The Future of the Arctic Circle Ryan Restivo 8 May 2014 Many complexities entangle the Arctic Circle region and organizational influence is increasing. In relation to global challenges and foreign influence, many new risks for world superpowers are signaled by systemic governance changes in the region. The goal of this research is to assist in understanding the dynamics behind the stability in the region to highlight gaps in governmental control and regional security. Ultimately if we can gain insights on regional governance, influence, and control, a voice for preservation can be echoed to lawmakers and decision makers.

A primary concern in the Arctic Region is that climate change may drive a shift from a balanced distribution of resources to an "up-for-grabs" environment for resources as larger governance gaps form. Additionally, China is increasingly seeking influence in the region. If a balance shift were to occur, China's rise to power could be a major game changer in the region. We recently have seen that as China has been purchasing territory and gaining involvement in the Arctic Circle to utilize the natural resources such as natural gas, fisheries and oil. An increase in external presence in the region will increase governance gaps due to the lack of control over the excess amount of players in the region. Treaty compliance largely relies on a strong [Arctic Council] influence. The Arctic Council currently maintains this role, though forces that can limit the Council's influence and could have an order of magnitude level impacts on the region and world.

Before delving into the analysis of the main variables that affect the Arctic Circle presently, and how the region will be impacted in the future, some brief background information is necessary. The Arctic Circle possess 1/5, or 20%, of the world's natural gas and oil preserves, fresh water, and fisheries. This makes the region a prime target for outside countries to tap into these resources as ice sheets begin to melt. This shift has allowed and will continue to allow new resources to emerge and create greater availability of shipping lanes. The location of the Arctic Circle is also quite unique. The Arctic Circle borders many countries, specifically the United States, Russia, Canada, Finland, Sweden, Norway, and Greenland. Because the Arctic Circle does border a significant amount of countries, the need for a governing power to oversee the stability of the region is high. Mentioned previously, The Arctic Council has taken this role. This organization seeks to ensure the stability of the region, protect the continental shelves, and maintain non-proliferation in the region. The reason that the Arctic Council wishes to ensure non-proliferation is that some of the bordering countries in the region possess nuclear weapons, which could pose a significant threat to the security and stability of the region.

Within the Arctic Council, a select few countries possess a greater amount of influence over the region. The United States seeks to, first and foremost, ensure the security of United States territories. In this case, the United States wishes to ensure that conflict in the region does not spread into its Alaskan territory. Next, the United States seeks to ensure its long-term resource use in the Arctic Circle and to conserve Arctic resources as they become more available. Lastly, the United States wants to maintain international cooperation with the members of the Arctic Council. Moreover, the United States seeks international cooperation with the potential countries that may get involved in the region in the future. Russia also has similar outlined goals for the Arctic region. These goals include maintaining Russia's security and ensuring the long-term use of Arctic resources and conservation of the newly emerged resources. The primary difference in Russia's goals and the United States' is that Russia has (recently) been acquire international control through physical expansion. The recent acquisition of Crimea and its military presence in Ukraine shows that Russia wants to expand its influence into neighboring territories. Because Russia borders the Arctic Circle, the potential for a greater military presence in the region is continuing to develop. Another key player under the Arctic Council is Iceland. Iceland wishes to control shipping lanes as they become available. Iceland also wishes to preserve Arctic resources, and become a greater economic power. In the past, Iceland has not been able to maintain a high GDP globally. However, with the recent investments by outside countries, specifically by China, Iceland has

begun to experience economic growth. In the future, Iceland hopes that this growth will continue until they have become a serious economic power in the region.

China's recent investment in some Arctic countries has shown that China is looking for greater influence abroad. This is a long-term strategy very much unlike United States political landscape. Chinese governmental decision making is not limited by media accountability, 2, 4, 8-year political cycles, or international law. China wishes to control and exploit Arctic resources, specifically Arctic fisheries. In the past, China has looked to the South China Sea for resources. The South China Sea possesses many natural gas and oil preserves, as well as a great number of fisheries. Unfortunately, these resources have been overexploited, leading to a search for resources in other parts of the world. Additionally, China wishes to control the newly accessible shipping lanes. China currently utilizes the South China Sea and the Strait of Malacca for most of its shipping. However, with the increase in climate change and the melting of ice sheets, China is able to utilize the Arctic Circle for shipping in the winter months. By utilizing the Arctic shipping lanes, China is able to save money and time in transit. This could lead to greater influence and control in the region in the future.

Throughout this analysis, we have focused on how two major global trends and two overarching game changers would affect the future of the Arctic Circle. The first global trend that focused on is the food, water, and energy nexus. Under this global trend, we focused on how the demand for resources affects the supply. As countries continue to consume more resources because of the growing population, the need for more resources is becoming vital. For example, China's population is growing at a substantial rate due to the repeal of their One-Child policy. As a result, they have been overfishing in the South China Sea to compensate for this growth in population. The need for more resources has led China to the Arctic Circle. The effects of greater foreign influence in the region will be assessed in later pages. The second global trend that we focused on was the changing demographic patterns. As previously stated, the changes in consumption utilization will affect the need for greater resources, causing for greater involvement abroad. Additionally, as economies continue to grow, the amount of funding going into the region could grow as well. The stability and control of the Arctic Council is affected by the amount of funding that it acquires from member countries. Some overarching game changers that we focused on in our analysis were the potential for increased conflict in the region and a wider scope of regional instability. Both of these game changers could result as outside countries become more involved in the region. The rate of resource exploitation has the potential to get out of hand, causing for conflict in the region. If conflict breaks out, the Arctic Council will need to take control of the region to ensure stability and security. If the Arctic Council is not able to do this, instability could occur.

In combination with the global trends and game changers discussed above, we have identified some key variables that will influence the future of the Arctic Circle. The three major variables are the availability of Arctic resources, the stability of Arctic resources, and the amount of influence in the region from external countries. In addition to these key variables, we have also identified three indicators that help show if change is beginning to occur in the region. These indicators are the control of the region, specifically by the Arctic Council, the global availability of resources, as well as the stability of global resources. We believe that these variables and indicators will help the Director of National Intelligence understand the complex nature of the region. The Arctic Circle poses an unprecedented problem for the United States. Never before has the rate of climate change increased to levels in which Arctic ice sheets have melted to open up untapped resources and shipping lanes. This opens up the issue of land acquisition in the region and treaty compliances. For this reason, we see that in the future of the Arctic Circle could pose a threat to the United States' security, create disputes over resources, as well as bring greater foreign influence into the region.

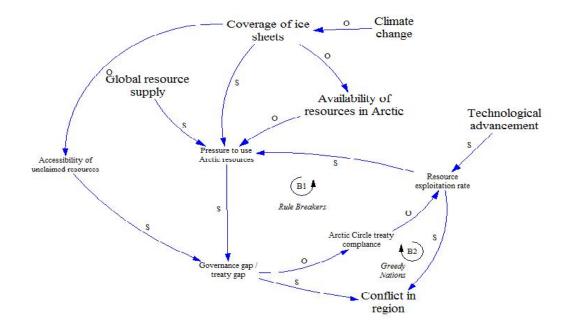
Changes in key variables could drastically affect the future of the Arctic Circle, as well how the control of the Arctic Council could affect the stability in the region. Because climate change does not occur rapidly, the region will continue to change slowly over the course of the next twenty years. Changes in the environment will likely occur slowly unless a game changer causes disruption. The presence of many actors in the region also poses a unique challenge in the coming years. Currently members of the Arctic Council agree to abide by the policies set in place by the Arctic Council. The introduction of new members or observers to the Arctic Council and foreign influence in the region will affect the ability of the Arctic Council to adequately control resource acquisition, land claims, and shipping lanes. The potential for policy resistance by outside countries is high. If the Arctic Council is unable to enforce their policies, individual countries may take it upon themselves to illegally acquire these natural resources. Additionally, as countries acquire land in the region to secure resource rights, the issue of maritime boundaries comes into play. The Arctic Circle may have trouble enforcing maritime boundaries while countries acquire the newly accessible pieces of land. Maritime boundaries, if unchecked, could overlap causing policy debates. Ultimately, these issues may not arise until further into the future.

Because the future of the Arctic Circle remains largely unknown, we focused on understanding the relationship between variables and the outcome of changes in one or more the key variables. Futures analysis and simulations allowed us to visualize the extent of these future outcomes. Additionally, it allows us to identify the current state of the Arctic Circle, as well as the best-case future scenario and the worst-case future scenario of the region. Through scenario development, we were able to understand how the Arctic Circle will look in the future, as well as to understand how United States security would be impacted. We were also able to identify some ways in which the United States could influence the future success of the region, as well as some threats to both the United States and the Arctic Council.

There are several major variables considered as driving factors in Arctic Circle control. The availability of resources, directly coming from climate shift, appears to be pushing the trends to go faster or slower. The stability of the resources, though not directly linked to availability, may come from technology or other governmental factors, which are important to the understanding of the main driving forces. The influence in the region largely comes from governmental control as well as other external controls but is also related to policy in the region and subsequently governance gaps.

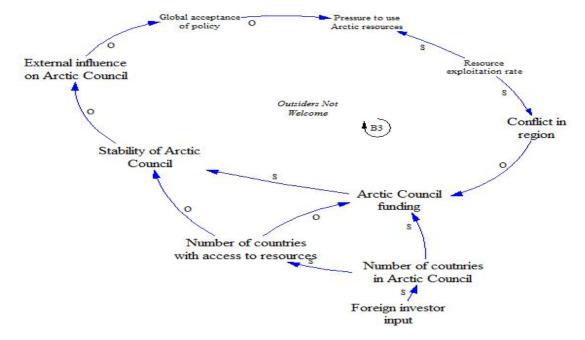
The trends of Arctic Circle control come from: More availability of resources, more global resource use, Arctic Council membership growth, as well as power shifts by Arctic Council members (based upon foreign investment).

The availability of resources comes from released ice sheets in the Arctic region. This comes from global climate shifts and can be seen in the causal loop diagram below. As the resources become available, we expect to see governance gaps to occur. These gaps would not cover precedence in the region, as there have not been legal issues in this type before. Gaps may include property rights of ice sheets, untapped resources underneath, new discoveries, new shipping routes, fisheries beneath the ice sheets, or land control. These gaps, depending on how rapidly increasing, would pressure the Arctic Council differently. A slow changing climate allows for balance of pressure and control of the region. However, as resources become more heavily available, the policy gaps may lead to "rule breakers." These rule breakers would exploit the policy gaps and increase their resource exploitation rates past intended levels. This may ultimately increase conflict in the region.



As countries become "rule breakers" by exploiting resources past Arctic Council control, we expect conflict in the region to increase. This increase may also be directly linked to governance gaps. Not all exploits will come from nation states, but nations may begin to enact policy against each other to prevent a "snowball" effect of resource acquisition. This could lead to armed conflict if the regional control is down or if treaties are completely ignored. The United States would protect its borders in Alaska, if its sovereignty came into question with armed reaction, and it would expect to see other NATO states to do the same with the support of NATO.

Below represents regional control of the Arctic Council as a direct result of the number of actors in the region. We would expect to see Arctic Council funding to increase, if more members joined the Arctic Council. Policy power may not increase as quickly if the nature of the system was compromised. If an issue was called into vote, a new member of the council may try to slow the vote, which becomes easier as more members join. These countries can also influence smaller countries through investment and mutual interest by going against the Council's previous wishes. If the number of countries with access to the Council increased, we would also expect to see the number of countries with access to the resources increase as well. This is due to a stake in the region and deals through policy. We have seen this begin to happen in land acquisition, currently, via China, Iceland, and Norway. As the access to the region increases through new players, we expect to see the stability of the council decrease. This puts pressure on policies in place as the legitimacy of the council may come into question and conflict may rise due to "rule breakers."



Conclusion: The Arctic Circle has many upcoming organizational shifts, policy gaps, and governance concerns. It is important to consider this region is largely undeveloped and isolated, and that the value of the area may be largely understated. Due to the rapid change of energy technologies and uncertainties of the intentions of the key players, I have a moderate level of confidence in this analysis. There have been several assumptions about the goals of some of the main actors, conditions, potential outcomes, and a clear bias exists.

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