping route and, more significantly, from accessing critical energy resources in times of conflict. As previously discussed, it is crucial for China to create an alternate shipping pathway that can facilitate the importation of energy and raw materials, as well as the exportation of goods, in order to secure its economic survival.¹³⁴

Even though the United States stationed cutting-edge military hardware near the Strait of Malacca, no attempt has yet been made to block the strait. The Strait of Malacca is an international waterway and is considered to be part of the global commons, meaning it is open to ships from all nations and cannot be blocked or closed off by any one country at least legitimately.

Nevertheless, if a military conflict or war were to occur, the United States Navy might seize strategic international shipping lanes, in which case the Strait of Malacca will be a primary target. In this scenario, the Navy could deploy more battleships and aircraft to the region to supervise and, if necessary, intercept ships. On the other hand, the United States also has interests in the area that will directly affect its economic security, and a blockade would cause severe consequences for the United States as well as the rest of the world. It would be more prudent to engage in bilateral or multilateral discussions with the states along the Strait of Malacca to safeguard their trade and interests in the significant water passage, rather than halting all commercial activity. Albeit, the possibility of China having to divert its ships from the Strait of Malacca would have a detrimental impact on Chinese economic security. Therefore, the most viable solution for China to avoid such a scenario would be to establish an alternative shipping route.

¹³⁴ Michael T. Klare, "China's Strategic Vulnerabilities: The Malacca Dilemma and Energy Security," *Current History* 111, no. 746 (2012): 99.

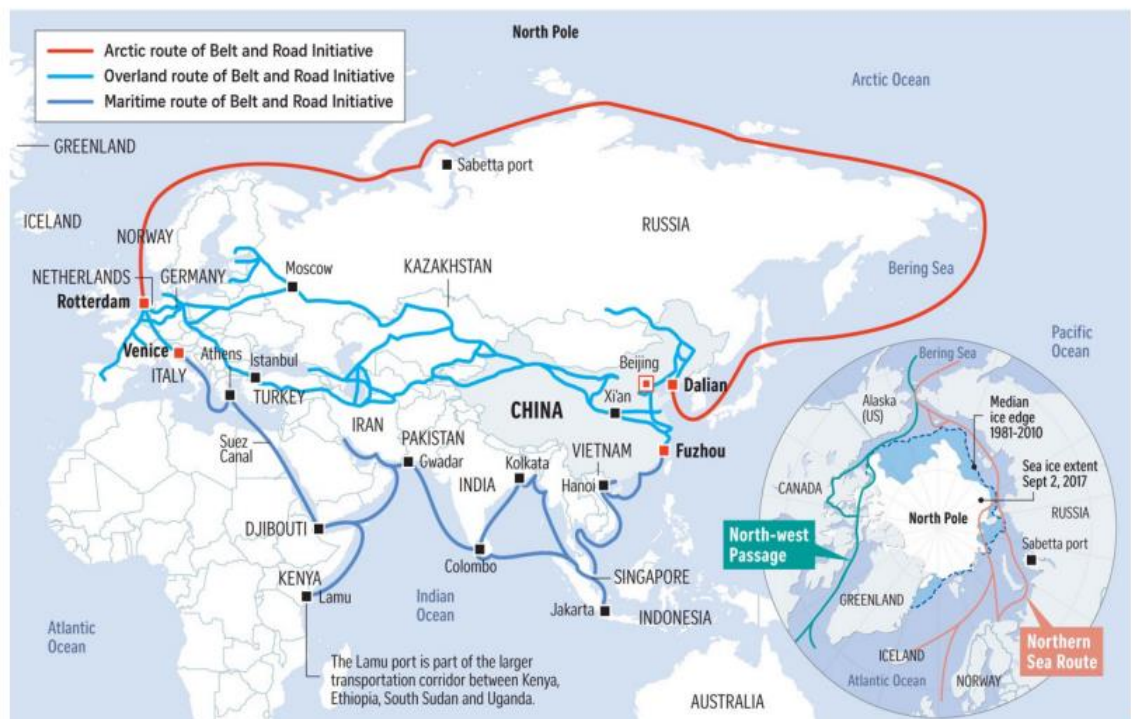
In conclusion, shipping routes play a crucial role in China's economic security strategy. The country relies heavily on its sea routes to maintain its economic growth and stability. On the other hand, current shipping routes are quite vulnerable and the passages are at full capacity. Therefore, China has been investing heavily in infrastructure and expanding its shipping routes to new regions to ensure that it can take advantage of new opportunities that arise. It is safe to claim that as the world's economic center of gravity shifts towards Asia, the shipping routes China utilizes will become even more critical for its economic security in the future.

5. THE POLAR SILK ROAD AND ITS UTILIZATION BY CHINA

The Arctic region, which had been an isolated area for centuries, is now gaining strategic significance due to the effects of climate change, resulting in the melting of ice and the emergence of new shipping routes.

Figure 5.1. Map of the Polar Silk Road and Other BRI Routes

China's polar extension to Silk Road



The Polar Silk Road, which forms part of the Belt and Road Initiative (BRI), is an extensive infrastructure project aiming to improve commercial transactions and connectivity between China and other nations. It is elaborated in the January 2018 White Paper by the Chinese State Council Information Office. This document is arguably the most dependable source to gain an understanding of the Chinese viewpoint on this matter. The Arctic holds

immense importance for the successful implementation of the Belt and Road Initiative (BRI), which is expected to have significant implications for global trade and the balance of power in international relations, particularly concerning economic security.

To gain a comprehensive understanding of this subject and to obtain the Chinese perspective, it would be prudent to first familiarize oneself with the White Paper.

5.1. The Arctic White Paper: An Overview of China's Arctic Policy

In January 2018, the Chinese government released a white paper titled “China’s Arctic Policy” (See Appendix 1), a comprehensive document that outlines China’s Arctic policy and its strategic interests in the region. The paper is significant because it is the first time that China has articulated a comprehensive Arctic policy, and it signals China’s growing interest in the Arctic region.

The Arctic White Paper begins by acknowledging the significance of the Arctic region for global climate and ecological systems, as well as for the sustainable development and security of Arctic states. It emphasizes China’s commitment to scientific research and environmental protection in the Arctic, and its willingness to cooperate with other Arctic states to address common challenges. In the White Paper China declares itself as a “Near-Arctic State”, and states its four main objectives in the region:

- 1.** Scientific research and environmental protection (particularly the effects of global warming on the region) will be examined.
- 2.** Exploration of oil, gas, mineral, and other non-living natural resources.

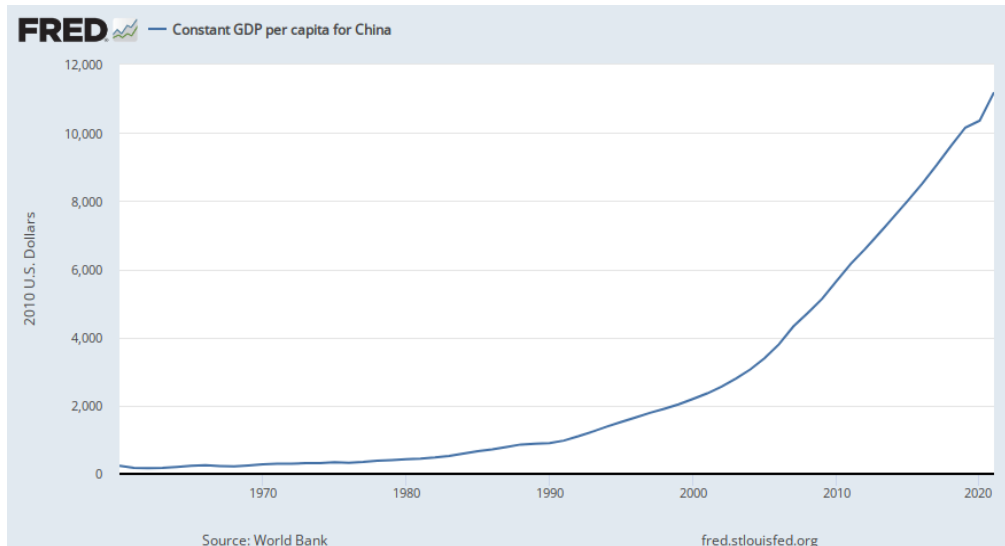
3. Shipping routes, and resource utilization for international trade and tourism.

4. Arctic governance.

The paper outlines China's strategic interests in the polar region, which include the promotion of maritime cooperation, the development of the "Polar Silk Road" as a major international trade route, the exploration and utilization of Arctic resources, and the protection of China's national security. Through the Polar Silk Road, China aims to have an alternative to the traditional shipping routes which are mainly under the control of Western powers. Furthermore, since the Polar Silk Road offers a shorter passage, it is expected to enhance connectivity and trade between China and other nations by providing a quicker, more affordable, and direct shipping route for Chinese goods to reach European markets.

As previously explained, China's GDP per capita has risen dramatically since 2000, as a result of its economic growth and globalization policies. This growth has led to increased demand for resources and energy, including those found in the Arctic region. Therefore, it is essential for China to include investments in Arctic infrastructure, research, and technology, as well as the development of new shipping routes through the Arctic Ocean in order to keep up with the rising demand.

Figure 5.2. World Bank Chart of GDP per capita for China



China's Arctic policy aims to expand its economic growth even further. Once the new Arctic policy is successfully implemented and the Polar Silk Road is effectively utilized, China shall significantly enhance its economic security. On the other hand, the Arctic region is still relatively unexplored and underdeveloped, and there are many challenges to operating in this harsh and remote environment. China will need to invest significant resources in developing infrastructure, technology, and human capital to fully utilize the Arctic's potential. Therefore, the economic benefits may not be immediate, and it may take time for China to see a return on its investment.

Secondly, the economic potential of the Arctic region is also dependent on global demand for resources and trade routes. If global demand for natural resources decreases, or if alternative trade routes become more popular, the economic benefits of the Arctic policy may be limited.

Another serious concern is the environmental hazard risk that elevated level of activity in the Arctic region will cause, such as the impact on the ecosystem and the risk of oil spills. This may lead to regulatory barriers and increased costs, which could limit the economic benefits of the Arctic policy. Thus, it is safe to claim while China's new Arctic policy may bring economic benefits, the extent to which China will become wealthier because of this new policy is uncertain and depends on a variety of factors.

The Arctic White Paper underscores the importance of the Arctic to China's Belt and Road Initiative (BRI), a massive infrastructure project that seeks to enhance connectivity and trade between China and other nations, particularly those along the old Silk Road trade route. The Arctic is seen as a key link in this project, and the development of the Polar Silk Road is considered the most significant component of China's broader strategic interests in the region.

The Arctic White Paper also acknowledges the concerns and interests of other Arctic states and emphasizes China's commitment to respecting the sovereignty, rights, and interests of Arctic states in accordance with international law. It states that China will conduct its activities in the Arctic region in a transparent and responsible manner and that it will work closely with other Arctic states to maintain regional stability and security.

The release of the Arctic White Paper has raised some concerns, particularly among the Arctic states. Some have accused China of attempting to expand its influence and control over the region, potentially jeopardizing the security and interests of other nations. Others have raised concerns about the potential environmental impacts of China's activities in the Arctic.¹³⁵

¹³⁵ Havnes Heljar, Seland J. Martin. "The Increasing Security Focus in China's Arctic Policy." July 16, 2019. Accessed February 12, 2023. <https://www.thearcticinstitute.org/increasing-security-focus-china-arctic-policy/>

In conclusion, the Arctic White Paper is a significant document that highlights China's growing interest in the Arctic and its strategic importance to China's economic, scientific, and security interests. While the paper emphasizes China's commitment to scientific research, environmental protection, and international cooperation, it also raises concerns about potential power shifts and geopolitical tensions in the region. As such, it is important for nations to engage in constructive dialogue and cooperation to ensure that the development of the Arctic region benefits all parties involved.

In order to gain a better comprehension of the Arctic policy of China, it is essential to first ascertain the accuracy of China's claim of being a "Near-Arctic State" declared in the White Paper.

5.2. China's Self-Proclaimed Arctic State Status

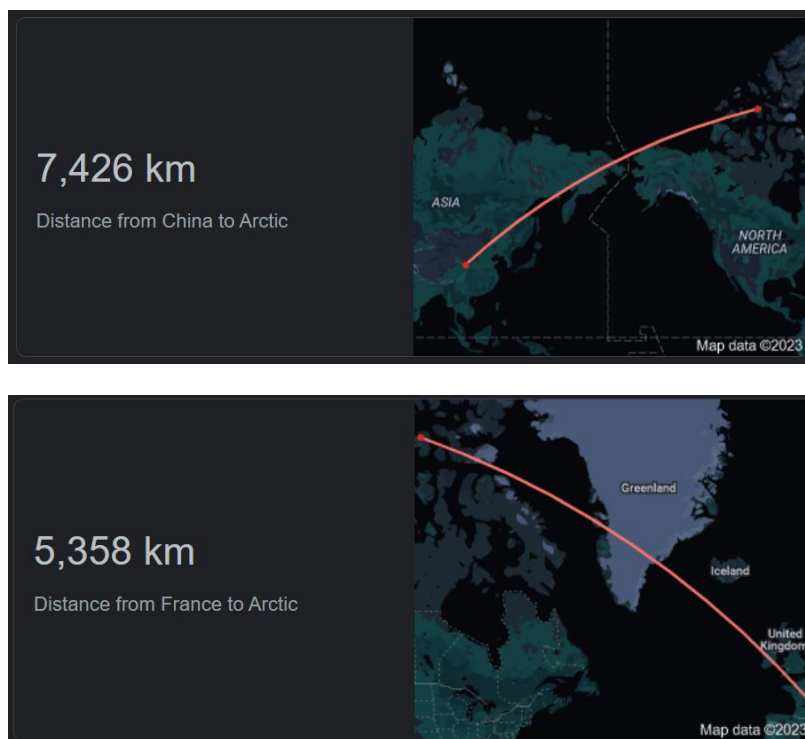
In January 2018, China, a country that is not geographically located in the Arctic region, formally announced itself to be a "Near-Arctic State" and stated its aims in the polar region in the aforementioned Arctic White Paper released by the State Council Information Office of China. China's self-proclamation of being a "Near-Arctic State" has generated widespread interest and scrutiny among international relations scholars and policymakers.

Whereas there is no concept of a "Near-Arctic State" in international relations, there are distinct categorizations of states based on their proximity to the Arctic region. The Arctic states are Canada, Denmark, Finland, Iceland, Norway, Sweden, the Russian Federation, and the United States. Any other country in the world shall be considered a Non-Arctic state.

Furthermore, the claim of being near the Arctic is certainly invalid due to its geographical distance of China from the Polar region. Unlike the Arctic

states, which are recognized as such under international law, China’s claim is self-proclaimed and lacks clear criteria for determining what constitutes a “near” Arctic state. The distance between China and the Arctic is 7426 km, which is much greater than the distance between most European countries and the Arctic. As an example, France is located approximately 5000 km from the Arctic region, which is considerably closer than China, yet France does not claim or recognize itself as a “Near-Arctic State”. Therefore, China’s declaration of being a “Near-Arctic State” and proclamation of interests and rights in the Arctic led to debates among Arctic states, particularly the United States, scholars, as well as other influential international actors such as international organizations.

Figure 5.3. Comparison of the Arctic distances between China and France



In order to assess the significance and impacts of the Polar Silk Road on the economic security of China, it is vital to analyze the motives behind China's designation of itself as an Arctic state and to scrutinize the consequences of its Arctic policies on regional sustainability, security, and governance.

The White Paper published in 2018 highlighted China's participation in international Arctic governance and emphasized its cooperation with Arctic and non-Arctic states for mutual aims in the polar region. In the White Paper, it is clearly seen that China's Arctic policies aim for regional governance, security, and sustainability. China does not only seek a passage from the East to the West but also aims to explore natural resources, particularly oil and gas, do scientific research, and even utilization for tourism. By analyzing these aims and interests, and the responses of Arctic states and the international community; China's engagement in the Arctic poses both opportunities and challenges for regional cooperation and governance as well as disputes in the international arena from a realist point of view. From a more liberal and constructivist approach, although China's self-proclamation as an Arctic state raises questions of legitimacy, transparency, and compliance, it also presents opportunities for multilateral cooperation and dialogue in the Arctic region. China's interests and aims in the Arctic are driven by a combination of strategic, economic, and environmental factors. Firstly, China considers the Arctic to be a strategic gateway to Europe, North America, and other regions, and seeks to participate in the development of new Arctic shipping routes, such as the Polar Silk Road. Secondly, China is interested in the Arctic's natural resources, including oil, gas, minerals, and fisheries, which can help meet its growing energy and resource demands. Thirdly, China claims to be concerned about the impacts of climate change in the Arctic, and seeks to participate in scientific research to provide environmental protection efforts in the polar region.¹³⁶

¹³⁶ Cantürk, Utku & Atvur, Senem. 2021. Arktik Bölgede Çevresel Bozulma, Strateji ve Rekabet: Çevresel Güvenlik Bağlamında Bir Değerlendirme.

China's lack of geographical proximity, historical ties, and cultural identity with the Arctic undermines its claim to be a Near-Arctic state. Descamps states that: "Factually speaking, China is not an Arctic country: Its coasts do not border with the Arctic Sea nor does it claim to have sovereignty on under-continental shelves or water in the Arctic"¹³⁷ They also question China's intentions and activities in the Arctic, especially in relation to security and governance. For example, China's growing military presence in the Arctic has raised concerns about its compliance with international norms and rules. However, as mentioned before, China's engagement in the Arctic also presents opportunities for multilateral cooperation and dialogue. China has expressed its willingness to participate in Arctic governance, including through the Arctic Council. China has also been involved in various Arctic research and environmental protection initiatives, such as the Svalbard Global Seed Vault and the Arctic Science Summit Week. In 2018, China was granted observer status in the Arctic Council.¹³⁸

In conclusion, in the last decade, particularly after 2018, China demonstrated a increasing interest in the Arctic region due to its strategic and economic significance, which is mainly driven by several factors, including its desire to gain access to the region's rich natural resources, such as oil and gas reserves, as well as its potential for shipping routes that could significantly reduce transportation times between Asia and Europe. Whereas, since China does not possess any territory within the Arctic Circle, it is not appropriate to regard China as an Arctic state, and China's self-proclamation of being a "Near-Arctic State" is invalid. It is difficult to ascertain whether China's objectives

https://www.researchgate.net/publication/355667133_Arktik_Bolgede_Cevresel_Bozulma_Strateji_ve_Rekabet_Cevresel_Guvenlik_Baglaminda_Bir_Degerlendirme/citation/download

¹³⁷ International Institute for Strategic Studies. "The Ice Silk Road: Is China a Near-Arctic State?" Stockholm International Peace Research Institute. January 29, 2021. <https://isdpr.eu/publication/the-ice-silk-road-is-china-a-near-artic-state/>.

¹³⁸ Zengerle, Patricia. "China granted observer seat on Arctic Council." Reuters. Accessed February 12, 2023. <https://www.reuters.com/article/arctic-council-idUSL6N0DW2ZT20130515>.

and interests in the region are genuinely cooperative and peaceful, as stated in the Arctic White Paper. Nevertheless, it is probable that China's Arctic policy will have a positive impact on its economic security as long as there will be no disputes resulting in harsh sanctions and/or conflicts.

5.3. Belt and Road Initiative

Belt and Road Initiative (BRI) is an extensive infrastructure and investment initiative that seeks to improve connectivity and foster economic growth across Asia, Europe, and Africa. While the BRI has received praise for its potential to advance regional integration and economic growth, it has also drawn criticism for its possible effects impact on China's economic security. The BRI is fundamentally designed to support China's economic development and strategic goals by facilitating trade, investment, and infrastructure development across a vast geographic area. China aims to lessen its reliance on western nations for international trade and investment by promoting connectivity and economic cooperation with its neighbors as well as securing access to key resources and significant markets of the world.¹³⁹

Whereas, it is safe to claim that the BRI puts China's economic security at risk by exposing it to potential financial and political conflict with partner countries. Also, as China invests heavily in infrastructure and other projects in BRI countries, it poses the risk of non-performing loans as well as other financial risks in case these projects fail to generate sufficient returns. Furthermore, China's reliance on partner countries for critical resources and markets will not disappear as soon as the Belt and Road Initiative is put into action, it will take considerable time. This might leave China vulnerable to those parties applying political and economic pressure. If those foreign governments supplying China

¹³⁹ J.P. "What is China's belt and road initiative?" *The Economist*. May 15, 2017. Accessed February 16, 2023. <https://www.economist.com/the-economist-explains/2017/05/14/what-is-chinas-belt-and-road-initiative?>

with energy and other essential resources decide to shift their economic ties away from China, it could have a significant impact on China's economic security and growth prospects.¹⁴⁰

To mitigate the risks, China has taken steps to enhance its economic security through various policy measures, including expanding its domestic market, investing in innovation and technology, and pursuing more strategic partnerships with other countries. These efforts are designed to reduce China's reliance on foreign markets and resources, while also promoting the development of new industries and technologies. Since Chinese President Xi Jinping introduced the BRI strategy in 2013 with the goal of fostering connectivity and economic development throughout Eurasia and beyond, international commercial activity has improved massively through increasing investments in shipping routes. The impact of these investments on the Chinese economy, particularly in terms of expanding China's access to international markets and resources can be clearly seen in the GDP per capita of China statistics. By investing in alternative ports, emerging shipping lanes, and other marine infrastructure, China has reached markets and sources of raw resources outside of its boundaries. China invested in Africa more than any other country in the world for instance. Another example is China has made significant investments in the development of Pakistan's Gwadar Port, which is strategically situated close to the Strait of Hormuz and provides China with access to the Persian Gulf and the Arabian Sea.¹⁴¹

In past, China's economy was more relied on exporting produced goods to foreign markets, but with the more advanced shipping routes and enhanced

¹⁴⁰ Huang, Yunsong, and Mohammad A. Razzaque. "The Belt and Road Initiative: Opportunities and Challenges for China and the World Economy." *Journal of International Trade and Economic Development* 30, no. 7 (2021): 785-807. doi:10.1080/09638199.2021.1887196.

¹⁴¹ Dimitrijević Duško, Jokanović Nikola. Research Gate. January 2016. The Review of International Affairs 1161:21-44 China's New Silk Road Development Strategy. https://www.researchgate.net/publication/323604715_china's_new_silk_road_development_strategy

international trade, China gained access to a wider variety of products and services from other markets at a more reasonable cost. Thus, the Chinese economy today is relatively more consumption-driven compared to before. This shows that improving existing commercial routes and creating new ones not only contributes to a single nation's economy, but it provides a more advanced and stable global economic security. Hence, not only Chinese trade but also global trade has been significantly impacted by investments made in the shipping routes. It has aided in lowering trade barriers and raising the volume of trade between China and other nations by offering a more effective and dependable mode of transportation for commodities. For example, there is a significant Chinese presence in the South Pacific, where they operate a number of shipping lanes linking China with Australia, New Zealand, and the South Pacific islands. These routes are crucial for China's trade with the area because they are mostly used for the shipment of agricultural and raw material products China desperately needs in order to feed its large population and keep its massive production.¹⁴²

In conclusion, China has made considerable investments in infrastructure and shipping routes recently because they are an important part of its modern trade strategy. The advantages these routes offer in terms of trade and economic growth are likely to assure their sustained importance in the years to come, despite the obstacles and hazards that are undoubtedly associated with them. The BRI represents a significant challenge and opportunity for China's economic security. While it has the potential to enhance China's economic development and international influence, it also poses risks to China's economic stability and security. As China continues to pursue the BRI and other strategic initiatives, it will need to balance these competing priorities and take steps to mitigate potential risks and challenges.

¹⁴² Liang Fang, Today's Risks to the "Maritime Silk Road", February 11 2015. Accessed February 16, 2023. http://www.81.cn/jwgd/2015-02/11/content_6351319.htm.

5.4. Assessing the Polar Silk Road and Its Impacts on the Economic Security of China

Due to its position as the leading exporter and second-largest economy globally, China has demonstrated a keen interest in the emerging shipping routes in the Arctic region to bolster its economic security. Thus, China has been focusing on developing its polar capabilities, and the concept of the “Polar Silk Road” has emerged as a crucial part of China’s ambitious Belt and Road Initiative (BRI). The Polar Silk Road aims to connect China to Europe via the Arctic, using newly opened shipping routes, and exploiting the natural resources found in the region. This chapter aims to assess the Polar Silk Road and its impacts on the economic security of China, providing an overview of the motivations and challenges faced by China in its pursuit of this ambitious project.

The 2018 Arctic White Paper describes China’s historical ties to the Arctic and defines China as a Near-Arctic state as we explained before. According to the Arctic White Paper, Beijing focuses in particular on the fields of scientific study and maritime lanes. Whereas, China has already established a foothold in the Arctic via maritime expeditions and research stations long before the Arctic White Paper was published. The Chinese government states that “China prioritizes scientific research” in the Arctic White Paper. The Polar Research Institute of China (PRIC) was founded in Shanghai in 1989, and the Chinese Academy of Sciences has been doing scientific studies in the Arctic since the 1980s.¹⁴³ “In 1993, China acquired the largest non-nuclear icebreaker in the world from Ukraine, the Xue Long (Snow Dragon), and utilized it as its main supply and research vessel for the poles.”¹⁴⁴ In 2004, China expanded its polar research initiatives by establishing its first polar research station named Huang He Zhan (Yellow River Station), in Svalbard, Norway.¹⁴⁵ Six years later, in 2010, China took a step further in expanding in

¹⁴³ State Council Information Office of the People’s Republic of China. <http://english.scio.gov.cn/>

¹⁴⁴ Humpert Malte. High North News. “China reveals details of a newly designed heavy icebreaker” December 17, 2019. Accessed February 20, 2023. <https://www.arctictoday.com/china-reveals-details-of-a-newly-designed-heavy-icebreaker/>

¹⁴⁵ Nong Hong. *China’s Interests in the Arctic: Opportunities and Challenges*. Washington, DC: Institute for China-America Studies, 2018.

the Arctic by establishing its first iceberg station, and two years after that, Aurora Observatory in Iceland was constructed by China to keep up with its scientific research goals stated in the Arctic White Paper. According to Chinese authorities, the only purpose of establishing these stations in the polar region is to investigate the Arctic ice and atmosphere in order to collect more data about the impact of climate change on the region. Proof of that would be the cooperation of the Chinese with the other Arctic states which establish scientific research in the Arctic. For example, China cooperated actively with Norway on environmental research in the Arctic and is a member of international polar research groups such as the International Arctic Research Committee.¹⁴⁶

Camilla TN Sørensen, Professor at the Danish Royal Defense Academy in Copenhagen, at the Institute for Strategy and War Studies, states that “Scientific research has long been the core element of China’s Arctic diplomacy.” Sørensen suggests that China has been cooperative and peaceful in its activities in the polar region as outlined in the Arctic White Paper thus far. However, over the long term, China’s growing presence in the Arctic, through the establishment of new and more advanced facilities, joint projects, and larger icebreakers, could establish a foundation for a more significant political role in the region. In other words, while China’s Arctic policy has been cooperative up to this point, it could be viewed as a preparatory phase for a future period that is more competitive and potentially even aggressive.¹⁴⁷

In 2017, the National Development and Reform Commission (NDRC) and China's State Oceanic Administration (SOA) jointly declared the Arctic to be an essential part of the Belt and Road Initiative (BRI), referring to it as a “blue economic passage”. In comparison to routes that cross the Suez Canal and Malacca Straits, employing this route might reduce the distance between China and Europe by up to 40%. The idea of a shorter and quicker and therefore more feasible route from Asia to Europe across the Arctic gives a substantial economic opportunity for Chinese firms as the European Union is China’s

¹⁴⁶ Yun Sun. “The Intricacy of China’s Arctic Policy.” Washington, DC: Stimson Center, 2018.

¹⁴⁷ Sorensen Camilla. “China as an Arctic Great Power.” Policy Brief. Royal Danish Defence College Institute for Strategy, 2018.

main trading partner, making it a key area of interest for Arctic research serving China's economic security. Furthermore, the decrease in shipping expenses will also be advantageous for European nations, resulting in a mutually beneficial outcome for all parties involved. Whether it is too optimistic to hope to achieve the 'Nash Equilibrium' or is it possible given that all parties involved are rational actors, happens to be the ultimate question that remains unanswered.¹⁴⁸

In the past decade, Chinese shipping activities along the Northern Sea Route (NSR) have increased significantly and align with the objectives outlined in the Arctic White Paper. China kept on seeking alliances and cooperation in the polar region, particularly with the Russian Federation. Since 2010, China has established shipping partnerships with Russia, with the Sovcomflot Group and China National Petroleum Company (CNPC) signing an Arctic oil transshipment framework. In 2012, the Chinese icebreaker Xue Long made history as the first Chinese ship to traverse the Arctic Ocean from Asia to Europe using the Northern Sea Route (NSR). In 2013, the Yong Sheng, a vessel owned by China National Shipping Company (COSCO), made the first commercial voyage by a Chinese ship in the Arctic, using the NSR to travel from Asia to Rotterdam. In 2018, COSCO strengthened the cargo ship Tian'en to withstand the ice and shorten the traditional Indian Ocean route by 12 days and 300 tons of fuel. COSCO aimed to make at least 14 transits of the Arctic in 2019. China's construction of the Xue Long 2 and tenders for a third icebreaker demonstrate its expanding economic interests in the Arctic shipping routes. Nevertheless, the regulatory structures governing the usage of these novel sea routes are vital factors to take into account in polar shipping logistics. As we mentioned earlier, in 2017, Christophe de Margerie, a Russian tanker, completed a voyage across the Arctic Ocean without the assistance of icebreakers. The thawing of the Arctic ice due to global

¹⁴⁸ Fytatzi Katerina, Fowler Rebecca. "Polar Silk Road Will Reshape Trade and Geopolitics." Oxford Analytica Daily Brief, 2018, 1-5.

warming has finally opened up the Polar Silk Road to a level where no icebreakers are needed during the summertime.¹⁴⁹

According to China's Arctic White Paper, "Non-Arctic states have rights in the Arctic under the Spitsbergen Treaty and the United Nations Convention on the Law of the Sea (UNCLOS)." China justifies its Arctic research activities as a "global commons" under the 1920 Spitsbergen Treaty and regards the Arctic as an international issue under UNCLOS. This has enabled China to establish the Yellow River Research Station in Svalbard, Norway, and Xue Long's access to Arctic waters for scientific purposes.

China considers the exploration of alternative shipping routes through the Arctic as scientific research, but it encounters several challenges in using these routes because of the harsh climate and other natural difficulties in the region rather than international regulations. As we mentioned earlier, the Polar Silk Road is navigable only during summertime. Most of the Northern Sea Route, particularly the 'Northwest Passage' that runs along the northern coast of Canada is only navigable during ice-free summer months as well. The 'Transpolar Sea Route', the third pathway that traverses the central part of the Arctic Ocean in waters that are open to all nations, requires the use of sturdy icebreakers even during summer and is anticipated to remain unsuitable for customary commercial navigation for many years. Additionally, it is important to note that the Northwest Passage is not a deep-sea passage and is therefore inadequate for larger tankers and carriers.¹⁵⁰

Among all these difficulties, the utilization of the Polar Silk Road comes with noteworthy hazards and obstacles. The melting of the Arctic ice as a result of global warming is a matter of emergency, as it may lead to grave environmental outcomes like elevated sea levels and augmented greenhouse gas emissions. Besides, the Arctic is a delicate area housing several indigenous societies and distinctive ecosystems that may be disrupted by an upsurge in shipping and economic actions. Furthermore, there are other

¹⁴⁹ Karadag Haluk. "Enhancing Economic Security of China Thorough the Strategic Cooperation in the Arctic: The Polar Silk Road Initiative", *Doğu Asya Araştırmaları Dergisi Volume 4/8 (2021):16*.

¹⁵⁰ Ma Clara. "The United States and China in the Arctic." Yale University Department of Political Science, One-term Senior Essay in International Relations 2019, 22.

issues that make the Polar Silk Road and the rest of the Northern Sea Route quite challenging and less viable, including limited search and rescue capacity in case of emergency, inadequate infrastructure and port facilities, and unpredictable weather conditions. Another problem is that insurance companies hesitate to cover vessels using this route or require very high rates for vessels operating in polar waters because of the issues we explained. Despite all the challenges, China keeps on expanding in the Arctic and addressing the issues such as infrastructure and port facilities, and the ice levels keep on diminishing due to the effect of global warming. Whereas, in the following years, China and other Arctic states may face serious strategic and commercial repercussions as a result of these new maritime routes brought on by melting sea ice. The establishment of the Polar Silk Road certainly carries the risk of potential disputes. For numerous nations, notably the US, Russia, Canada, and Norway, which all have competing claims and interests in the region, the Arctic plays an important geopolitical role. Tensions and conflicts between these nations may result from the Arctic's growing geopolitical and economic importance.¹⁵¹

¹⁵¹ “The Arctic: China wants to be a Polar Power.” *The Economist*, April 14, 2018. Accessed February 21, 2023. <https://www.economist.com/china/2018/04/14/china-wants-to-be-a-polar-power>.

Figure 5.4. Traditional Shipping Route vs. Polar Silk Road Map



In summary, maintaining safe and efficient shipping routes is crucial for China, as its economic security is heavily dependent on its capacity and level of international trade. It shall be seen on Figure 5.4. that the traditional shipping route is much longer, and there are considerably more states to pass by which means more procedures to follow for each and every ship. We have already stated the fact that China needs an alternative shipping route in case one of these passages gets blocked purposely or by accident. The traditional

shipping route from China to Europe, mainly from Shanghai to Rotterdam for instance involves vessels passing through the Strait of Malacca, the Indian Ocean, the Suez Canal, and the Mediterranean Sea before reaching their destination in Europe. The route is longer, approximately 10500 nautical miles; but it is more established, with existing ports and infrastructure, making it a popular choice for international trade. On the other hand, the Polar Silk Road is significantly shorter than the traditional route, approximately 7200 nautical miles; potentially cutting down shipping time and costs. However, the Polar Silk Road is still in the initial stages of planning and development, and there are concerns about the lack of adequate infrastructure and its environmental impact on the Arctic region. Additionally, the extreme weather conditions in the Arctic pose significant challenges to shipping operations. The Polar Silk Road is navigable from July to October while the traditional shipping route is navigable all year round, then again there is incomparably more traffic, particularly in the Strait of Malacca and the Suez Canal, and other dangers such as piracy. We have already stated the fact that China needs an alternative shipping route in case one of the existing passages becomes blocked intentionally or accidentally. By having an alternative option, China can increase its independence from the West, which in turn will enhance its economic security.

It is safe to claim that if the Polar Silk Road is fully utilized, it could result in such rapid economic growth for China that it may surpass the United States in less than a decade. Of course it is difficult to predict with certainty whether China will overtake the US when it starts efficiently utilizing the Polar Silk Road. While it could offer new opportunities for China to expand its trade and economic influence, there are several factors to consider that we explained before such as the lack of adequate infrastructure, harsh weather conditions, and environmental concerns. It is crucial to take into account the stance of other nations, particularly the Arctic states, as it could significantly impact the situation. If China were to economically surpass the United States, it could lead to conflict, and as an Arctic state, the US might feel compelled to intervene. Therefore, completely freeing China from Western pressure by relying solely on an alternative shipping route may not be feasible considering these factors.

Furthermore, while the Arctic region is rich in natural resources and has strategic importance, it is still a relatively small part of the global economy. Even if the Polar Silk Road is successful, it may not be enough for China to overtake the US in terms of overall economic power. As we mentioned earlier, since China is not an Arctic state, therefore, it may not have the ability to fully capitalize on the region's natural resources as doing so could result in a costly conflict that outweighs any potential benefits.

Council on Foreign Relations noted: "For Xi, the BRI serves as pushback against the much-touted U.S. "pivot to Asia" as well as a way for China to develop new trade linkages, cultivate export markets, boost Chinese incomes, and export China's excess productive capacity. "China has had a fair amount of success in redrawing trade maps around the world, in ways that put China at the center and not the U.S. or Europe," says CFR's David Sacks, an expert on U.S.-China relations."¹⁵²

¹⁵² Council on Foreign Relations. "China's Massive Belt and Road Initiative." Backgrounder, last modified April 10, 2019. Accessed February 22, 2023. <https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative#chapter-title-0-4>.

CONCLUSION

The Polar Silk Road is a strategic initiative that aims to utilize new shipping routes and infrastructure in the Arctic region. The development of this initiative certainly has significant implications for China's economic security, given the country's reliance on international trade and energy resources.

Our research findings suggest that the Polar Silk Road has the potential to boost China's economic growth by providing shorter and more feasible new trade routes and access to untapped rich resources of the Arctic. Hence, it can be concluded that the Polar Silk Road will have a substantial positive effect on China's economic security.

On the other hand, our conclusion was that China cannot be classified as an Arctic state because of its geographical distance from the Arctic Circle. Therefore, if China were to use the Polar Silk Road to access natural resources in the Arctic, as well as utilizing it as a shorter passage to the West, this could potentially be met with disapproval from the Arctic states that have jurisdiction over those resources. Hence, the development of this initiative presents significant risks, including environmental degradation, geopolitical tensions, and potential conflict with other nations, mainly the United States.

Leveraging a shorter trade route shall be beneficial for all parties included. However, the utilization of natural resources in the Arctic by a non-Arctic state is likely to provoke a strong reaction. The advantages of a shorter trade route are outweighed by the potential risks of major powers engaging in conflict in an environmentally vulnerable location. The progression of the Polar Silk Road project presents substantial geopolitical hazards, especially given the increasing great power competition between China and the United States. The initiative has the potential to create tensions and conflicts with other nations that have interests in the Arctic region, particularly Russia, Canada, and the Nordic countries.

One potential flashpoint could be the territorial disputes in the Arctic region. The Arctic has mostly been a zone of cooperation and peaceful dialogue, but as the region becomes more accessible and appealing, competition for resources and strategic interests keeps growing. The United States and other Arctic nations have already expressed concerns about China's growing presence in the Arctic, particularly its potential use of the Polar Silk Road to access untapped natural resources. This may lead to heightened tensions between China and the United States, which could potentially result in trade constraints or sanctions that will negatively affect China's economic security, ultimately leading to a possibility of armed conflict. Another potential flashpoint is the issue of environmental protection. The Arctic is one of the world's most fragile and sensitive ecosystems, and the development of the Polar Silk Road could have significant environmental impacts. The emergence of the Polar Silk Road coincided with the issue of climate change, which currently poses the most significant danger to the Arctic. The risks associated with oil spills, increased maritime traffic, and pollution could trigger protests and political opposition from environmental groups and Arctic nations. This could lead to further tensions between China and the United States, particularly if the United States and other nations impose stricter environmental standards on China's activities in the Arctic.

The Polar Silk Road is not a standalone initiative, but rather part of China's broader Belt and Road Initiative. Therefore, collaboration with other nations is essential for China to accomplish this project. Hence, the success or failure of this initiative shall depend on the effectiveness of China's overall strategy, including its engagement with partner countries and its ability to address domestic and international concerns.

In summary, the potential risks of geopolitical tensions and conflicts arising from the development of the Polar Silk Road will have significant implications for China's economic security. The issues of territorial disputes, environmental protection, and security are likely to remain key areas of concern, and China will need to work closely with other Arctic nations to address these challenges and ensure the sustainable development of the Arctic region. If successful cooperation takes place while considering environmental

concerns, the Polar Silk Road will not only strengthen China's economic security but also have a positive impact on the global economy as a whole.

REFERENCES

- “2021 Statistical Analysis of U.S. Trade with China.” Bureau of Industry and Security, U.S. Department of Commerce. Accessed January 30, 2023.
<https://www.bis.doc.gov/index.php/country-papers/2971-2021-statistical-analysis-of-u-s-trade-with-china/>.
- “Arctic Ice Route is China’s New Maritime Silk Road to Europe.” Asia Times, September 3, 2018.
- Carnegie Endowment for International Peace. “Countering Unfair Chinese Economic Practices and Intellectual Property Theft.” Accessed February 25, 2022.
<https://carnegieendowment.org/2022/04/25/countering-unfair-chinese-economic-practices-and-intellectual-property-theft-pub-86925>.
- “China-EU - International trade in goods statistics.” Statistics Explained, Eurostat. Accessed January 29, 2023. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=China-EU_-_international_trade_in_goods_statistics.
- “Climate Change in the Arctic.” Norwegian Polar Institute. Accessed January 12, 2023. <https://www.npolar.no/en/themes/climate-change-in-the-arctic/#toggle-id-5>.
- “Container Ship Facts: Egypt’s Suez Canal Blocked by Massive Boat.” Newsround, BBC, March 25, 2021.
- “Denmark Country Profile.” BBC News. Last modified December 2, 2022.
<https://www.bbc.com/news/world-europe-17955470>.
- “Denmark.” CIA World Factbook. Last modified October 30, 2022.
<https://www.cia.gov/the-world-factbook/countries/denmark/>.

“Finland Country Profile.” BBC News. Last modified December 2, 2022, <https://www.bbc.com/news/world-europe-17211464>.

“Global Warming vs. Climate Change.” Climate Change: Vital Signs of the Planet. National Aeronautics and Space Administration, n.d. Accessed January 11, 2023. <https://climate.nasa.gov/global-warming-vs-climate-change/>.

“Iceland.” CIA World Factbook. Last modified October 30, 2022. <https://www.cia.gov/the-world-factbook/countries/iceland/>.

“Managing the Arctic: A Norwegian Perspective,” Harvard International Review. Accessed December 27, 2022. <https://hir.harvard.edu/managing-the-arctic-a-norwegian-perspective/>.

“Map of China’s Trading Partners.” The Heritage Foundation, 2018. Accessed February 1, 2023. <https://www.heritage.org/international-economies/commentary/chinas-trade-policies-are-threatening-its-global-interests>.

“North Pole Drifting Stations (1930s-1980s).” Woods Hole Oceanographic Institution. Accessed December 24, 2022. <http://www.whoi.edu/northpole/>.

“Norway.” CIA World Factbook. Last modified November 2, 2022. <https://www.cia.gov/the-world-factbook/countries/norway/>.

“RAIPON: National Representation, Advocacy, and Hope.” Cultural Survival Quarterly. Last modified December 21, 2015. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/raipon-national-representation-advocacy-and-hope>.

“Russia’s Icebreaker Tanker, ‘Christophe de Margerie’ Makes Arctic History.” The New York Times. August 25, 2017. <https://www.nytimes.com/2017/08/25/world/europe/russia-tanker-christophe-de-margerie.html>.

“Russian Arctic Oil Spill Pollutes Big Lake Near Norilsk” BBC News. June 9, 2020. <https://www.bbc.com/news/science-environment-46455844>.

“The Arctic: China wants to be a Polar Power.” The Economist. April 14, 2018. Accessed February 21, 2023. <https://www.economist.com/china/2018/04/14/china-wants-to-be-a-polar-power>.

“The Epoch Times.” Biden Administration Releases National Arctic Strategy to Counter China and Russia, March 29, 2021. https://www.theepochtimes.com/biden-administration-releases-national-arctic-strategy-to-counter-china-and-russia_3752108.html.

“The Maritime Silk Road.” China Daily, September 22, 2016. http://www.chinadaily.com.cn/silkroad/2016-09/22/content_26810823.htm.

“Treaty with Russia for the Purchase of Alaska.” Primary Documents in American History. The Library of Congress, April 25, 2017. Accessed November 29, 2022. <https://www.loc.gov/rr/program/bib/ourdocs/Alaska.html>.

Acharya, A., & Chen, X. (2019). China’s economic security: domestic and international implications. *International Affairs*, 95(4), 757-776.

Ahmad, Shaheer and Mohammad Ali Zafar. “Russia’s Reimagined Arctic in the Age of Geopolitical Competition.” *Journal of Indo-Pacific Affairs*, March 9, 2022, Air University Press.

Aleut International Association. n.d. “About Us.” Accessed April 27, 2023. <https://www.aleutinternational.org/about-us>.

Arctic Athabaskan Council. “About AAC.” Arctic Athabaskan Council. n.d. Accessed December 28, 2023. <https://arcticathabaskancouncil.com/about-aac>.

Arctic Council, “Canada,” accessed November 26, 2022, <https://arctic-council.org/about/states/canada/>.

Arctic Council. “About the Arctic Council.” Accessed November 14, 2022. <https://www.arctic-council.org/en/about-us>.

Arctic Council. “Denmark.” Accessed December 26, 2022. <https://arctic-council.org/about/states/denmark/>.

Arctic Council. “Expert Groups.” Accessed January 5, 2023. <https://arctic-council.org/en/about/expert-groups/>.

Arctic Council. “Finland.” Accessed December 26, 2022. <https://arctic-council.org/about/states/finland/>

Arctic Council. “Iceland.” Accessed December 26, 2022. <https://arctic-council.org/about/states/iceland/>.

Arctic Council. “Norway.” Accessed December 27, 2022. <https://arctic-council.org/about/states/norway/>.

Arctic Council. “Observers.” Accessed January 9, 2023. <https://arctic-council.org/about/observers/>.

Arctic Council. “Protection of the Arctic Marine Environment (PAME).” Arctic Council. Accessed January 8, 2023. <https://arctic-council.org/about/working-groups/pame/>.

Arctic Council. “Russian Federation.” Accessed December 27, 2022. <https://arctic-council.org/about/states/russianfederation/>.

Arctic Council. “Sweden.” Accessed December 29, 2022. <https://arctic-council.org/about/states/sweden/>.

Arctic Council. “The United States.” Accessed December 29, 2022. <https://arctic-council.org/about/states/the-united-states/>.

Arctic Council. 2015. Protection of the Arctic Marine Environment (PAME) Work Plan 2015-2021. Tromsø: PAME Secretariat. <https://oaarchive.arctic-council.org/handle/11374/968>.

Arctic NGO Forum. "About the Arctic NGO Forum." Arctic NGO Forum. Accessed January 9, 2023. <https://www.arcticngoforum.org/about-us/>.

Arctic Parliamentary Conference. "About the Arctic Parliamentary Conference." Arctic Parliamentary Conference. Accessed January 9, 2023. <https://arcticparliament.org/about/>.

Berritella, M., & Zhang, J. (2010). The impact of climate change on international seaborne trade: A review of the literature. *Transportation Research Part D: Transport and Environment*, 15(5), 281-294. doi:10.1016/j.trd.2010.02.005

Borunda, Alejandra. "Climate Change Is Having Widespread Health Impacts, Report Says." *National Geographic*, March 4, 2021. <https://www.nationalgeographic.com/environment/2021/03/climate-change-is-having-widespread-health-impacts-report-says/>.

Brekke, Torkjell and Rob Huebert. "Russia in the Arctic: A Good Partner or a Dangerous Rival?" *Arctic Review on Law and Politics*, Vol. 8, No. 2, 2017, pp. 96-114.

Brødsgaard, K. E. (2020). Economic security and the Belt and Road Initiative. In *China's Belt and Road Initiative and Its Impacts on the World* (pp. 63-81). Palgrave Macmillan, Cham.

Burke, Marshall, Solomon M. Hsiang, and Edward Miguel. "Climate and Conflict." *Annual Review of Economics* 9 (2017): 641-665. doi:10.1146/annurev-economics-063016-103655.

Cable, Vincent. "What Is International Economic Security?" *International Affairs* 71, no. 2 (1995): 305-324. Accessed January 25, 2023. doi:10.2307/2623436.

CAFF - Conservation of Arctic Flora and Fauna. Accessed January 8, 2023. <https://www.caff.is/>.

CAFF - Conservation of Arctic Flora and Fauna. Arctic Council. Accessed January 8, 2023. <https://arctic-council.org/about/working-groups/caff/>.

CAFF. "Arctic Migratory Birds Initiative." Accessed January 8, 2023. <https://www.caff.is/ambi>.

Center for Strategic and International Studies. "The Ice Curtain: Russia's Arctic Military Presence." March 26, 2020. Accessed December 29, 2022. <https://www.csis.org/analysis/ice-curtain-russias-arctic-military-presence>.

Chen, X. 2021. The importance of maritime trade routes for China's economic growth. *Journal of Contemporary China*, 30(127), 523-538.

CIA World Factbook. Accessed February 1, 2023. <https://www.cia.gov/the-world-factbook/countries/china/#transportation>.

Collins, Alan, ed. *Contemporary Security Studies*. 4th ed. Oxford, United Kingdom: Oxford University Press, 2016.

Council on Foreign Relations. "China's Massive Belt and Road Initiative." Council on Foreign Relations, 2021, <https://www.cfr.org/backgrounders/chinas-massive-belt-and-road-initiative>.

Diaz, Henry F., et al. "Climate Change Impacts on Agriculture and Trade in the 21st Century." *PNAS* 114, no. 26 (2017): 6868-6872. doi:10.1073/pnas.1613473114.

Dimitrijević Duško, Jokanović Nikola. Research Gate. January 2016. The Review of International Affairs LXVII(1161):21-44 China's New Silk Road Development Strategy.

Dimitrijević Duško, Jokanović Nikola. Research Gate. January 2016. The Review of International Affairs LXVII(1161):21-44 China's New Silk Road Development Strategy.

EPPR. "Arctic Search and Rescue (ASR) Agreement." Arctic Council, 2011. <https://oaarchive.arctic-council.org/handle/11374/1659>.

EPPR. "Emergency Prevention, Preparedness, and Response (EPPR)." Arctic Council, accessed January 8, 2023. <https://arctic-council.org/about/working-groups/eppr/>.

Friðriksson, Jón. "Iceland's Energy Security and Geopolitical Interests." *Journal of Energy Security* 6, no. 2 (2013): 33-46.

Gamble, James. *Aleutians, Gilberts and Marshalls, June 1942-April 1944*. Washington, D.C.: Office of the Chief of Military History, Department of the Army, 1950.

Gerhardt, Holger. "Sweden's Arctic Policy: An Emerging Engagement." *Arctic Yearbook*, Vol. 2015, 2015, pp. 186-201.

Government of China. "Arctic White Paper of China", Last Updated Jan 26, 2018. https://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm.

Gupta, S. 2021. The rise of the Chinese economy: A review of the literature. *International Journal of Business and Management*, 16(5), 21-32.

Gwich'in Council International. "About Us." Gwich'in Council International. n.d. Accessed December 30, 2022. <https://gwichin.org/about-us>.

Hamilton, L.C., J. Brakke, and A. Cahill. 2018. "Observer states and non-Arctic actors in the governance of the Arctic." In *Handbook of the Politics of the Arctic*, edited by L.C. Hamilton and W.E. Hall, 187-208. Cheltenham, UK: Edward Elgar Publishing.

Hansen Jim. "The Planet in Peril - Part I." Yale Center for the Study of Globalization, October 19, 2006. Accessed October 15, 2022.

<http://web.archive.org/web/20091015102057/http://www.ycsg.yale.edu:80/papers/HansenWeb.pdf>.

Havnes Heljar, Seland J. Martin. "The Increasing Security Focus in China's Arctic Policy." July 16, 2019. Accessed February 12, 2023.

<https://www.thearcticinstitute.org/increasing-security-focus-china-arctic-policy/>

Helle, Knut. *The Cambridge History of Scandinavia, Vol. 1: Prehistory to 1520*. Cambridge University Press, 2003.

Hensel, Chase. "The Gwich'in First Nation and the Arctic National Wildlife Refuge: Challenges and Opportunities in the Politics of Energy and the Environment." *Review of Policy Research* 25, no. 3 (2008): 235-56. <https://doi.org/10.1111/j.1541-1338.2008.00318.x>.

<https://www.google.com/maps/dir/China/Arctic/>

<https://www.google.com/maps/dir/France/Arctic/>

Hua, Huang. "The Market Economy in China." *Security Dialogue* 24, no. 2 (1993): 175-179. doi:10.1177/0967010693024002009.

Huang, Jing. "Economic Security and the Chinese Experience." *Journal of Strategic Studies* 26, no. 4 (2003): 73-100. Accessed January 30, 2023.

<https://doi.org/10.1080/01402390312331281280>.

Huang, Yunsong, and Mohammad A. Razzaque. "The Belt and Road Initiative: Opportunities and Challenges for China and the World Economy." *Journal of International Trade and Economic Development* 30, no. 7 (2021): 785-807. doi:10.1080/09638199.2021.1887196.

Humpert Malte. High North News. "China reveals details of a newly designed heavy icebreaker" December 17, 2019. Accessed February 20, 2023. <https://www.arctictoday.com/china-reveals-details-of-a-newly-designed-heavy-icebreaker/>

Indigenous Culture and Conservation Alliance. "About Us." Indigenous Culture and Conservation Alliance. n.d. Accessed April 28, 2023. <https://iccalaska.org/about/>.

Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, 2013.

International Arctic Science Committee. "Working Groups." Accessed January 5, 2023. <https://iasc.info/working-groups>.

International Institute for Strategic Studies. "The Ice Silk Road: Is China a Near-Arctic State?" Stockholm International Peace Research Institute. January 29, 2021. <https://isdp.eu/publication/the-ice-silk-road-is-china-a-near-artic-state/>.

International Institute for Strategic Studies. "The Ice Silk Road: Is China a Near-Arctic State?" Stockholm International Peace Research Institute. January 29, 2021. <https://isdp.eu/publication/the-ice-silk-road-is-china-a-near-artic-state/>.

International Maritime Organization (IMO). (2018). *Initial IMO strategy on reduction of GHG emissions from ships*. IMO. <https://www.imo.org/en/OurWork/Environment/Pages/IMO-Strategy-on-reduction-of-GHG-emissions-from-ships.aspx>

International Monetary Fund. “World Economic Outlook Database October 2022.” imf.org. Accessed January 29, 2023. <https://www.imf.org/en/Publications/WEO/weo-database/2022/October>.

International Monetary Fund. “World Economic Outlook Database.” Accessed November 22, 2022. <https://www.imf.org/en/Publications/WEO/weo-database/2022/>.

International Trade Centre. *Climate Change Impacts on Trade: Evidence from Country Case Studies*. Geneva, Switzerland: International Trade Centre, 2018.

Inuit Circumpolar Council. “Home.” Inuit Circumpolar Council. Accessed January 3, 2023. <https://www.inuitcircumpolar.com/>.

Inuit Circumpolar Council. “ICC Political Universe.” Inuit Circumpolar Council. Accessed January 3, 2023. <https://www.inuitcircumpolar.com/about-icc/icc-political-universe/>.

Irwin, D., & Rada, N. (2018). Climate change and international trade: Implications for agriculture. In *Handbook on Trade and the Environment* (pp. 305-324). Edward Elgar Publishing.

Israel Defense. “The Strait of Malacca: China between Singapore and the United States” Accessed November 23, 2022. <https://www.israeldefense.co.il/en/node/46689>.

Jernsletten, Jørn, and Mikkel Nils Sara. “Indigenous Knowledge and Climate Change: The Role of the Saami Council.” *Arctic Review on Law and Politics* 9, no. 2 - 2018.

Karadag Haluk, “Enhancing Economic Security of China Thorough the Strategic Cooperation in the Arctic: The Polar Silk Road Initiative”, *Doğu Asya Araştırmaları Dergisi* Volume 4/8 (2021):16.

Khurshudyan, Isabelle and Andrew Freedman. “An oil spill in Russia's Arctic exposes problems with Moscow's big plans for the far north.” *Washington Post*, July

28, 2020. <https://www.washingtonpost.com/climate-environment/2020/07/28/an-oil-spill-russias-arctic-exposes-problems-moscows-big-plans-far-north/>.

Koc, Yasin, and Yuxiao Nie. "China's Belt and Road Initiative and Economic Security." In *The Belt and Road Initiative: Opportunities and Challenges*, edited by V. G. Rastyannikov, 227-237. Cham: Springer, 2019. Accessed April 29, 2023. https://doi.org/10.1007/978-3-030-17557-3_16.

Kulchitsky, Anatoly. "The Situation of Indigenous Peoples in the Russian Federation." RAIPON. Accessed January 4, 2023. <https://en.raipon.info/documents/index>.

Li, J. 2022. China's investment in port infrastructure and its impact on the global economy. *Journal of Transport Economics and Policy*, 56(3), 432-447.

Liang Fang, Today's Risks to the "Maritime Silk Road", February 11, 2015. Accessed February 16, 2023. http://www.81.cn/jwgd/2015-02/11/content_6351319.htm.

Lu, D., & Teng, F. (2020). From efficiency to resilience: Towards a new framework for China's economic security in the era of COVID-19. *China Economic Journal*, 13(3), 347-370

Lundmark, Linda and Sverker Sörlin. "Sweden's Arctic Footprint: A Comparative Analysis of Sweden's Arctic Policies and Research Interests." *Arctic Yearbook*, Vol. 2013, 2013, pp. 61-81.

Michael R. "Looking North: Sharpening America's Arctic Focus." May 6, 2019.

Michael T. Klare, "China's Strategic Vulnerabilities: The Malacca Dilemma and Energy Security," *Current History* 111, no. 746 (2012): 99.

Nabokov, Peter. "Aleut Story." *Common Knowledge* 11, no. 3 (2005): 8-34.

NASA Goddard Institute for Space Studies. "GISTEMP Surface Temperature Analysis (GISTEMP v4)." Accessed January 11, 2023.

https://data.giss.nasa.gov/gistemp/graphs_v4/.

National Aeronautics and Space Administration (NASA). Climate Change: How Do We Know?. Accessed January 11, 2023. <https://climate.nasa.gov/evidence/>.

National Geographic Education. "Arctic." National Geographic Education, 2021, <https://education.nationalgeographic.org/resource/arctic/>.

National Security Presidential Directive 66. "Subject: Arctic Region Policy." Federation of American Scientists, May 12, 2009.

<https://fas.org/irp/offdocs/nspd/nspd-66.htm>.

Ng, A. K. Y., & Chen, L. (2019). Trade and Environment in the WTO Era. In *Routledge Handbook of the Economics of Climate Change Mitigation* (pp. 139-155). Routledge.

Nielsen, Jørgen S. "Denmark's Path to Modernity: Rural Society and Urban Development." *Scandinavian Journal of History*, vol. 37, no. 3, 2012, pp. 322-337.

Norwegian Ministry of Foreign Affairs. "Norwegian Policy on the Arctic." Government.no. Accessed December 27, 2022.

<https://www.regjeringen.no/en/topics/foreign-affairs/norwegian-policy-on-the-arctic/id2481349/>.

Ólafur Ragnar Grímsson, "Full Opening Speech at the Arctic Circle China Forum", YouTube video. Accessed November 21, 2022. <https://youtu.be/BByASgDkb7c>.

Oxhorn, P. (2003). Economic security: conceptual clarity and policy implications. *Canadian Journal of Political Science*, 36(4), 845-864.

Pompeo, Michael R. "Looking North: Sharpening America's Arctic Focus," U.S. Department of State, May 6, 2019, <https://www.state.gov/looking-north-sharpening-america-arctic-focus/>

Purtill, James. "What Would Happen if the World Reacted to Climate Change Like It's Reacting to the Coronavirus?" BBC Future, April 22, 2020. <https://www.bbc.com/future/article/20200422-what-would-happen-if-the-world-reacted-to-climate-change-like-it-is-to-coronavirus>.

Russian Association of Indigenous Peoples of the North. "About the Association." RAIPON. Accessed January 3, 2023. <https://en.raipon.info/association/index>.

Russian Association of Indigenous Peoples of the North. "RAIPON History." RAIPON. Accessed January 3, 2023. <https://en.raipon.info/history/index>.

Saami Council. "The Saami Council." Accessed January 4, 2023. <https://www.saamicouncil.net/en/the-saami-council>.

Shankman, Sabrina. "There's a Very Simple, No-brainer Solution to Climate Change. It's Called Trees." NBC News, September 17, 2019. <https://www.nbcnews.com/mach/science/there-s-very-simple-no-brainer-solution-climate-change-it-ncna1057371>.

Small, Margaret. "From Thought to Action: Gilbert, Davis, and Dee's Theories behind the Search for the Northwest Passage." *The Sixteenth Century Journal* 44, no. 4 (2013): 1041-1058. Accessed November 1, 2022. doi:10.2307/24246301.

Sommer, Rebecca. "The Sámi People of Lapland." *Cultural Survival Quarterly* 15, no. 4 (1991).

State Council Information Office of the People's Republic of China. <http://english.scio.gov.cn/>

Stephan, Ingo. "Russia and the Arctic: Opportunities and Challenges for the West." Canadian Foreign Policy Journal, Vol. 23, No. 1, 2017, pp. 1-12.

Strait of Malacca - World Oil Transit Chokepoints Archived 2014-11-22 at the Wayback Machine, Energy Information Administration, U.S. Department of Energy.

Sustainable Development Working Group (SDWG). "Sustainable Development Working Group." Arctic Council, accessed January 9, 2023. <https://sdwg.org/>.

The Economic Security with Chinese Characteristics." Clingendael Strategic Monitor 2019-2020, Clingendael Institute, 2019, www.clingendael.org/pub/2019/strategic-monitor-2019-2020/economic-security-with-chinese-characteristics/.

The White House. "Fact Sheet: The United States National Strategy for the Arctic Region," Statement, October 7, 2022. Accessed December 27, 2022.

<https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/07/fact-sheet-the-united-states-national-strategy-for-the-arctic-region/>.

Tynkkynen, Nina. "Sweden's Arctic Identity and Its Environmental Diplomacy." Environmental Politics, Vol. 26, No. 5, 2017

U.S. Department of Energy Energy Information Administration, "Strait of Malacca - World Oil Transit Chokepoints." Archived November 22, 2014, at the Wayback Machine.

United Nations Development Programme, "Human Development Report 2021/2022" (PDF) (September 8, 2022), accessed September 28, 2022.

<https://hdr.undp.org/en/content/human-development-report-2021-2022>.

United Nations Environment Programme. "Arctic Monitoring and Assessment Programme (AMAP)." Accessed January 5, 2023. <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/science-policy-assessment/arctic-monitoring-and-3>.

United States Environmental Protection Agency (EPA). Climate Change Indicators: Climate Forcing. Accessed January 11, 2023. <https://www.epa.gov/climate-indicators/climate-forcing>.

University of Alaska Fairbanks. "Treaty of the Arctic Athabaskan Council." Center for Alaska Native Policy and Strategy. Last modified October 11, 2016. Accessed December 28, 2023. https://uaf.edu/caps/resources/policy-documents/aac-Treaty%20of%20the%20AAC%20_%20Arctic%20Athabaskan%20Council.pdf.

US Congressional Hearing. "Strategic Importance of the Arctic in US Policy." 2018. Page 15.

Voosen, Paul. "The Climate Solution Actually Adding Millions of Tons of CO₂ Into the Atmosphere." *Science Magazine*, March 22, 2021. <https://www.sciencemag.org/news/2021/03/climate-solution-actually-adding-millions-tons-co2-atmosphere>.

Wang, Y. 2021. Maritime transport and global economic security: A case study of China's maritime routes. *Journal of International Trade and Economic Development*, 30(3), 325-341.

Wang, Yuzhu. "The International Economic Security Implications of China's One Belt, One Road Initiative." *Journal of Contemporary China* 28, no. 114 (2019): 296-311. Accessed April 29, 2023. <https://doi.org/10.1080/10670564.2018.1490088>.

WMO Library. "Byrd Polar and Climate Research Center." Accessed January 6, 2023. https://library.wmo.int/index.php?lvl=author_see&id=8890.

Yu, J. 2022. China's efforts towards sustainable economic growth: An overview. *Journal of Economic Development*, 47(1), 45-58.

Zengerle, Patricia. "China granted observer seat on Arctic Council." Reuters. Accessed February 12, 2023. <https://www.reuters.com/article/arctic-council-idUSL6N0DW2ZT20130515>.

Zhang, Zhihua, and Kevin Honglin Zhang. "China's International Trade, Economic Security, and Global Governance." *Journal of Contemporary China* 27, no. 111 - 2018: 471-485. Accessed February 29, 2023. <https://doi.org/10.1080/10670564.2017.1352041>.

APPENDIX – I. ARCTIC WHITE PAPER

Full text: China’s Arctic Policy

Updated: Jan 26,2018 1:50 PM Xinhua

BEIJING — The State Council Information Office of the People’s Republic of China published a white paper titled “**China’s Arctic Policy**” on Jan 26, 2018.

Following is the full text of the White Paper:

China's Arctic Policy
The State Council Information Office of the
People's Republic of China
January 2018
First Edition 2018

- Contents
 - Foreword
- I.** The Arctic Situation and Recent Changes
 - II.** China and the Arctic
 - III.** China's Policy Goals and Basic Principles on the Arctic
 - IV.** China's Policies and Positions on Participating in Arctic Affairs
 1. Deepening the exploration and understanding of the Arctic
 2. Protecting the eco-environment of the Arctic and addressing climate change
 3. Utilizing Arctic Resources in a Lawful and Rational Manner
 4. Participating Actively in Arctic governance and international cooperation
 5. Promoting peace and stability in the Arctic Conclusion
- Conclusion

Foreword

Global warming in recent years has accelerated the melting of ice and snow in the Arctic region. As economic globalization and regional integration further develops and deepens, the Arctic is gaining global significance for its rising strategic, economic values and those relating to scientific research, environmental protection, sea passages, and natural resources. The Arctic situation now goes beyond its original inter-Arctic States or regional nature, having a vital bearing on the interests of States outside the region and the interests of the international community as a whole, as well as on the survival, the development, and the shared future for mankind. It is an issue with global implications and international impacts.

A champion for the development of a community with a shared future for mankind, China is an active participant, builder and contributor in Arctic affairs who has spared no efforts to contribute its wisdom to the development of the Arctic region. The Chinese government hereby issues this white paper, to expound its basic positions on Arctic affairs, to elaborate on its policy goals, basic principles and major policies and positions regarding its engagement in Arctic affairs, to guide relevant Chinese government departments and institutions in Arctic-related activities and cooperation, to encourage relevant parties to get better involved in Arctic governance, and to work with the international community to safeguard and promote peace and stability in, and the sustainable development of, the Arctic.

I. The Arctic Situation and Recent Changes

The Arctic is situated at a special geographical location. It commonly refers to the area of land and sea north of the Arctic Circle (approximately 66 degrees 34 minutes N), totaling about 21 million square kilometers. In the context of international law, the Arctic includes the northernmost landmasses of Europe, Asia and North America adjacent to the Arctic Ocean and the relevant islands, and a combination of sea areas within national

jurisdiction, high seas, and the Area in the Arctic Ocean. There is no single comprehensive treaty for all Arctic affairs. The Charter of the United Nations, the United Nations Convention on the Law of the Sea (UNCLOS), the Spitsbergen Treaty and other treaties and general international law govern Arctic affairs at present.

The continental and insular land territories in the Arctic cover an area of about 8 million square kilometers, with sovereignty over them belonging to Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States, respectively. The Arctic Ocean covers an area of more than 12 million square kilometers, in which coastal States and other States share maritime rights and interests in accordance with international law. These coastal States have within their jurisdiction internal waters, territorial seas, contiguous zones, exclusive economic zones, and continental shelves in the Arctic Ocean. Certain areas of the Arctic Ocean form part of the high seas and the Area.

States from outside the Arctic region do not have territorial sovereignty in the Arctic, but they do have rights in respect of scientific research, navigation, overflight, fishing, laying of submarine cables and pipelines in the high seas and other relevant sea areas in the Arctic Ocean, and rights to resource exploration and exploitation in the Area, pursuant to treaties such as UNCLOS and general international law. In addition, Contracting Parties to the Spitsbergen Treaty enjoy the liberty of access and entry to certain areas of the Arctic, the right under conditions of equality and, in accordance with law, to the exercise and practice of scientific research, production and commercial activities such as hunting, fishing, and mining in these areas.

The Arctic boasts a unique natural environment and rich resources, with most of its sea area covered under thick ice for most of the year. The Arctic natural environment is now undergoing rapid changes. Over the past three decades, temperature has been rising continuously in the Arctic, resulting in diminishing sea ice in summer. Scientists predict that by the middle of this century or even earlier, there may be no ice in the Arctic Ocean for part of the year. On the one hand, melting ice in the Arctic has led to changes in the natural environment, or possibly can result in accelerated global warming, rising sea levels, increased extreme weather events, damaged biodiversity, and other global problems. On

the other, with the ice melted, conditions for the development of the Arctic may be gradually changed, offering opportunities for the commercial use of sea routes and development of resources in the region. Commercial activities in the region will have considerable impact on global shipping, international trade and energy supply, bring about major social and economic changes, and exert important influence on the way of work and life of Arctic residents including the indigenous peoples. They may also pose a potential threat to the ecological environment of the Arctic. The international community faces the same threat and shares the same future in addressing global issues concerning the Arctic.

II. China and the Arctic

China is an important stakeholder in Arctic affairs. Geographically, China is a “Near-Arctic State”, one of the continental States that are closest to the Arctic Circle. The natural conditions of the Arctic and their changes have a direct impact on China’s climate system and ecological environment, and, in turn, on its economic interests in agriculture, forestry, fishery, marine industry and other sectors.

China is also closely involved in the trans-regional and global issues in the Arctic, especially in such areas as climate change, environment, scientific research, utilization of shipping routes, resource exploration and exploitation, security, and global governance. These issues are vital to the existence and development of all countries and humanity, and directly affect the interests of non-Arctic States including China. China enjoys the freedom or rights of scientific research, navigation, overflight, fishing, laying of submarine cables and pipelines, and resource exploration and exploitation in the high seas, the Area and other relevant sea areas, and certain special areas in the Arctic Ocean, as stipulated in treaties such as the UNCLOS and the Spitsbergen Treaty, and general international law. As a permanent member of the UN Security Council, China shoulders the important mission of jointly promoting peace and security in the Arctic. The utilization of sea routes and exploration and development of the resources in the Arctic may have a huge impact on the energy strategy and economic development of China, which is a major trading nation and

energy consumer in the world. China's capital, technology, market, knowledge and experience is expected to play a major role in expanding the network of shipping routes in the Arctic and facilitating the economic and social progress of the coastal States along the routes. China has shared interests with Arctic States and a shared future with the rest of the world in the Arctic.

China has long been involved in Arctic affairs. In 1925, China joined the Spitsbergen Treaty and started to participate in addressing the Arctic affairs. Since then, China has exerted more efforts in the exploration of the Arctic, expanding the scope of activities, gaining more experience and deepening cooperation with other participants. China's membership in the International Arctic Science Committee in 1996 marked its more active participation in scientific research in the Arctic. Since 1999, China has organized a number of scientific expeditions in the Arctic, with its research vessel Xue Long (Snow Dragon) as the platform. In 2004, China built the Arctic Yellow River Station in Ny Alesund in the Spitsbergen Archipelago. By the end of 2017, China has carried out eight scientific expeditions in the Arctic Ocean, and conducted research for 14 years with the Yellow River Station as the base. Using its research vessel and stations as platforms, China has gradually established a multi-discipline observation system covering the sea, ice and snow, atmosphere, biological, and geological system of the Arctic. The year 2005 saw China as the first Asian country to host the Arctic Science Summit Week, a high-level conference on Arctic affairs. In 2013, China became an accredited observer to the Arctic Council. In recent years, Chinese companies have begun to explore the commercial opportunities associated with Arctic shipping routes. China's activities in the Arctic have gone beyond mere scientific research, and expanded into diverse areas of Arctic affairs including the platforms of global governance, regional cooperation, and bilateral and multilateral affairs, and such disciplines as scientific research, ecological environment, climate change, economic development, and cultural exchanges. As an important member of the international community, China has played a constructive role in the formulation of Arctic-related international rules and the development of its governance system. The Silk Road Economic Belt and the 21st-century Maritime Silk Road (Belt and Road Initiative),

an important cooperation initiative of China, will bring opportunities for parties concerned to jointly build a “Polar Silk Road”, and facilitate connectivity and sustainable economic and social development of the Arctic.

III. China’s Policy Goals and Basic Principles on the Arctic

China’s policy goals on the Arctic are: to understand, protect, develop and participate in the governance of the Arctic, so as to safeguard the common interests of all countries and the international community in the Arctic, and promote sustainable development of the Arctic.

To understand the Arctic, China will improve the capacity and capability in scientific research on the Arctic, pursue a deeper understanding and knowledge of the Arctic science, and explore the natural laws behind its changes and development, so as to create favorable conditions for mankind to better protect, develop, and govern the Arctic.

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

To develop the Arctic, China will improve the capacity and capability in using applied Arctic technology, strengthen technological innovation, environmental protection, resource utilization, and development of shipping routes in the Arctic, and contribute to the economic and social development of the Arctic, improve the living conditions of the local people and strive for common development.

To participate in the governance of the Arctic, China will participate in regulating and managing the affairs and activities relating to the Arctic on the basis of rules and mechanisms. Internationally, China is committed to the existing framework of international law including the UN Charter, UNCLOS, treaties on climate change and the environment, and relevant rules of the International Maritime Organization, and to addressing various

traditional and non-traditional security threats through global, regional, multilateral and bilateral mechanisms, and to building and maintaining a just, reasonable and well-organized Arctic governance system. Domestically, China will regulate and manage Arctic-related affairs and activities within its jurisdiction in accordance with the law, steadily enhance its ability to understand, protect and develop the Arctic, and actively participate in international cooperation in Arctic affairs.

Through all the above efforts to understand, protect, develop and participate in the governance of the Arctic, China will work with all other countries to build a community with a shared future for mankind in the Arctic region. While pursuing its own interests, China will pay due regard to the interests of other countries and the broader international community, bear in mind the importance of the protection and development of the Arctic, and of keeping in proper balance its current and long-term interests, so as to promote the sustainable development of the Arctic.

In order to realize the above-mentioned policy goals, China will participate in Arctic affairs in accordance with the basic principles of “respect, cooperation, win-win result and sustainability”.

“Respect” is the key basis for China’s participation in Arctic affairs. Respect should be reciprocal. It means all States should abide by international treaties such as the UN Charter and the UNCLOS, as well as general international law. They should respect the sovereignty, sovereign rights, and jurisdiction enjoyed by the Arctic States in this region, respect the tradition and culture of the indigenous peoples, as well as respect the rights and freedom of non-Arctic States to carry out activities in this region in accordance with the law, and respect the overall interests of the international community in the Arctic.

“Cooperation” is an effective means for China’s participation in Arctic affairs. It means establishing a relationship of multi-level, omni-dimensional and wide-ranging cooperation in this area. Through global, regional, multilateral and bilateral channels, all stakeholders — including States from both inside and outside the Arctic, intergovernmental organizations, and nonstate entities — are encouraged to take part in cooperation on

climate change, scientific research, environmental protection, shipping route development, resource utilization and cultural activities.

“Win-win result” is the value pursuit of China’s participation in Arctic affairs. It means all stakeholders in this area should pursue mutual benefit and common progress in all fields of activities. Such cooperation should ensure that the benefits are shared by both Arctic and non-Arctic States as well as by nonstate entities, and should accommodate the interests of local residents including the indigenous peoples. It should also help to promote coordinated development of activities in all fields to ensure the harmony between natural conservation and social development.

“Sustainability” is the fundamental goal of China’s participation in Arctic affairs. This means promoting the sustainable development of the Arctic by ensuring the sustainability of environmental protection, resource utilization and human activities in the area. It means realizing harmonious coexistence between man and nature, better coordination between ecological protection, economic growth and social progress, better balance between utilization, management and protection, and intergenerational equity.

IV. China’s Policies and Positions on Participating in Arctic Affairs

When participating in Arctic affairs, China prioritizes scientific research, underscores the importance of environmental protection, rational utilization, law-based governance and international cooperation, and commits itself to maintaining a peaceful, secure and stable Arctic order.

1. Deepening the exploration and understanding of the Arctic

The Arctic holds great value for scientific research. To explore and understand the Arctic serves as the priority and focus for China in its Arctic activities.

China actively promotes scientific expedition and research in the Arctic. China respects the Arctic States' exclusive jurisdiction over research activities under their national jurisdiction, maintains that scientific research in areas under the jurisdiction of Arctic States should be carried out through cooperation in accordance with the law, and stresses that all States have the freedom of scientific research on the high seas of the Arctic Ocean. China is actively involved in multi-disciplinary research including Arctic geology, geography, ice and snow, hydrology, meteorology, sea ice, biology, ecology, geophysics and marine chemistry. It actively participates in monitoring and assessing local climatic and environmental changes, and carries out multi-level and multi-domain continuous observation of atmosphere, sea, sea ice, glaciers, soil, bio-ecological character and environmental quality through the establishment of multi-element Arctic observation system, construction of cooperative research (observation) stations, and development of and participation in the Arctic observation network. China is committed to improving its capacity in Arctic expedition and research, strengthening the construction, maintenance and functions of research stations, vessels and other supporting platforms in the Arctic, and promoting the building of icebreakers for scientific purposes.

China supports and encourages research activities in the Arctic by constantly increasing investment in scientific research, building modernized research platforms, and improving the capacity in, and level of, research on the Arctic. It is making a greater effort to advance research in the fields of natural science, climate change and ecological environment, accelerate the development of basic subjects such as physics, chemistry, life science and earth science, strengthen social science research including Arctic politics, economy, law, society, history, culture and management of Arctic activities, and promote innovation in both natural and social sciences. It is also working to strengthen personnel training and public awareness of the Arctic, support higher learning and research institutions to train professionals specialized in natural and social sciences on the Arctic, build science popularization and education centers, and publish cultural products on the Arctic to improve public knowledge. It actively promotes international cooperation on Arctic research, pushes for an open and inclusive international monitoring network of the

Arctic environment, supports pragmatic cooperation through platforms such as the International Arctic Science Committee, encourages Chinese scientists to carry out international academic exchanges and cooperation on the Arctic, and encourages Chinese higher learning and research institutions to join the network of the University of the Arctic.

The availability of technical equipment is essential to understanding, utilizing and protecting the Arctic. China encourages the development of environment-friendly polar technical equipment, actively participates in the building of infrastructure for Arctic development, pushes for the upgrade of equipment in the fields of deep sea exploration, ice zone prospecting, and atmosphere and biology observation, and promotes technology innovation in Arctic oil and gas drilling and exploitation, renewable energy development, navigation and monitoring in ice zones, and construction of new-type icebreakers.

2. Protecting the eco-environment of the Arctic and addressing climate change

China follows international law in the protection of the natural environment and ecosystem of the Arctic and conservation of its biological resources, and takes an active part in addressing the challenges of environmental and climate change in the Arctic.

(1) Protecting the Environment

China always gives top priority to resolving global environmental issues, earnestly fulfills its obligations under relevant treaties, and discharges its responsibility of environmental protection. China is actively engaged in improving the Arctic environment by enhancing the environmental background investigation of Arctic activities and the assessment of their environmental impact. It respects the environmental protection laws

and regulations of the Arctic States and calls for stronger environmental management and cooperation.

The marine environment is a key area for Arctic environmental protection. China supports the Arctic coastal States in their efforts to reduce pollutants in the Arctic waters from land-based sources, in accordance with the relevant treaties, and commits itself to raising the environmental responsibility awareness of its citizens and enterprises. In order to effectively protect the marine environment of the Arctic, China works with other States to enhance control of the sources of marine pollution such as ship discharge, offshore dumping, and air pollution.

(2) Protecting the Ecosystem

The Arctic is home to several endangered species of wild fauna and flora from around the globe. China attaches importance to the sustainable development and biodiversity protection of the Arctic. It conducts scientific evaluation of the impact on the Arctic ecological system caused by global climate change and human activities, strengthens protection of migratory birds and their habitats, organizes research on the migration patterns of Arctic migratory birds, improves the adaptability and resilience of the Arctic ecological system, and advances international cooperation in the protection of Arctic species of fauna and flora.

(3) Addressing climate change

Addressing climate change in the Arctic is an important part of global climate governance. China consistently takes the issue of climate change seriously. It has included measures to deal with climate change such as Nationally Determined Contributions in its overall national development agenda and planning, and has made significant contributions to the conclusion of the Paris Agreement. China's emission reduction measures have a

positive impact on the climatic and ecological environment of the Arctic. China is committed to studying the substance and energy exchange process and mechanisms of the Arctic, evaluating the interaction between the Arctic and global climate change, predicting potential risks posed by future climate change to the Arctic's natural resources and ecological environment, and advancing Arctic cryospheric sciences. It strengthens publicity and education on addressing climate change to raise the public's awareness of the issue, and promotes international cooperation in addressing climate change in the Arctic.

3. Utilizing Arctic Resources in a Lawful and Rational Manner

The Arctic has abundant resources, but a fragile ecosystem. China advocates protection and rational use of the region and encourages its enterprises to engage in international cooperation on the exploration for and utilization of Arctic resources by making the best use of their advantages in capital, technology and domestic market. China maintains that all activities to explore and utilize the Arctic should abide by treaties such as the UNCLOS and the Spitsbergen Treaty as well as general international law, respect the laws of the Arctic States, and proceed in a sustainable way on the condition of properly protecting the eco-environment of the Arctic and respecting the interests and concerns of the indigenous peoples in the region.

(1) China's participation in the development of Arctic shipping routes

The Arctic shipping routes comprise the Northeast Passage, Northwest Passage, and the Central Passage. As a result of global warming, the Arctic shipping routes are likely to become important transport routes for international trade. China respects the legislative, enforcement and adjudicatory powers of the Arctic States in the waters subject to their jurisdiction. China maintains that the management of the Arctic shipping routes should be conducted in accordance with treaties including the UNCLOS and general international law and that the freedom of navigation enjoyed by all countries in accordance with the law

and their rights to use the Arctic shipping routes should be ensured. China maintains that disputes over the Arctic shipping routes should be properly settled in accordance with international law.

China hopes to work with all parties to build a “Polar Silk Road” through developing the Arctic shipping routes. It encourages its enterprises to participate in the infrastructure construction for these routes and conduct commercial trial voyages in accordance with the law to pave the way for their commercial and regularized operation. China attaches great importance to navigation security in the Arctic shipping routes. It has actively conducted studies on these routes and continuously strengthened hydrographic surveys with the aim to improving the navigation, security and logistical capacities in the Arctic. China abides by the International Code for Ships Operating in Polar Waters (Polar Code), and supports the International Maritime Organization in playing an active role in formulating navigational rules for the Arctic. China calls for stronger international cooperation on infrastructure construction and operation of the Arctic routes.

(2) Participating in the exploration for and exploitation of oil, gas, mineral and other non-living resources

China respects the sovereign rights of Arctic States over oil, gas and mineral resources in the areas subject to their jurisdiction in accordance with international law, and respects the interests and concerns of residents in the region. It requires its enterprises to observe the laws of the relevant States and conduct risk assessments for resource exploration, and encourages them to participate in the exploitation of oil, gas and mineral resources in the Arctic, through cooperation in various forms and on the condition of properly protecting the eco-environment of the Arctic.

The Arctic region boasts an abundance of geothermal, wind, and other clean energy resources. China will work with the Arctic States to strengthen clean energy cooperation,

increase exchanges in respect of technology, personnel and experience in this field, explore the supply of clean energy and energy substitution, and pursue low-carbon development.

(3) Participating in conservation and utilization of fisheries and other living resources

As fish stocks have shown a tendency to move northwards due to climate change and other factors, the Arctic has the potential to become a new fishing ground in the future. As regards fishing in the high seas in the Arctic Ocean, China has consistently held a firm stance in favor of conservation in a scientific manner and of rational use, and maintains that, while enjoying their lawful right to conduct fisheries research and development in the high seas in the Arctic Ocean, all States should fulfill their obligations to conserve the fishery resources and the ecosystem in the region.

China supports efforts to formulate a legally binding international agreement on the management of fisheries in the high seas portion of the Arctic Ocean. China also supports the establishment of an Arctic fisheries management organization or making other institutional arrangements based on the UNCLOS. China will strengthen survey on and research into the fishery resources in the high seas in the Arctic, carry out appropriate exploratory fishing, and play a constructive part in the management of fisheries in the high seas in the Arctic Ocean. China hopes to strengthen cooperation with the Arctic coastal States on the research, conservation, and utilization of fishery resources. China is committed to properly protecting Arctic biodiversity and advocates transparent and reasonable exploration and utilization of Arctic genetic resources, and fair and equitable sharing and use of the benefits generated by the exploitation of such resources.

(4) Participating in developing tourism resources

Arctic tourism is an emerging industry, and China is a source of tourists to the Arctic. China supports and encourages its enterprises to cooperate with Arctic States in developing tourism in the region, and calls for continuous efforts to enhance security, insurance, and rescue systems to ensure the safety of tourists in the Arctic. China conducts training for and regulates Chinese tourism agencies and professionals involved in Arctic tourism, and endeavors to raise the environmental awareness of Chinese tourists. China advocates low-carbon tourism, ecotourism, and responsible tourism, and hopes to contribute to the sustainable development of Arctic tourism.

China takes part in the development and utilization of Arctic resources on the condition of respecting the traditions and cultures of the Arctic residents including the indigenous peoples, preserving their unique lifestyles and values, and respecting the efforts made by the Arctic States to empower the local citizens, foster their social and economic progress, and improve education and medical services, so that the Arctic residents, including the indigenous peoples, will truly benefit from the development of Arctic resources.

4. Participating Actively in Arctic governance and international cooperation

China is committed to improving and complementing the Arctic governance regime. China has worked to regulate and supervise the activities of Chinese citizens, legal persons or other organizations in the Arctic in accordance with the law to ensure that their activities accord with international law and respect the relevant national laws on environmental protection, resource conservation, and sustainable development. And it has endeavored to strengthen overall coordination of its Arctic policy and related affairs. Furthermore, China takes an active part in the international governance of the Arctic. China upholds the current Arctic governance system with the UN Charter and the UNCLOS as

its core, plays a constructive part in the making, interpretation, application and development of international rules regarding the Arctic, and safeguards the common interests of all nations and the international community.

China stands for steadily advancing international cooperation on the Arctic. It has worked to strengthen such cooperation under the Belt and Road Initiative according to the principle of extensive consultation, joint contribution and shared benefits and emphasized policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and closer people-to-people ties. Concrete cooperation steps include coordinating development strategies with the Arctic States, encouraging joint efforts to build a blue economic passage linking China and Europe via the Arctic Ocean, enhancing Arctic digital connectivity, and building a global infrastructure network. China hopes to work for the common good of all parties and further common interests through the Arctic.

At the global level, China actively participates in the formulation of rules concerning the global environment, climate change, international maritime issues, and high seas fisheries management, and fulfills all its international obligations in accordance with the law. China expands cooperation with various States and international organizations in environmental protection, and promotes energy conservation, emissions reduction, and low-carbon development. China also promotes global cooperation in tackling climate change, and upholds the principles of equity, common but differentiated responsibilities, and respective capabilities. It urges developed countries to fulfill their commitments under the UN Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement, and provides support to fellow developing countries in addressing climate change. China plays a constructive role in the work of the International Maritime Organization, and makes solid efforts to fulfill its international responsibilities for ensuring maritime navigational security and preventing its ships from polluting the maritime environment. China advocates stronger international cooperation in maritime technology and a globally coordinated solution to reducing greenhouse gas emissions from maritime transport under the International Maritime Organization framework. China takes an active part in negotiations over high seas fisheries regulation in the Arctic, and calls for a legally

binding international agreement for managing fishery resources in the high seas portion of the Arctic. The agreement should allow scientific research and exploratory fishing activities in the high seas portion of the Arctic, and protect the freedom of all States on the high seas in accordance with international law.

At the regional level, China takes an active part in Arctic intergovernmental mechanisms. China, as an accredited observer to the Arctic Council, highly values the Council's positive role in Arctic affairs, and recognizes it as the main intergovernmental forum on issues regarding the environment and sustainable development of the Arctic. China stands by the commitments it made when applying to become an observer to the Council. It fully supports the work of the Council, and dispatches experts to participate in the work of the Council including its Working Groups and Task Forces. China respects the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, and the Agreement on Enhancing International Arctic Scientific Cooperation, all adopted by the Arctic Council. China also supports international cooperation through such platforms as the Arctic Science Ministerial Meeting.

At the bilateral and multilateral levels, China promotes practical cooperation in all fields, especially regarding climate change, scientific expeditions, environmental protection, ecosystems, shipping routes, resource development, submarine fiber-optic cables, cultural exchanges, and capacity building. China proposes to form cooperative partnerships between Arctic and non-Arctic States, and has carried out bilateral consultations on Arctic affairs with all Arctic States. In 2010, China and the United States set up an annual dialogue mechanism for bilateral dialogues on the law of the sea and polar issues. Since 2013, China and Russia have been conducting dialogues on Arctic issues. In 2012, China and Iceland signed the Framework Agreement on Arctic Cooperation, which was the first intergovernmental agreement on Arctic issues between China and an Arctic State. China also values cooperation with other non-Arctic States. It has conducted bilateral dialogues on the law of the sea and polar issues with the United Kingdom and France. In 2016, China, Japan and the Republic of Korea launched high-level trilateral dialogues on

Arctic issues to promote exchanges on policies, practices, and experience regarding Arctic international cooperation, scientific research, and commercial cooperation.

China supports the participation of all Arctic stakeholders in Arctic governance and international cooperation. China supports platforms such as “The Arctic: Territory of Dialogue”, “The Arctic Circle”, “Arctic Frontiers”, “The China-Nordic Arctic Research Center”, in promoting exchanges and cooperation among the stakeholders. China also supports the participation of research institutions and enterprises in Arctic governance with their own expertise put to good use. China encourages research institutions to communicate with foreign think tanks and academic institutions, and supports enterprises to participate in the commercial development and utilization of the Arctic in a lawful and orderly manner.

5. Promoting peace and stability in the Arctic

Peace and stability in the Arctic provides a significant guarantee for all activities in the region, and serves the fundamental interest of all countries including China. China calls for the peaceful utilization of the Arctic and commits itself to maintaining peace and stability, protecting lives and property, and ensuring the security of maritime trade, operations and transport in the region. China supports the peaceful settlement of disputes over territory and maritime rights and interests by all parties concerned in accordance with such treaties as the UN Charter and the UNCLOS and general international law, and supports efforts to safeguard security and stability in the region. China strives to reinforce cooperation with the Arctic States in maritime and air search and rescue, maritime early warning, emergency response, and information sharing in order to properly handle security challenges such as maritime accidents, environmental pollution, and maritime crimes.

CONCLUSION

The future of the Arctic concerns the interests of the Arctic States, the wellbeing of non-Arctic States and that of the humanity as a whole. The governance of the Arctic requires the participation and contribution of all stakeholders. On the basis of the principles of “respect, cooperation, win-win result and sustainability”, China, as a responsible major country, is ready to cooperate with all relevant parties to seize the historic opportunity in the development of the Arctic, to address the challenges brought by the changes in the region, jointly understand, protect, develop and participate in the governance of the Arctic, and advance Arctic-related cooperation under the Belt and Road Initiative, so as to build a community with a shared future for mankind and contribute to peace, stability and sustainable development in the Arctic.