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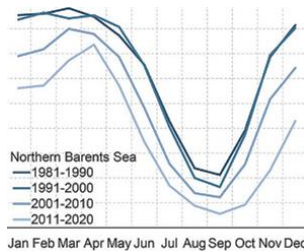
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The Arctic Is Warming Faster Than We Once Predicted

Situated in the Arctic waters shared by Norway and Russia, the Barents Sea has a relatively shallow depth of 230 meters and a total surface area of 1,400,000 km² (Smedsrud et al., 2013). To the trained eye, the Barents Sea is recognizable through the bits of landmasses such as the Kola Peninsula and the archipelagos of Svalbard that partially surround it. This is also an area of great interest for a wide variety of scientists as it harbors great marine biodiversity and was formed after a significant geological event. In 2022, the Barents Sea is once more dominating the minds of scientists, but this time, for a sinister reason.



Declining Sea Ice Concentrations

Arctic ice has been melting for over four decades and the rate at which this has been happening correlates positively with the upsurge in green house gases (GHG) released through human activity (Onarheim et al., 2017). In other words, the steady-but-steep climb of industrialization and globalization is reflected by a steady and steep climb in sea ice melting.

The graph on the left-hand side depicts the changes in sea ice concentration in the Barents Sea decade after decade starting from 1981 (Isaksen et al., 2022). As can be observed, the closer we inch towards the present decade, the lower the sea ice concentrations become. Additionally, the gaps between the decades only grow larger, which echoes the escalating rates of climate change.

Ring the Alarm: Why Scientists Are Worried

What was predicted by scientists in 1970 is no longer accurate as a lot has changed in terms of the impact humans now have on the planet. However, what was predicted by

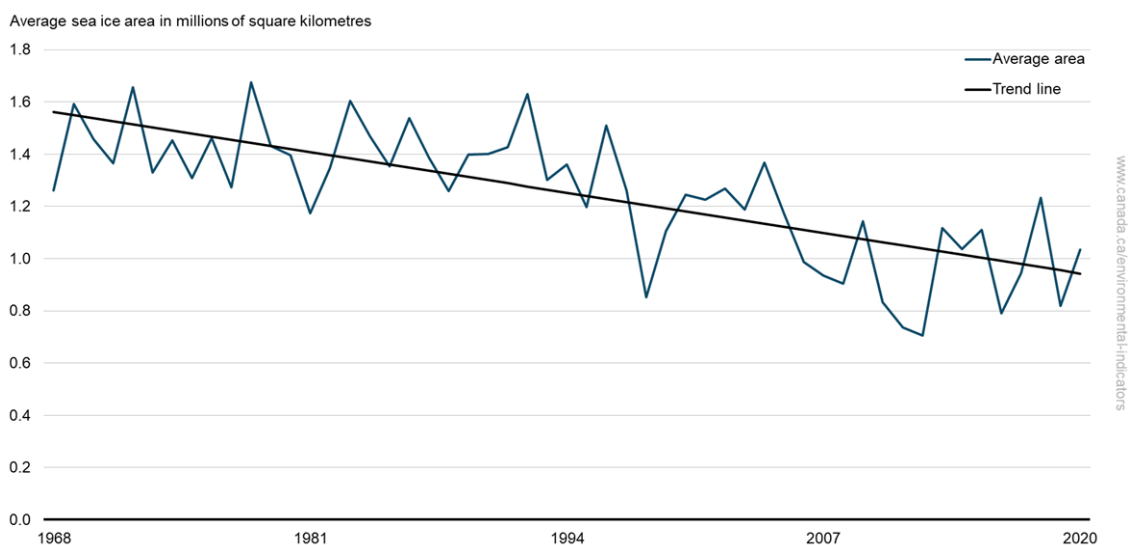


scientists in 2009 should still stand today as it has merely been a decade since. Unfortunately, as sane as this logic sounds, it is far from representing our current situation. Researchers have been aware of this fact for a while, but with recent studies being published (such as the report on the Barents Sea), they now have solid evidence to back their claims (Isaksen et al., 2022).

The Situation in Canada

Geographically, one could say that Canada is located in a rather safe and secure location when bearing in mind the effects of global warming, the occurrence of natural disasters, and extreme temperature changes. Yet, to be factually accurate, this sentiment should be rephrased as “the **populated** regions of Canada are sheltered from the real and dire consequences of global warming” because the truth is that for most northern populations, global warming is clearly happening and threatening their lives and cultures.

Like the Barents Sea and the rest of the Arctic, northern Canada is experiencing rapid climate change. In fact, a statistical analysis carried out by the *Environment and Climate Change Canada Climate Research Division* in 2020 indicated that each decade brings a higher loss of sea ice cover in Arctic Canada (see image below). Other studies also confirm these steep rates of Arctic warming over the last three decades (Polyak et al., 2016), and





many, if not all, researchers agree that these changes cannot be explained by natural global warming¹, i.e., they are human-induced.

In Canada, Indigenous and northern communities face the worst consequences of Arctic warming as their food supplies, habitat, infrastructures, energy supplies (e.g., electricity), and health are directly impacted (Government of Canada, 2021). Amongst these, the shortage in local and cultural food supplies has forcefully prompted many northern communities to turn towards store-bought food items. Unfortunately, this is far from ideal as the prices of grocery store products are incredibly high due to the remoteness of these communities and hefty transportation costs (*Canada: Climate Crisis Toll on First Nations' Food Supply*, 2020). With rising food insecurity and financial uncertainty, the health of these populations takes a serious and unfair hit compared to the rest of the Canadian population – a problem that only exacerbates the already existing inequalities that these communities face.

Part 2: Taking Action to Fight Global Warming

It would be a grave mistake to assume that people do not care about global warming. Most people show interest and attention upon receiving accurate and reliable information; however, the problem lies within the gap in knowledge surrounding the sense of urgency that the topic of global warming fails to evoke. For years, people have been taught that the consequences of global warming represent a problem of the future: “We are doing something wrong today, but we have X years to right our wrongs.” For many, it seems like we have decades to solve the problem, and as a natural consequence, they are relaxed about the current state of things.

In the next part of this article, you will get the chance to go over the current beliefs around global warming, why people fail to act, and what they can start doing to become a part of the solution.

¹ Recall: Global warming is a natural process that occurs with and without human activity; however, in the past few decades, humans sped the process up by releasing excessive amounts of greenhouse gases (GHG) into the atmosphere through their activities (e.g., fossil fuel combustion, livestock agriculture, etc.).



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