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Security Implications of Arctic Climate Change in Russia and the United States

An honors thesis presented to the
Department of Political Science,
University at Albany, State University of New York
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and
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Abstract

Climate change is altering the world in an unprecedented way which brings about difficulties for world leaders. The Arctic is one particular region where major climate change consequences are being felt. As climate change grows more severe in this region not only will accessibility to the Arctic grow, but interest in the Arctic will grow as interest in Arctic resources heighten. As a result of these changes countries with Arctic borders and interests are going to face a variety of economic and security concerns in the region. This paper specifically looks at the way Russia has and is likely to continue to respond to the impacts of climate change in the Arctic both economically and defensively. By then also looking at the actions of the United States, and comparatively notice how the United States is much less engaged in the Arctic than Russia and therefore has a much more unpredictable future in the region. This paper concludes that as the consequences of climate change continue to be felt in the Arctic, issues of security are going to become more visible. Particularly with states such as Russia and the United States who already have a tense relationship.

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Introduction

Climate change is something that can no longer be ignored, and the effects of the warming planet can be felt even now. It is creating new crises that governments have never had to deal with before and the difficulty in navigating those challenges is something that will impact every country eventually.

One such result of climate change that can no longer be ignored now is the warming of the Arctic region, and a major state that will have to alter how it is functioning in the Arctic because of global warming is Russia. This paper will seek to answer the question: in what ways will climate change bring about Russian security concerns within the Arctic Circle, and what are the security implications for the United States? This question addresses the major idea of this paper that climate change will allow the Arctic region to be more accessible, and this will create security concerns for Russia along their Arctic border as more Western actors enter the region to develop the area for economic gain.

This paper is utilizing sources and data from papers prior to the 2022 Ukraine invasion. Given this, this paper will be unable to identify to what degree the outcomes of the recent war will have on worldwide involvement in the Arctic. However, the conclusions that are reached at the end of this paper are likely to be similar to the conclusions that would've reached if sources regarding the recent war were used. This is likely the case given that similar historical events are looked at in order to reach the conclusion, and more importantly given the fact that the ongoing war does not change the amount of distrust between Russia and the West but rather elevates it. The factor of distrust is one that directly relates to security concerns and issues.

Taking that into account with other data sources available this paper discovers that

climate change is not something that is going away and as a result we see more security issues rising. In the case of the Russians there is a continued demand to both secure their border and territory in the Arctic as well as utilize this area for their own economic gain. We can see that the Russians have been making decisions and following through on actions in relation to these goals in the past and have been setting themselves up for increased involvement in the Arctic area in the future. The US is much more unpredictable within the area. They have for a long time been regarded as a sleeping giant within the area and haven't shown any substantial future plans or involvement in the region to change that assumption. However, the US has the potential to be necessary in a legal role in the Arctic. The tensions between Russia and the West have only increased in recent years and as the Russia's continue to make advancements in the Arctic region the US can use its alliance power with the other Arctic states to create policies that won't favor the Russians. The Russians do not have access to as strong of an alliance network in the Arctic so although the US is vastly behind the Russians in their Arctic involvement they have the ability to influence Arctic development in a way the Russians cannot.

Historical Russian Involvement in the Arctic

The Arctic region has been important militarily for Russia since they were the Soviet Union. It houses much of Russia's nuclear missile defense as well as Russia's Northern Fleet, (Sharma, 2018, pg.154). This includes intercontinental missiles, missile defense systems, nuclear attack early warning stations, nuclear submarines, and icebreakers, (Nilsson, 2014). After the collapse of the Soviet Union the Russians largely dismissed the Arctic as an area of importance, but this interest was greatly renewed around the 2000s when oil prices were at a high and as these prices rose the capacity for economic gain grew as well, (Klimenko, et. al.

2019). Ever since the Arctic has been regarded by the Russians as a region that holds economic opportunity.

In tandem with growing economic interests in the Arctic the Russians also began to view the Arctic as an area to restore their military power and ensure their domestic security. This is in part due to President Putin's ideas of restoring Russia as a world power and revitalizing Russian military might. The Arctic is so crucial to Putin's idea of revitalizing Russian military might because it is so central to national identity and is in a region of the world where Russian forces can conduct military demonstrations on an equally important domestic and international stage, (Klimenko, et. al. 2019).

Most notably going forward it is important to keep in mind the resulting effect of the 2014 Ukrainian crisis. Mainly that it resulted in elevated levels of distrust between Western powers and Russia. Russia has felt for some time now, especially after the 2014 crisis in Ukraine, that the Western world is against them and should be viewed with distrust, (Kristensen & Sakstrup, 2016). This has led Russia to feel the need to prepare for a potential military confrontation in the Arctic. However, as can be expected, the more Russia builds up its military defense to protect themselves from the West, the more the West wants to build up their own military might to defend against the Russians. Hence, this back and forth between the West and Russia continues only leading to more distrust.

This back and forth between the West and Russia is at the front of this paper, and will continue to be discussed. Distrust is something that will only rise as the consequences of climate change become more severe, and it sets the stage for developing security dilemmas in the region.

Climate Change and Security in the Arctic

Over the course of the last few decades the issue of climate change has begun to establish itself as a major concern within the world. The impact of climate change is becoming more noticeable and the concerns with global warming have been the object of many environmentalists' movements. The changing environment is bound to create political challenges as the physical landscape of the world changes and creates new problems for our world leaders. The Arctic will be no exception to these political challenges.

The main effect of climate change within the Arctic is the warming of ocean temperatures and the access it allows in the Arctic waters. The warming of the Arctic Ocean is causing a significant melting of sea ice, it is even estimated that by 2050 the Arctic Ocean will be ice free in the summers, (Leddy, 2020). The major effect that is most likely to occur as a result of melting sea ice is that accessibility in the Arctic will rise dramatically. No longer will ice breaker ships be necessary in order to travel in the Arctic. Greater accessibility will lead to more competition as well as a greater need for states to protect their Arctic borders, (Leddy, 2020). This accessibility creates the opportunity for states to insert themselves within new areas of resource extraction and create a profit due to the easier access. For example, China is currently the country with the largest control over important rare earth minerals. The Arctic, however, holds an estimated 25% of the worlds rare earth mineral deposits, meaning whichever state is able to secure a foothold in the Arctic and begin resource extraction quickly and efficiently has the capacity to make a lot of money in the area, (Aspen Institute, 2019, pg. 8). China's lack of Arctic territory leaves open the possibility that Arctic states such as Canada, Russia, or the US could insert themselves into the Arctic mineral reserves and overtake China as the world's main

monopoly of rare earth minerals.

A large aspect of Arctic competition is likely to surround the desire for resources in the Arctic. This is because climate change, as a whole, has been linked to resource scarcity. The Arctic has been known to be abundant in resources for quite some time, but sea ice and extreme weather has made resource extraction difficult. As the climate warms this process will be made less difficult and lead many actors to look towards the Arctic for resources such as oil, natural gas, minerals, and even fish due to the warming Arctic oceans. This influx of actors in the Arctic region creates competition in extracting resources especially since there is currently very little policy as to how states should function in the Arctic, (Aspen Institute, 2019).

Resource scarcity is also something that affects both the security of states with Arctic borders, as well as resource extraction within the Arctic. Resource scarcity has been proven to be about violent conflict both internally and externally, especially since world population growth is only increasing, (Aspen Institute, 2019, pg. 2). Given the link between conflict and climate change it is essential for Arctic states to be aware of this relationship and plan accordingly. Particularly because the demand for new resources creates competition not only in the Arctic in order to extract the resources themselves, but also outside the Arctic when there inevitably becomes an unequal division of the resources extracted. Conflict created by unequal division of resources post Arctic extraction is likely given that climate change is going to affect each community differently. There is bound to be a different impact on communities that are richer than those that are poorer, mainly because poor communities are going to have less of an opportunity to combat inequality and secure resources for themselves. This inequality is what allows for climate change to have the capacity to create conflict and require states to focus on the security of their borders, as well as the stability of their national populations, (Aspen Institute,

2019, pg. 4). These conflicts only further break the economic stability of states as then more money is being diverted to handle conflict rather than climate change and the continued lack of proper climate change action only creates more conflict states have to deal with, (Aspen Institute, 2019, pg. 6). States with Arctic borders are therefore going to have a struggle with ensuring they are capable of protecting themselves from potential security threats that could arise as more powers seek the Arctic as a solution for their resource scarcity problem, especially given the lack of standards for Arctic operations.

Russian Arctic Policy

As discussed, Russia's past involvement in the Arctic peaked during the Cold War. This dissipated in later years and Russia focused its energy on other non-Arctic sectors. However, in current years Russia has been looking at the Arctic region as an area where advancements in Russian security are needed. This is due to the threat of Western powers. Russia for a long time has been wary of Western influence and seen the Western powers as a threat to both Russian influence and Russian values. Currently we can see this dynamic play out within Ukraine after Russia invaded in early 2022. The events that have unfolded within current day Ukraine has shown us that the Russians perceive the Western threat to be very much real, and in their minds it is imperative to protect themselves. Hence why the Russian's want to maintain control of the countries surrounding their border so they can ensure a geographical barrier between themselves and the West.

As climate change progresses and the world continues to change the Western threat will only be viewed in a more severe light for Russia. This relates back to the earlier point that richer, more powerful communities are who are most likely to get through the problems climate change

will bring about, (Aspen Institute, 2019, pg. 4). Should Russia want to be successful in dealing with climate change, particularly in the region they share a massive border with, they do not want to be the weakest state in the Arctic either economically or politically. In order to ensure this doesn't happen recent Russian policy, such as the 'Framework for the State Policy of the Russian Federation in the Arctic', has detailed plans designed to support both the militaristic and economic build up in the Arctic in order to combat more aggressive Western policy, (Hansen, 2021).

Russia's desire to increase security along their Arctic border is something that shouldn't be a shock given Russia's geography. Russian territory spans across 40% of all dry land that exists north of the polar circle, (Nilsson, 2014). Despite their massive amounts of Arctic land there is potential for Russia to make future claims within the area. The UN Convention on the Law of the Sea (UNCLOS) in 1982 decided that states have the right to an exclusive economic zone roughly 200 nautical miles from the coast, and the rights for exclusive mineral extraction can be extended even further if they can prove that a continental shelf that is a part of their preexisting territory expands further than this existing exclusive economic zone, (Nilsson, 2014). This is something Russia is attempting to do by claiming that the Lomonosov and Alpha-Mendelev ridges are connected to the Siberian continental shelf which is already Russian territory. There are other competing claims in that area from Denmark and Canada, but should that claim be recognized for Russia would then be able to claim the underground of the central Arctic Ocean as well as parts of the underground of the Barents Sea, Bering Sea, and the Sea of Okhotsk, (Nilsson, 2014). This would be massively economically beneficial for Russians who desire to export natural gas and oil as it is assumed that this ridge holds about 2.5 billion barrels of oil equivalent, (Sharma, 2018). Should this claim not be recognized it leaves the door open for

the claims mentioned above, from either Denmark or Canada, to be accepted which would take economic opportunity away from Russia and provide it for those more Western states who could pose a threat to Russians given that they don't share similar Russian values.

The current amount of infrastructure that exists within the Russian Arctic is lacking both in terms of quantity and quality. There is a serious lack of new or fully functioning infrastructure within the region which is needed if the Russians want to adequately monitor this area. In order to combat this, recent Russian Arctic policies involve reopening, rebuilding, and renovating old Soviet era Arctic infrastructure as well as building new Arctic buildings, (Sharma, 2018). By reopening Soviet era buildings along with building new Arctic buildings the Russian Arctic region should be able to build up its military network in a way that allows for the region to be better connected, (Townsend & Kendall-Taylor, 2021a). However, fully connecting the region will be exceedingly complicated because most of the Soviet era buildings are located in the Western area of the Russian Arctic in order to protect the Northern Fleet (which has $\frac{2}{3}$ of Russian sea based nuclear warheads), meaning that other areas will take much longer to build up due to a lack of already existing infrastructure, (Laruelle, 2011).

Economically speaking, a main concern for Russia is the issue of the Northern Sea Route. This route is something that will be able to aid in the development of the Russian Arctic as well as potentially having the capacity to build up the Russian economy. Specifically, this potential for economic growth comes from the Russian argument that the Northern Sea Route is a part of Russian waters rather than international waters, (Nilsson, 2014). This distinction holds a great deal of importance for Russia if they want to profit as much as possible off the route. In the past, Russia has already benefited within this sea route by collecting fees from ships looking to sail in the area and by also collecting fees associated with the use of

Russian icebreaker ships that aid ships in making the passage, (Townsend & Kendall-Taylor, 2021b). Russia seeks to increase the security and control they have over the passage by implementing rules such as requiring ships to formally request transit in the area. That rule was implemented in 2019, goes against international law, and is most likely being used as a way for the Russians to exert control in the area and secure these waters as Russian waters rather than international, (Townsend & Kendall-Taylor, 2021b). In 2014 it was estimated that within the 2030s summer sea ice wouldn't exist anymore and that the Northern Sea Route will then be more travelable, (Nilsson, 2014). As the sea ice melts this shipping route will be more desirable to travel across since this route is able to significantly cut travel time between Europe and East Asia along with domestic travel between Siberian river ports and European territories, (Sharma, 2018). So the longer Russians are able to establish themselves as the ones in control of the Northern Sea Route the more difficult it will be for the rest of the world to combat this.

In order for the Russians to be successful in the Arctic they will most likely have to engage in cooperation with the Chinese. This is likely since the Chinese have a growing demand for the Russian energy that the West has placed sanctions on. With the Arctic being the source of approximately 80% of Russian gas it can be assumed that the Chinese will be supportive of Russian plans to develop the Arctic in order to extract this energy, (Townsend & Kendall-Taylor, 2021a). Currently it isn't expected that the Chinese would contribute militarily, but there is a possibility that with this cooperation may come a buildup of military assets in the region that has the potential to turn the Arctic into a militarized area, (Townsend & Kendall-Taylor, 2021a). This possibility would create a huge threat for the NATO states in the area which could result in the West's response to build up military development in their own Arctic territories, (Townsend & Kendall-Taylor, 2021a). This cooperation seems unlikely at this time

though, and we can assume that with this greater development in the Arctic we will also see the increase of security along the Russian Arctic border.

Security Implications for the United States:

After Russia's 2014 invasion of Ukraine tensions between the US and Russia rose. The Arctic was beginning to be viewed as an area of concern, and this led the US to begin to take steps towards addressing the security issue that the Russian Arctic is. For example, the US began to fly over Iceland, sail in the Norwegian Sea, and signed bilateral defense agreements with Nordic states as a way to build up regional deterrence, (Townsend & Kendall-Taylor, 2021). Events such as this are important to keep in mind given the recent Ukraine invasion.

Although the US has been involved in other NATO states' Arctic territories they have vastly neglected their own Arctic region. The US has even been regarded as a 'sleeping giant' in the Arctic region given its decision not to prioritize their involvement in the Arctic, (Olesen, 2017). Any general comparison between the US and Russia's involvement in their Arctic regions would tell you that the Russians have a much stronger presence. For example, the US only has two ice breakers whereas Russia has around forty and is continuing to make more, (Olesen, 2017). The United States has, for some time, been assuming the Arctic has limited importance in the future and therefore there is no need to increase their presence in their Alaskan territories, (Conley, 2018). However, the actions Russia is taking in the Arctic should cause the United States to evaluate their security assessments of the Arctic. Given climate change it seems like the Arctic is growing in importance and if the United States doesn't begin to act in this region now Russia will be at a major advantage in the region. In order to ensure future US security within this region it would be essential for the US to build up their own resources and

infrastructure within the Alaskan region, (Conley, 2018). This will be a feat within itself since Arctic policy has a much harder time being implemented since government officials are largely unconcerned with the Arctic region, (Olesen, 2017).

It is clear that at the very least the US will want to be involved in future development of Arctic laws and treaties. Given their international position and alliances the US is in a much better position to get what they want regarding the development of these laws than Russia which could put them at a large advantage in the Arctic, (Laruelle, 2011). Particularly in regard to the development of the Northern Sea Route. As mentioned, the Russians would like to establish those waters as its own internal waters, whereas the US and the rest of the West would want to establish them as international waters, (Zandee, et al. 2020).

Conclusion

Climate change is shifting world dynamics as world leaders deal with the problems that arise from global warming. The growing accessibility of the Arctic and the increased demand for natural resources that reside in the Arctic creates security concerns that previously weren't an issue due to the natural barrier the sea ice provided. These security concerns that arise due to growing accessibility have led Russia to reinvigorate their involvement in the Arctic, whereas we do not see that same response from the United States.

It has been made clear that in recent years Russia has made great strides to improve their Arctic security and work to secure economic advantages within the region. As climate change continues to progress we expect to see these policy implementations continue at an equal, if not, faster speed. The Russian Arctic is a vast amount of territory and the Russians, who have felt threatened by the West for many years now, are unlikely to discontinue or wind

down any protective measures in the Arctic.

On the other hand, the United States has a much less sure future in the Arctic. As discussed, the United States has played a much more passive role in the Arctic compared to Russia. At this point it seems certain that climate change is occurring and will create a more accessible Arctic that will force the United States to reevaluate their position on their Arctic territories. However, a lack of involvement in the area makes it difficult to predict how the United States will respond going forward. At the very least it should be expected they will play a role in the development of Arctic laws, given their role on the Arctic Council and NATO, but their individual actions and responses are still unpredictable at this point.

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