

# [Impact of climate change on the arctic circle](https://assignbuster.com/impact-of-climate-change-on-the-arctic-circle/)

Introduction

Oil, as a globally valuable natural resource, remains the focus of major international disputes and economic challenges spanning over recent decades. As climate change begins to open up untapped areas rich for drilling, these economic conflicts are only exacerbated by the tenacity of geopolitical rights in certain areas. A prime example of this phenomenon is in the Arctic Circle, bordered by powerful Western nations. Since the majority of the Arctic is ocean covered in rapidly melting glacial sheets, an unseen sovereignty problem arises as nations vie for drilling rights to oil reservoirs. Governments and scientists are attempting to find methods to substantiate their claims to features in the Arctic Ocean, however, there is a lack of defined policy and legislation over the Arctic. This has led to considerable tensions between the two main powers in this region, Russia and the United States.

Empirical evidence has been compiled over the last century to give an incredibly clear picture of how climate change is severely affecting the rate of glacial ice melt and permafrost thaw in the Arctic Circle. These climatically induced changes are occurring in both the “ North American” Arctic and “ Eurasian” Arctic. The Arctic circle is the global area above 66° N, with the “ North American” Arctic comprised of the ocean and landmass between 0°E and -150° W and the “ Eurasian” Arctic between 0° and °180 E.() Total land ice in the Arctic covers about 273, 000 km2. Glacial ice melt is chronic in the Arctic, with causality directed at steadily increasing global temperatures. Historic meteorological observations in the North American Arctic display that the mean temperature rapidly rose a whopping  Ëœ 1°C from 1900 through 2000. (Harriss 2016) This change represents a double augmentation of increasing global temperature trends. Various studies complied by the IPCC have likewise indicated that the Eurasian Arctic is warming at approximately at a Ëœ0. 12°C per year rate, noted as increasing at significantly quicker rate than the global temperature average. (IPCC 2014) Hence, glacial ice melt is exacerbated in the Arctic, as is permafrost thaw on continental land. The Eurasian and North American Arctic areas have lost several hundred kilometers of ice in the past 50 years alone. In turn, the rapidity of this ice melt is allowing for access to previously inaccessible oil and gas resources in the Arctic region.

It’s been approximated that the Arctic circle contains about 412. 16 billion barrels of crude oil and liquid natural gas, with the majority, about 63. 4%, located in the Eurasian Arctic. (EIA 2008) The majority of Arctic oil and gas reservoirs have already been discovered, with approximately 61 large oil and gas fields currently located by various geographic agencies. Oil is a crucial resource for almost every nation on earth, as it used for the majority of energy production.(EIA 2008) Western nations especially rely on oil for lifestyle comforts, economic dominance, and global trade power relations. The energetic conversion of oil, uncoincidentally, also drives the temperature trends occurring with modern climate change. (Hobbie, et. al 2017) Of course, with such a high demand for these valuable fossil fuels, several states geographically located in or near the Artic have begun staking claims in fields and shelves. Russia, the United States, Norway, Denmark, Canada, and Finland have all made claims for various Arctic shelves and basins containing natural resources. This has produced some geopolitical tensions, as the question of which states have certain sovereign rights over Arctic underwater features remains pertinent.()

In order to fully understand the scope of these international economic topics, one must understand the concept of sovereignty . Sovereignty, defined at a base level, is the possession of total authority within a geographic territory. There are two types of sovereignty in political theory-external and internal. External sovereignty concerns the relationship between a sovereign power and other states in the international community. (Lansing 1907) States with external sovereignty are recognized by other states as being a sovereign entity in the international system. Internal sovereignty, defined by law theorist Robert Lansing, is ” that which is inherent in a people of any state, or vested by its ruler…in its fundamental laws”.(Lansing 1907) Simply put, internal sovereignty is simply the right of is the right of a state to govern itself within its own defined borders. Now, when examining how this concept applies to the geopolitical disputes over Arctic oil sources, one can hone it down to a fundamental issue; how does one establish sovereignty in a borderless ocean, that, by UN law, is international? Various Arctic states are exacting claims over areas in the Arctic that aren’t geologically part of a claimed continental landmass. According to the 1982 UN Convention on the Law of the Sea, a state may claim an exclusive economic zone up to only 200 “ nautical miles” from their internationally recognized borders, unless the state can prove the continental shelf on which it sits extends beyond these 200 nautical miles, in which case the zone is extended to 350 miles. ( 2015) For the United States and Russia, geopolitical tensions have risen over the past decade due to the tenacity of sovereignty in international waters. For example, in a deep-sea dive in the early 2000’s, Russia dropped a tiny titanium flag under the North Pole ice sheet, symbolically asserting their claim over an area containing over 10 billion tons of oil, as well as a wealth of other natural resources.(Than 2007) This action raised alarms for the Arctic United States. The international system will need to figure out to what extent sovereignty extends to undersea geologic features and oil reserves, and who gets to make those decisions. The Arctic is a huge wealth of resources, and will be a key feature in the future development of the global energy market.

Problem Statement

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