

## The geopolitical implications of climate change in the Arctic Ocean and major power interests and strategies

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### Abstract

*The Arctic Ocean is a hot belt of concertation and going to decide the future apart as well prominent powers improving their attraction in this region due to its geographical location ice cap is melting because of climate change and global warming. The research question of this article is that how the geopolitics of the Arctic Ocean are going to change in the future the objective of this study to explore an analysis of melting polar dynamics and geopolitical implications of climate change in the arctic ocean and to explore the role of major power interests and strategies in this area balancing economic opportunities and security concerns. This Rese adopted a qualitative approach as it is the collection and analysis of the selected literature available about the topic. Realism Theory is applied in this Article in the context of power. The Arctic is currently the fastest growing continent. Every Arctic country is making concerted efforts to stake claims to humans in the High North by opening colonies, intensifying military activities, increasing resource exploitation, and more. the Arctic Ocean is largely a confined ocean with two major channels. The Pacific end is severely restricted, while the Atlantic end is fairly open and flanked by long continental shelves. Persistent ice cover - a key feature of a wary and skeptical mariner's view has been declining year after year as a result of a warming polar climate, with higher temperatures for both air and sea. Almost all prominent scientists currently studying the global environment predict that this trend will continue, leaving people with treasures in the form of natural resources, strategically important terrain and highly efficient sea lanes of communication. You will have access to a vast collection of human history.*

**Keywords:** *Arctic Ocean, climate change, Realism, geopolitical implications, Major power Strategies.*

### Introduction

The Arctic Ocean is the earth's northernmost massive body of water. The Arctic Ocean is probably covered with ice throughout the year. It is the world's smallest ocean global warming effect the world's land and sea and environmental change occurs and inadequately affects the nature of waters and land. The arctic sea is located in the polar region of the Arctic Ocean because of climate change the cessation sea is enhancing in the gazes of prominent powers and regional countries. This sea is the pot of natural reveres, likewise oil, gases, minerals, submarine materials

seafood, and fish. further, it is in the eyes of advanced research institutions of various major powers. The Arctic Sea is more engaging in the last few decades when the ice starting melts speedily. The geostrategic, economic, and recently opening straits of the world's major powers USA, Russia, and China are immersed in this area. The neighboring countries also struggle to take their rights. There are eight states which are the neighbors of the sea located in the Northern Hemisphere, this region includes the Arctic Ocean, Canada, Greenland, Russia, America (Alaska), Iceland, Norway, Sweden, and Finland. These are the council members of this ocean these eight countries regime land in the Arctic Circle. five have coastlines to uphold. The temperature is rising. Due to melting ice. The race for newly accessible resources is commencing. And Russia is gaining ground.

The Arctic Ocean, frozen once a spectrum of ice is going through substantial changes due to transnational environmental change. The polarization dynamics of melting in the Arctic Ocean have profound geopolitical rises, enticing prominent power strategies and interests. This research paper examines the consequences of climate change on the Arctic Ocean. The geopolitics arising in the region and potential changes in the future politics of the Arctic Ocean. The Arctic Ocean opens new shipping routes for the globe due to its geographical location and melting polar dynamics or climate change this region significantly decreases the distance to the purpose of world connectivity through this ocean the locale of Arctic Ocean.

region Major power interests are increasing to get access to natural resources and secure their interest.

### **Significance of the study**

This research is the examination and exploration of major power interests and strategies in the Arctic Ocean it is the exploration of different sought aspects such as economic, political, security, challenges, and conflicts regarding various possible reasons it is a significant contribution to the existing literature related to the respective area this research paper will be a source of information for future researchers.

### **Methodology**

The study adopted a qualitative approach involving data collection through books news articles as well as focus on the Arctic Ocean melting polar dynamics and geo-political implications of climate change in the Arctic Ocean and Major Interest and strategies The research is using secondary source to analyze major power interest and strategies in Arctic ocean region case study is a tool that closely examines the data to understand power dynamics, competition, conflicts, economic political and security challenges

### **Data collection**

To analyze data was collected from secondary source to be compared to answer the research objectives

### **Secondary Data**

A secondary source is literature that has been written in the form of papers, articles, books and other similar publications and has been read in depth to learn about previously information about the research and to help organize the theoretical frame work. A comparative case study can be conducted by combining and comparing secondary data.

### **Realism Theory**

In this research, applied a realism theory in the context of power, and security dilemma Realist conceptions of power, as well as the consequences of power in an anarchistic society, have been questioned by Strategies and interests of a major power in the Arctic Ocean

## Review Of Literature

Indeed, with this one exception, the rusted weapons of long-dead sailors whose battles are over can be found at the bottom of any body of water. The Arctic, located at the top of the Earth and beyond human reach, is the ultimate. A sea that has never experienced much active combat. Now it has the magical potential to develop in the field of cooperation and peace. However, the size of its resources makes it valuable which will attract increasing interest from all sides, resulting in tension and risk. The Arctic is currently experiencing a delicate state of tension between environmentalists who fear that we will destroy the last pristine place on Earth and developers who want to take advantage of the immense natural wealth (although their view I with responsibility); Between Russia and NATO, which are increasingly heading for conflict in the Arctic Ocean and fully capable of sliding into another Cold War, both metaphorically and literally. and among scientists who wish to advance their understanding of the region's natural resources. The Arctic Ocean is a region that is both mysterious and dangerous. Above all, when we examine the Arctic, we must think about its importance to the global imagination. The area that many Scandinavians still refer to as the "High North" was often considered a temperate region to be explored. Early maps of the Arctic often depicted agricultural land and a temperate climate, and this misconception persisted for generations. The speed at which mankind is able to fully utilize all the resources available to it will be affected by a number of dangerous conditions. The Promise of the Arctic Ocean. Some of the issues in the region. The simple harshness of the climate remains the first and most obvious threat. The turbulent governance that surrounds the region, particularly at sea, is another threat to the Arctic Ocean today. National and international laws are conflicting because five major landmasses boundary the Arctic Ocean—Russia, Canada, Denmark, the US, and Norway, (a feature of Greenland).

The United Nations Convention on the Law of the Sea (UNCLOS), created in 1982, governs the law of the sea globally. After more than a decade of talks involving almost all the countries of the world. It underwent major revisions in 1994 and now serves as the basis for the overall governance of the oceans. Strangely, in keeping with its vital maritime interests, the US has chosen not to ratify the treaty and instead relies on "customary international law" to reap its maximum benefits. . Most countries believe that the UNCLOS framework is still applicable and useful in the Arctic Ocean today. A 2008 agreement (the Ilulissat Declaration) memorializes this view. The Arctic Council is a high-level, consensus-driven forum for Arctic nations in addition to the Law of the Sea Treaty. (Russia, Canada, USA, Norway, Denmark, plus Sweden, Finland, and Iceland). The five non-profit organizations that are also regular

participants in the Council represent the region's indigenous peoples and represent the interests of the majority of those living north of the Arctic Circle.

The International Marine Organization, headquartered in London, is a maritime body under the United Nations. Focuses on the regulation of shipping. It is working on a "Polar Code" that would establish common standards for shipping in the polar region. The International Maritime Organization participates in all relevant discussions about the Arctic Ocean, together with the UN Law of the Sea Convention and the Arctic Council. There are risks at the national level as well. Organizations in each of the major stakeholder countries work to deliver Rule over its own citizens as well as sovereign Arctic Ocean territories, but it also affects other entities, such as cruise ships. Geopolitical rivalry is the third threat facing the Arctic. Examining the positioning of the five main states in the Arctic Ocean, five countries - the United States of America, Norway, Canada, and Denmark are members of NATO, while the Russian Federation is an unusual "partner" of the alliance. It is clear that the Arctic Ocean could quickly serve as a place to stop Cold War belligerents if relations between NATO and Russia deteriorate. There is growing concern that permafrost in the Arctic may melt as a result of another environmental threat that is not fully understood. Emission of huge amount of methane gas as a result of global warming. This would be equivalent to releasing large amounts of carbon into the atmosphere with potentially catastrophic effects.

## **Geopolitical Implications:**

For several reasons, changes in dynamics in the Arctic region have geopolitical implications. The melting polar dynamics of the Arctic Ocean as a result of climate change have important geopolitical implications, affecting the interests and actions of major powers in the region. This study addresses the monetary, security and political elements of the changing landscape of Arctic with particular need for transnational cooperation and sustainable management to address the challenges and take benefit of the opportunities contributed by the changing dynamics of the Arctic. Here are some important factors and challenges to consider:

### **1- Economic Challenges**

- a- Resources: Oil, natural gas, minerals, and fish stocks, including melting Arctic ice, create new opportunities for resource acquisition. However, exploitation is difficult, because of the hostile environment, inadequate infrastructure, and exorbitant costs.
- b- Economic evolution: The Arctic may experience an increase in economic activity due to climate change, including tourism, research and infrastructure development. However, it also makes local populations that depend on traditional sources of livelihood more vulnerable.
- c- Routes: These shipping routes can significantly decrease shipping distances between Asia, Europe, and North America, but operative challenges and territorial disputes affect their commercial viability.

## 2- Political and security challenges

- a- Environmental Impacts: The melting of the polar ice caps causes climate change and makes the fragile Arctic ecosystem more difficult to manage. Environmental threats such as pollution, overfishing, and the possibility of oil spills require global control.
  
- b- Territorial claims: Several Arctic states, notably Russia, Canada, Denmark (via Greenland), Norway, and the United States, have competing territorial claims in the Arctic region. Political tensions could rise if disputes arise over the size of the continental shelf and access to resources.
  
- c- Search and Rescue: To maintain ships and crew members safe in isolated and difficult conditions, the development of new shipping routes in the Arctic requires improved search and rescue capabilities.

## **Major power interest in the Arctic Ocean Russia**

In this context, it is important to recognize how important the Arctic is to Russia. More than 20% of Russians live north of the Arctic Circle, compared to almost no Americans and a small number of Canadians. By the way, the Russians identify themselves as an Arctic nation in a way that arguably transcends the sentiments of any other sovereign state, with the possible exception of Canada. They have just launched Arctic, a 567-foot-long, 33,000-ton, 80,000-shaft-horsepower nuclear icebreaker that can break up to ten feet of ice, making it the largest and most powerful icebreaker in the world. Strangely enough, the area is largely devoid of human habitation. The largest Arctic nation is Russia because Russian territory in the Arctic Ocean is more than 50% NATO nations near Russia's boundaries. In this region Russian military is present additionally Russia is heavily invested in infrastructure having its interest to protect Russia affirming its dominance.

Fish, which provides essential protein for human life, is also abundant there. For example, the Exclusive Economic Zone 200 nautical miles off the coast of Alaska provides 50% of the fish stocks in the United States. Both within the exclusive economic zones, they control and on the high seas (where competition from non-Arctic states are intense and growing), and this is also true for many other countries that navigate these waters. All this is in a region that makes up only 2.5% of the total square mileage of the planet. Regarding geopolitical ownership, it is important to note that with claims to the entire Russian continental shelf, about 80% of the Arctic's proven reserves would be under Russian control.

The High North is an important tenet of the Russian Federation's worldview because the majority of the Russian coastline lies above the Arctic Circle. It also boasts excellent infrastructure and the Arctic's largest population (around four million). With greater geopolitical clarity, Russia understands the potential of the Arctic and will take action to dominate the region. The Arctic plays an important role in the Russian psyche and is valued as a nation of rugged individualists capable of surviving in the harshest conditions. Compared to other Arctic countries, especially the United States, Russia will always have a strong sense of responsibility for the Arctic Ocean.

**USA**

The narrow Bering Strait, off the coast of Alaska, which connects the larger Pacific Ocean with the Arctic Ocean at one end of the Arctic Ocean, is one of the most important sea lanes of communication today. The U.S. Coast Guard claims that all traffic through the Bering Strait increased by about 120 percent between 2008 and 2012, using it as a crude indicator of shipping growth. In terms of traditional ports, navigational equipment, float systems, and other associated marine systems, the area of open sea across which all this shipping must pass is essentially underdeveloped. For example, only air travel provides reliable access to Barrow, Alaska, a US port on the North Slope. Even Russia, which has invested significantly in it.

## **China**

In recent years, China has shown increasing interest in the Arctic region. Because of the Northeast Passage route and its access to Arctic resources, China describes itself as a "near-Arctic" state despite not being an Arctic nation. Economic prospects, resource exploration, transportation routes, scientific research, and geopolitical implications are some of the reasons for China's interest in the Arctic. Chinese strategies and actions in the Arctic include

The Arctic is believed to have a wealth of unexplored natural resources, including minerals, fisheries, oil, and gas. To sustain its expanding economy, China aims to gain access to these resources. Chinese enterprises have invested in mining efforts, energy research, and fishing projects in the Arctic. China has invested in research infrastructure and resource exploration in the region to accumulate access to natural resources as well china expand its influence in global affairs

## **Canada**

The Arctic region spans over 1.second-largestre miles, making it the second largest expanse of land on the planet. Canada, a staunch High North NATO ally, has traditionally prioritized Arctic security both in an idealistic environmental sense and in a practical geopolitical context. Canada boasts the longest coastline in the world, with 65 percent of that coastline extending into the Arctic Ocean. Canada has continued to speak and speak throughout the first decade of the 21st century with a significant focus on the Arctic Ocean in general and the Ocean in respective.



## **Findings**

By 2040 there will be almost an entire year of clear, and for another ten years after that, there will be no ice at the North Pole. Ironically, the Northwest Passage was the elusive passage through the Canadian Arctic that the Western world had long sought. Today, we have opened it up to rapid growth with no endeavor additional than pollution and transnational warming. The size of the Arctic is approximately in million square miles, about the same locale as the Antarctic continent. The Arctic Ocean holds over a dollar in trillions of cobalt, diamonds, platinum, manganese, Au, nickel, zinc, palladium, lead, and periodic earth metals, as well as an estimated 15 percent. Unexpected oil (potentially 100 billion barrels) and 30 percent undiscovered gas (potentially 1,000 million barrels of raw gas and 44 billions of barrels liquefied natural gas). At a rough percentage, the Arctic has about 25 percent of proven hydrocarbon reserves (oil and natural gas). All of this promises exciting potential for humanity in the form of natural assets that were previously out of reach due to harsh environments, persistent snow, and great distances from global communication centers. Of course, the Arctic Ocean holds great promise, but it also lies in a dangerous area. The famous Northwest Passage, important in terms of trade and geopolitics, is opening rapidly as the ice cover melts. A few years ago more than a million tons of cargo passed through polar routes, eliminating thousands of kilometers from traditional sea routes crossing the lower trade routes. This cargo, which is increasing in tonnage each year, can be broadly divided into three categories: global shipping, with a specific destination outside the Arctic, transactional shipping containers (themselves high within the North's port infrastructure), and adventure tourism. The (shortest) Northwest Passage, which follows the North American continent, and the Northern Sea Passage, which mainly follows Eurasia along the coast, are the main routes connecting Asia and Europe.

## **Analysis**

The Arctic is currently the fastest growing continent. Every Arctic country is making concerted efforts to stake claims to humans in the High North by opening colonies, intensifying military activities, increasing resource exploitation, and more. The Arctic Ocean is largely a confined ocean with two major channels. The Pacific end is severely restricted, while the Atlantic end is fairly open and flanked by long continental shelves. Persistent ice cover - a key feature of a wary and skeptical mariner's view has been declining year after year as a result of a warming polar climate, with higher temperatures for both air and sea. Almost all prominent scientists currently studying the global environment predict that this trend will continue, leaving people with treasures in the form of natural resources, strategically important terrain and highly efficient sea lanes of communication. You will have access to a vast collection of human history.

## **Conclusion**

In conclusion, the melting dynamics in the Arctic Ocean because of geo-political implications and climate change have been substantial. Major powers are vying for permits to resources, dominion over shipping lanes, and consequences in the region. As the Arctic continues to change, the future geopolitics of the Arctic region will be shaped by environmental impacts, legal frameworks, multinational collaboration, and the evolving prominent powers balance has created new opportunities for resource extraction, shipping routes, and access to valuable natural resources, including minerals, oil, and gas. The Northwest Passage and northern shipping routes are becoming more and more passable as the Arctic ice melts, greatly reducing transportation distances between Europe, Asia and North America. This development has several implications for geopolitics. First and foremost, Arctic littoral nations—including Norway, Denmark (through Greenland), Russia, Canada, and the United States—are fighting for sovereignty over these new access areas and the resources they contain. These are the countries.

## **Suggestions**

The Arctic Ocean is rich in raw resources, including oil, gas, minerals, and fisheries. The increasing directive for these resources has instructed competition among nations to assure access and dominion over them. This competition can inflate tension and potentially lead to conflict. To address maritime security challenges in the Arctic Ocean region, the following area policies can be considered. Enhancing multinational cooperation between prominent powers and role of organizations such as (UNCLOS). Arctic states cooperate in various ways to solve common problems and advance sustainable development, including through the Arctic Council. However, geopolitical tensions and conflicting interests make building a comprehensive governance structure difficult.

- 1-International cooperation
- 2-sustainable management approaches  
balancing the economic interest
- 4-environmental preservation
- 5-major power can contribute to the long-term stability and sustainability of the Arctic region.
- 6-Role of the united nations convention on the Law of the Sea (UNCLOS)  
The Arctic Council

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