Climate Change's Impact on Politics in the Arctic

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The changing face of the Arctic

The Arctic is a region more dynamic than ever. This development is primarily caused by growing geopolitical and economic interests but also fueled by climate change and the rapid melting of ice, turning the region into a focal point of international competition.

Once a nearly inaccessible ice desert, the progressive improvement of the technology behind ships, aircraft and buildings has increased the range of

activities capable of being carried out by humans in the Arctic dramatically throughout recent decades.

Additionally, climate change has fundamentally altered the Arctic. Temperatures in the region are rising at about two – four times the global average, leading to rapid loss of both on- and offshore ice. As ice coverage diminishes, new shipping routes such as the Northern Sea Route and the Northwest Passage are becoming viable alternatives to traditional trade paths in other regions of the world (e.g. the Suez Canal). Additionally, the rapid retreat of the Arctic's ice-cover exposes vast reserves of natural resources, including oil, natural gas, as well as rare minerals, which were previously locked beneath thick layers of ice or frozen ground. These developments are driving increased interest from Arctic and non-Arctic states alike, reshaping the region's economic and security landscape.

This brief serves the purpose of examining the implications the accelerated warming of the Earth's atmosphere will have on the Arctic and consequently the geopolitical situation with a focus on the economy- and defense-sectors.

The Arctic as an economic area

The Arctic is estimated to hold about 13% of the world's undiscovered oil and 30% of its untapped natural gas resources. These vast reserves present both an economic opportunity and an environmental dilemma, especially when looking at the step of extraction of the resources. Countries such as Russia, the United States, Canada and Norway have intensified their explorations and drilling activities in the Arctic, hoping to capitalize on these resources. However, the extraction of fossil fuels in a fragile ecosystem such as the Arctic, carries severe environmental risks, including oil spills that could have devastating consequences for marine life.

Additionally, the Arctic is rich in rare earth minerals, which are essential for technologies such as batteries, wind turbines, and semiconductors. As technology advances and the demand for such resources consequently grows, competition for Arctic mineral rights is intensifying. The increasing demand for resources, driven by technological improvements, has drawn interest from non-Arctic nations such as China, further complicating the region's geopolitical landscape.

The Arctic as a maritime passage

The steady retreat of ice covering the Arctic has unlocked new lanes of transportation, drastically reducing travel times between major markets. The Northern Sea Route (NSR), which runs along Russia's Arctic coast, for example offers a shorter route between Europe and Asia compared to the Suez Canal. Similarly, the Northwest Passage through Canada's Arctic waters could become an alternative for North American and European trade.

Just like the uncovering of untapped resources in the Arctic, these new trade routes present both opportunities and challenges. While shorter routes reduce fuel costs and carbon emissions, they also raise concerns regarding regulation. While Russia has asserted control over the NSR, requiring foreign vessels to obtain permission before using the route, Canada and the United States are in dispute about the legal status of the Northwest Passage, with Canada considering it internal waters while the U.S. argues that it lies within international waters. As shipping activity inevitably increases, ensuring the safety and security of these routes will become a growing concern for Arctic nations and those wanting to get a foot into the region.

The legal complexities of Arctic Sovereignty

The geopolitical situation in the Arctic is furthermore complicated by overlapping territorial claims. Nations such as Russia, Canada, and Denmark have submitted competing claims to extend their continental reach under the United Nations Convention on the Law of the Sea (UNCLOS). If accepted, these claims would grant them exclusive rights to vast areas of the Arctic seabed, including its valuable resources. The multitude of competing interests will inevitably lead to legal disputes regarding the entitlement of different nations to the resources they claim to be within their territorial reach.

Beyond these formal territorial claims, informal conflicts are also at play. Russia's increasingly aggressive behavior, combined with China's growing involvement in the Arctic through its self-declared "Polar Silk Road", has led Western nations to reassess their Arctic policies. While the Arctic Council has historically served as a forum for cooperation, rising geopolitical tensions threaten to undermine its former authority.

The Arctic is far more than just an economic battleground

It will also, in the light of climate change, become a strategic battleground. As economic interest grows, so do security concerns. Multiple nations neighboring the Arctic, including Russia, increased their military presence, deployed advanced air defense systems, and conducted large-scale military exercises. These actions have raised concerns among NATO states, prompting the United States, Canada, as well as European nations to enhance the military presence in the Arctic as well.

This response primarily consists of joint military exercises being carried out in the region, as well as an increase in naval patrols in Arctic waters. Additionally, NATO has placed a renewed focus on Arctic security, with member states strengthening their military infrastructure in the Arctic. The competition for control over Arctic territories and waterways has transformed the region into a potential ground for further geopolitical tension.

How is Climate Change impacting existing infrastructure in and around the Arctic?

Additionally, to the abovementioned potential problems, there is a far more physical challenge, states that have invested into infrastructure in the Arctic will face – the impact of the loss of ice on existing infrastructure.

As the majority of already constructed infrastructure is built on permafrost, a kind of permanently frozen ground providing buildings, roads and pipelines with stability, these buildings are in particular danger of collapsing or at least suffering severe structural damage as rising temperatures cause the permafrost to retreat, weakening the ground beneath them. This phenomenon not only threatens the sustainability of Arctic settlements but also poses logistical challenges for industries operating in the region.

What will the Arctic's future look like?

The Arctic is rapidly transforming due to climate change, economic interests, and conflicting geopolitical interest. As the ice recedes, it opens new opportunities but also amplifies tensions among nations competing for control over resources, trade routes, and strategic positions. Legal disputes, military build-ups, and environmental concerns will shape the future of the Arctic, already today making it a focal point for global diplomacy and security questions. While cooperation remains an option, the future of the Arctic ultimately depends on how key actors in the region respond to its transformation. How will the actors respond to each other's advances? How will they deal with the rapid loss of ice? Will they opt for diplomatic solutions, or increase their military presence in the Arctic instead? These are all questions to which we will get answers much sooner than we think due to climate change.