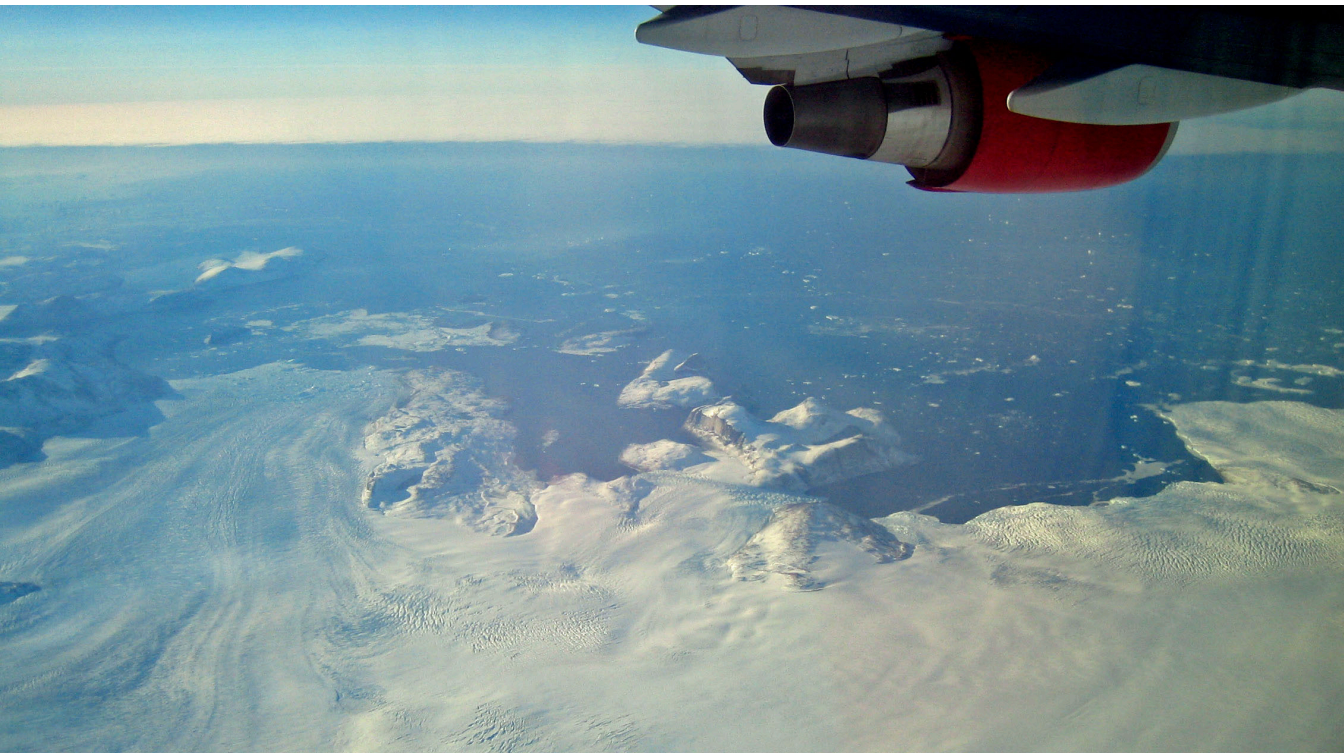




JULY 2023

Melting of Ice in the Arctic

A view from South Asia



The Arctic © Paul Downey | Flickr

The Arctic is considered a global climatic emergency hotspot. The melting of ice in the High North is not just a local issue, as its impact is global in nature. Much of the literature discussing the impact of Arctic-melting revolves around the impact on circumpolar countries and generally the Global North. This paper presents a South Asian perspective on both the challenges and opportunities posed by a warming Arctic. The article starts by introducing the role that the Arctic plays in South Asia both environmentally and

anthropogenically, for instance in relation to the Monsoon and sea level rise. It then moves on to discussing how South Asia will not only be impacted by events in the Arctic but has in turn been working towards shaping them to its benefit. It concludes on what further steps South Asia can take in realizing its interests through Arctic diplomacy, an example being India's efforts in constructing an Asian-Arctic perspective through its observer status at the Arctic Council and building scientific and political cooperation for a warming world.

Introduction

Warming up of the Arctic region is considered to be the litmus test for climate change and its impact. Estimates state that since the 1980's, 75% of the Arctic Sea ice has melted and the region can expect ice free summers by the 2050's. The primary reason for the melting is human-induced global warming from carbon emissions. The [Arctic region](#) is warming four times faster than the global average. The melting of ice in the Arctic is not only changing the security landscape of countries around the Arctic region, but also of the [entire world](#). In NATO's Secretary- General Jens Stoltenberg's [words](#) "the melting of the ice in the Arctic could lead to the heating up of geopolitical tensions between different powers in the world". The objective of this article is to delve into the impact of the Arctic ice melting on the South Asian region.

The [geophysical impact](#) of the melting of ice in the Arctic region has been studied well. Scientists across the globe agree that there is an increase in sea level across oceans due to the melting of ice in the Arctic region, especially of [land ice](#). Similarly, the melting of ice further disturbs the normal ocean current movement and reduces the albedo effect of ice, meaning it reduces its capacity to mirror sunlight back. In addition to this, thawing of permafrost will add more carbon dioxide and other GHG's like methane into the atmosphere. This will further increase global warming. These apocalyptic events will negatively affect biodiversity by eliminating habitats for species such as seals and polar bears, it will also drive fish stocks further north as the oceans warm, inhibiting the access to these animals from fisherman of the Global South. This makes the melting of ice in the Arctic not just a regional challenge, but a global human security issue.

However, the impact of melting of ice in the Arctic is not just physical in nature; it also affects the geopolitics and geoeconomics of the region, besides causing ripples in global politics. For instance, the ongoing Russia-Ukraine war has already raised tensions between the NATO and Russia to reach Cold War era levels.

Along with it, contestations for the new found land in the region will accentuate geopolitical tensions. This will attract further military build-ups, arms race, mini-lateral groupings and coalitions. At the same time, the melting of ice in the Arctic also provides new opportunities in the form of shorter navigation routes, greater availability of oil, gas and fish stocks, and greater access to critical marine resources to the states of the region.

South Asia and the Arctic

The impact of climate change is global in nature and so is the impact of the melting of ice in the Arctic. The opportunities arising from the melting will be enticing but the consequences may outweigh the benefits, especially for countries from the Global South. [Studies show](#) that the worst affected regions due to climate change will be the countries around the equator and small island states. Most of them are developing countries, which are more vulnerable, yet less-equipped to deal with climate emergencies. In a world of complex interdependence, unrest and instability in the Arctic can impact even South Asia.

As per the [Asian Development Bank's data](#) on South Asia, about 14% of the region' suburban population, totalling to about 400 million, live in coastal and major river delta areas that are 10 meters or less above sea level, thus putting the region under grave threat from the consequences of climate change. The COVID-19 pandemic illustrates how large scale disasters impact the region and the lives of the most vulnerable. For instance, as per [UN reports](#), Southern Asia is expected to see the largest increase in extreme poverty after the COVID-19 pandemic, with an additional 32 million living below the international poverty line.

In addition to suffering from climate change, the region is also contributing to it. Three-fourths of South Asia is covered by India, which is the third largest carbon emitter in the world. In a nutshell, South Asia is a box of paradoxes – the region is highly vulnerable towards sea level rise, coastal erosion and abrupt disasters like

the floods happened in Pakistan, while at the same, it hosts one of the largest carbon emitters like India. It is understandable that it feels the need to burn fossil fuels to secure the energy demand for development. However, this in turn jeopardizes its future due to consequent environmental degradation. This paradox makes South Asia an ideal case to study the impacts of climate change.

Geophysical Impact

The future of South Asia is intricately linked to the melting of Arctic ice. For instance, the Indian sub-continent heavily relies on the monsoon season for agricultural production, and changes in the Arctic can disrupt the natural course of the Indian monsoon. As Dr. Ravichandran, Secretary, Ministry of Earth Sciences (MoES) notes, “the autumn sea ice area in the Greenland Sea is related to the Central Pacific sea surface temperature. Reduction in Greenland Sea ice area warms the Central Pacific Ocean which in turn causes reduced rainfall during [Indian monsoon season](#)”. Erratic monsoons can lead to reduced rainfall, affecting agricultural output and contribute to higher inflation in food products. With a poverty-stricken population exceeding 200 million, South Asia would face acute water shortages, further impacting the region’s GDP.

The next big threat from the melting of ice is due to the rapid increase in sea level in the sub-continent. For instance, in [Bangladesh](#), the sea level is projected to rise by 0.4 to 1.5 meters by 2100. Similarly, approximately [77%](#) of the land area of the Maldives, an island nation extremely vulnerable to sea level rise, with 80% of the nation only around 1 metre above sea level, is predicted to be underwater by 2100. In addition to this, the western coast of India will be facing a high rate of coastal erosion. [Kerala](#), a western coastal state with 592km of coastline is eroding at a rate of 41%. The same state has a coastal population density of [2262 persons per sq. km](#), when the state average is 859 persons per sq. km. This critical situation makes melting of ice in the Arctic a local problem for the people living in the coastal regions of South Asia.

There are studies that highlight the possible contribution of the South Asian region towards aggravating the melting of ice in the Arctic. For example, the increase in summer rainfall in the north-western part of the Indian subcontinent is leading to the release of huge amounts of heat from the land, which is being transported through a pathway to the [Canadian Arctic region](#). This heightens the ice melting in the Arctic.

Geo-Political, Geo-Strategic and Geo-Economic Impact

The evolving politics of the Arctic ice melting is changing the way scholars of security studies understand climate change and its relationship to security. The melting of ice has opened up a lot of opportunities, especially for Arctic countries. From a macroscopic view, more resources and better connectivity are building blocks of human progress, but it exacerbates many existing conflicts and has the potential to create newer conflicts in all parts of the world. This dichotomy manifests itself on various levels.

Firstly, it will open the Arctic waters for commercial navigation. This can have implications for the balance of power in the region, as well as for the economy of South Asia. The Northern Sea Route will significantly reduce the distance between Asia and Europe, while the North West Passage will reduce the distance between Asia and North America, though to a lesser degree. Reduction in travel time may increase trade and commerce between these regions. However, the Northern Sea route could become a competitor to the current route going through the Indian Ocean Route connecting Europe to China via the Suez Channel, Malacca Strait and the South China Sea. The change in trade route will have a geopolitical impact on South Asia, considering its position on the map. This will reduce the role of the Indian Ocean and its littoral states to the bare minimum and countries from South Asia, especially India will witness a loss of business.

Secondly, the opening of commercial shipping routes will increase vessel traffic in the Arctic. However, operating shipping routes through

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the ice-free Arctic is dangerous and costly. The melting of ice is not uniform in all years and operating a nuclear-powered ice breaker is not cost effective. The insurance cost of such expeditions is high and it will reflect in the final bills paid by the developing countries including in South Asia. Moreover, the increase in the rate of human activity in the Arctic will in turn cause further melting, making it a vicious cycle.

Thirdly, the melting of ice will guarantee more access to oil and gas reserves in the region. But, one of the primary contributions to increasing global warming is made by carbon emissions from the burning of fossil fuels. Extracting more fossil fuels from the Arctic through mining, and burning the same will only worsen the precarious situation. Additionally, the release of methane gas from permafrost will increase the global greenhouse effect. Again, developing countries from South Asia will have to cap their developmental needs in the name of cutting down of GHG emissions from the burning of newer fossil fuels from the Arctic region. This also throws light on the inherent inequality and difference in GHG emissions between the Global South and the Global North.

Fourthly, the melting of ice can also lead to greater access to fish stocks in the Arctic region, which can be important for South Asian countries that rely on fish exports.

Fifthly, the countries from the Arctic region are already involved in a Great Game. Russia is already [demanding](#) that the sea route be part of its territorial waters, while the US and Europe [consider](#) it as international waters. China, even though a non-Arctic country, has already declared the Chinese Polar Silk Route. This will push other powers in the region to bolster their security and affirm their territorial rights in the Arctic which will further complicate the situation. Unlike Antarctica, the Arctic is not a Global Common and there is no overarching treaty that governs it. Only the UN Convention of Law of the Sea (UNCLOS) is applicable to the Arctic countries. Large parts of it are under the sovereignty of the five littoral

states – Russia, Canada, Norway, Denmark (Greenland) and the US – and exploitation of the new resources is well within their rights. Thus, national economic interest may supersede the global conservation efforts of the Arctic. This will further escalate security issues in the Arctic.

In this geopolitical jigsaw, the Arctic melting will intensify power rivalries not just in the High North, but the increasing conflictual atmosphere among different states will impact South Asia. The 21st century is already witnessing a great range of power struggle in South Asia, especially because of emergence of the idea of the Indo-Pacific. Revisionist China is challenging existing regional powers like India, Australia, USA and Japan in the Indian Ocean. The establishment of the AUKUS (Australia-United Kingdom-United States) pact is the latest development. The ongoing geopolitical tensions in the South China Sea and the existing bilateral border disputes among the major powers have created a state of flux in the region. Coupling the Arctic tensions with the South Asian quagmire will turn it into a political minefield for all states.

In addition to that, the ongoing Russia-Ukraine war has presented the right atmosphere for other countries to intervene in the Arctic. A distant country like India will have to manage its own regional political game and simultaneously try to make New Delhi relevant in the Arctic.

Lastly, from a human security perspective, the increasing variabilities of climate, contributes to food insecurities all over the world. The ice loss in the North paves the way for an increase in the formation of Polar vortexes in the Arctic Circle, creating intense heat waves near equatorial regions. This could result in the unpredictability of weather systems in regions like South Asia and even cause significant damage to crops on which global food systems are dependent. India's Arctic Policy also [mentions](#) the possibility of unleashing viruses and bacteria that have been dormant in the permafrost and potentially cause new global pandemics. They will just complicate the geopolitics of the present time.

The way ahead

The ice loss in the Arctic is due to reasons which are global and human centric; hence the solution should also be of the same nature. Firstly, converting the Arctic into a Global Common like the Antarctic Treaty is almost impossible, but leaders across the globe can build a framework within the purview of the United Nations, to coordinate and bolster conservation efforts in cooperation with the Arctic Council. To accept every country on earth as a stakeholder in this process is key to developing a unified Arctic narrative.

Secondly, since the beginning of the Russia-Ukraine war, Arctic governance is paralyzed, especially inside the Arctic Council. Internally, the region is fighting its past. The future, however, depends on not just how they resolve the tensions between nation-states, but also on introducing environmental protections and safeguards. This requires global co-operation and for non-Arctic countries to step in. Countries like India should take leadership in bringing consensus and cooperation in matters related to the Arctic. India enjoys the goodwill of a majority of the stakeholders, which gives it an opportunity to become a facilitator rather than just a moderator. India should call upon countries in the Arctic Council, especially Russia, to bring back responsible multilateralism in the region. The [announcement](#) of India's Arctic policy is in line with this ambition. The policy states that "India's interest in the Arctic is scientific, environmental, economic as well as strategic and aims to build a partnership for sustainable development"

Thirdly, monitoring the third pole of ice at the Himalayas and building an institutional platform for research including all the three poles can help build a sustainable future for the planet. A scientific cooperation of Arctic-Hindu Kush Himalayan-Antarctica region alliance can provide a platform for cooperation for a warming world. Focusing on scientific research and curbing carbon emissions under the UNFCCC, will become crucial in conserving the last mile of ice on both the poles.

Lastly, instead of looking to drill more into the Arctic ice for oil and gas, we should work on enhancing the thickness and life of each glacier in the North Pole. 2023 marks the 10th anniversary of India's observer-ship in the Arctic Council. Along with other Asian peers in the Arctic Council with observer status, such as China, Japan, South Korea and Singapore, India should spearhead an Asian-Arctic Dialogue Mechanism and call for reduction of industrial methane and carbon black emissions and attenuate their cataclysmic impact on the Arctic environment.

The current commitments under the Paris agreement are not enough to limit the average temperature rise to below 1.5 degree C. In such a situation protecting existing carbon sinks is important. In all probability, countries from South Asia will be one of the first casualties of climate change and will have to bear more burdens than the other countries. Here, problems are based on existing human insecurities and deteriorating ecological security. The response, therefore, must reflect equity and sustainable development. Preserving the Arctic is meaningful not just for Arctic countries but also for the entire humanity. For countries from South Asia, the time is now.

About the Planetary Security Initiative

The Planetary Security Initiative sets out best practice, strategic entry points and new approaches to reducing climate-related risks to conflict and stability, thus promoting sustainable peace in a changing climate. The PSI is operated by the Clingendael Institute in partnership with Free Press Unlimited and The Hague Center for Strategic Studies.

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