Breaking the Ice: Russia and the United States in the Arctic

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First Published, 2021

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ISBN : 978-93-83445-59-2

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www.icwa.in

Printed by
ALPHA GRAPHICS
6A/1, Ganga Chambers, W.E.A.,
Karol Bagh, New Delhi-110005
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Abstract

The Arctic is changing in rapid and profound ways. The region is warming twice as fast as anywhere else on Earth with the Arctic transitioning from being permanently ice-covered to seasonally ice-free. The growing geostrategic and geopolitical importance of the Arctic has led nations to look at the region as an asset for future development. While there is a call to address the issue of climate change and preserve the Arctic environment, Russia and the United States (US) are preparing themselves for a no ice or less ice Arctic of the future. As the natural environment goes through change, it is expected to bring about a similar change in the security and economic architecture of the region. The region is already witnessing a rise in militarisation as well as defence up-gradation by the members of the Arctic Circle, especially Russia and the US. While Russia has tried to exhibit its growing interest by laying claim to parts of the Arctic continental shelf, on the other hand, there is a growing realisation within the US on the

need to strengthen its coast guard and navy to protect American interests in the Arctic. As the two countries stand on opposite sides of international geostrategic issues, the gulf between the US and Russia, might led to future confrontation in the Arctic region. The objective of the study is to understand the dynamics of the Russia-US relations in context of the Arctic. The study will analyse the changes that are emerging in the security environment within the Arctic and how Russia and the US actions are furthering the militarisation of the region. These developments affect not just bilateral relations between the two countries but may also create fissures in the functioning of Arctic Council. It will also factor in the growing importance of the Arctic for China and its impact on the Russia-US dynamics in the Arctic region. The paper also look at the strategic importance of the Arctic for India.

Keywords: *Arctic, Arctic Council, China, India, Militarisation, NATO, NORAD, Russia, United States.*

[I] Introduction

The Arctic is the northernmost region of the world lying north of the Arctic Circle, which includes the North Pole and the Arctic Ocean. It covers an area of 14.5 million square kilometres and is surrounded by eight countries- Canada, Finland, Greenland (Kingdom of Denmark), Iceland, Norway, the Russian Federation, Sweden, and the United States (US) commonly known as the Arctic eight.

Map One: Arctic Administrative Area

Source: Map: Arctic Centre, University of Lapland. Credit for the border data: Runfola D, Anderson A, Baier H, Crittenden M, Dowker E, Fuhrig S, et al. (2020) geo-boundaries: A global database of political administrative boundaries. PLoS ONE 15(4): e0231866. https://doi.org/10.1371/journal.pone.0231866

For many, the Arctic is synonymous with pristine environment and extreme weather conditions with little life. Nonetheless, both, for archaeologists and anthropologists, who have studied the evolution and migration of early humans, the Arctic has had human presence since the Ice Age or for close to 30,000 years providing the vital land link between the continent of Europe and North America. It has also been hypothesised that migration of early humans from the Arctic region populated Central Asia, Persia and parts of South

Asia.[1] While little is known of the first humans who called the Arctic their home, "today close to 4 million people live in the Arctic and approximately 500,000 are indigenous peoples."[2]

The Arctic has also attracted explorers who have travelled to the region to explore the unknown area and discover its many treasures. "The first European marine explorer to travel to the Arctic was the Greek Pytheas, in 330 B.C."[3] In 1000 A.D., the Vikings in an effort to expand their domain set sail to the Arctic and conquered Greenland, Alaska and Canada. They established their colonies there to develop new routes for trade and acquire more land for their growing population. In modern times, as sea routes of commerce became critical and the search for alternative sea routes for trade became important, it spurred the growth in maritime exploration. One such area was the route from the Atlantic to the Pacific Ocean through the Northwest Passage along the Arctic.

The industrial revolution and the resultant technological revolution increased the demand for both raw material and new markets. This resulted in a race to control the Arctic sea routes from competition to reach new markets. The discovery of natural resources in the Arctic further added to the strategic competition and countries increased their investments in the region. During the Second World War, the Arctic emerged as a key strategic arena for the allies. It was a shortest and most direct route to supply key reinforcements for allied forces fighting on the continent. The area became an important theatre in the war, with Germany using its submarines to block this route.

The polarisation of the international political order after the Second World War translated in a rapid militarisation of the Arctic. As the Cold War progressed, the Arctic transformed into a political and strategic region for both power blocs. "One reason for this sudden rise was the 'near-ness' in geographical terms between the two newly risen superpowers. The narrowest distance between mainland Russia and mainland Alaska is approximately 55 miles. However, in the body of water between Alaska and Russia, known as the Bering Strait, there are two small islands known as Big Diomede and Little Diomede. Interestingly, Big Diomede is owned by Russia while Little Diomede is owned by the US. The stretch of water between these two islands is only about 2.5 miles wide."[4]The proximity between rivals meant a heightened need for security.

The Second World War had highlighted the military importance of the Arctic region. The Soviet Northern Fleet was established to support the Soviet ground forces protecting the nation's north-western borders and the Arctic sea routes. As the war came to an end, it emerged as a powerful branch of the Soviet navy that had access to the high seas and through the Arctic, communicated with the Soviet fleet for the Pacific based in Vladivostok. The routes that were used during the war for anti-Axis cooperation were now being used to influence the bi-polar international political order. Along with the overt military build-up, the Arctic region also saw covert espionage activities and some nuclear tests were also conducted here. As the Cold War progressed, the militarisation of the Arctic kept pace. The Arctic region became a stage for military escalation between

the two superpowers, leaving little room for the development of a cooperative framework to deal with issues of the region.

As a result of the Cold War, the Arctic was divided into the Eastern and Western sections with limited interactions. The lack of people to people contact and/or State-to-State communication was largely a result of the security concern that guided national policies. Rather than being seen as a potential area of cooperation, Arctic was viewed through a security prism as a military theatre with political, economic and social interest being secondary. The first initiative in the late 20th century with the establishment of Arctic Council.

The foundations of the framework for international cooperation to address common issues such as environmental protection and sustainable development can be traced to a speech by then Soviet Secretary General Mikhail Gorbachev in Murmansk in 1987. Popularly known as the Murmansk Initiative, the speech outlined a number of policy initiatives that bound together a range of security, economic and environmental issues in a one unified package. In his speech,[5]Gorbachev stated that, "the Soviet Union was in favour of *radically* lowering the level of military confrontation. Let the North of the globe, the Arctic, become a zone of peace."[6] (emphasis added). Gorbachev proposed dialogue between the Eastern and Western hemispheres on the limitation of military activity in the Arctic.[7] The most prominent result of this step was the establishment the Arctic Council in 1996.

The Arctic Council is the most important inter-governmental forum for the Arctic. Since its establishment, it has become a vital mechanism for through which the eight Arctic States collaborate with each other. It also space for the active participation of Arctic Indigenous Peoples and a diverse and growing group of Observers. The Council provides a forum for negotiations and collaboration on environmental, ecological and social projects for the Arctic nations.

The Arctic Council and the changing international system shifting post-Cold War, the focus from the security issues providing the two nations an opportune moment to collaborate with each other. Scientific research in the Arctic region became the primary focus of cooperation among Russia and the US and other nations that surround the Arctic Circle. However, the growing realisation of an ice-free Arctic, the possibility of exploration of the natural resources of the region, the strategic geopolitical importance of the region along with the present antagonistic relation between Russia and the US is reviving the competition between the two and will likely also affect their relation in the Arctic.

The paper is an attempt to study the geostrategic approach to the Arctic with a focus on Russia and the US. The paper looks at the environmental costs of climate change and the economic opportunities it presents. It also analyses the Arctic Council as an arena for cooperation between Russia and the US in protecting the Arctic.

The paper is structured in six broad sections – the first section deals with the increasing refocus of the Arctic. It traces the increasing impact of the climate change on the region and the resulting economic and geo-strategic tussles. In the second section, Russian outlook towards the Arctic is analysed. It emphasises on the historical importance of the region and the emerging consciousness of the secure Arctic for the Russian foreign policy. The third section tries to understand various narratives related to the Arctic in the US foreign and security policy paradigms. It looks at the changing dynamics in the region and the steps taken by America to fortify its position in the ever-changing Arctic. The fourth section looks at the challenge posed by China to the two nations. The fifth section provides a short glimpse into the evolving Arctic policy of India and how it is cooperating with both US and Russia. The sixth and concluding section provides assessment of the impact of US-Russia relations on the Arctic.

[I] (a) Re-focus on the Arctic

In the past few years the impact of climate change has been the driving force behind the emergence of the importance of the Arctic. Changes in the climate are leading to the melting of the sea ice in the Arctic Ocean, the glaciers on land and thawing of the permafrost. This has alarmed scientists as it has consequences for both, the Arctic ecosystem and weather patterns and ocean temperatures across the world. For example, reduced sea ice is likely to have devastating consequences for the ecology of the Arctic effecting the population of polar bears, ice dependent seals and the local people for whom

these animals are a food source. Another consequence would be the increase in ultraviolet radiation reaching the earth surface.[8] Countries such as India and Bangladesh, which are not Arctic nations but have densely populated coastlines face the prospect of displacing millions of people as a result of coastal erosion due to rise in sea water levels and destruction of valuable maritime ecosystems due to change in ocean water temperatures.

Coastal ecosystems have been impacted by the rise of sea levels, however, attributing such change to just rise of sea levels remains challenging due to other non-climate related drivers such as infrastructure development and human induced habitat degradation. These non-climate drivers have reduced the ability of the coastal ecosystems to adapt to climate induced changes. The impact of Sea Level Rise (SLR) over the course of the century would impact costal ecosystems and habitat, loss of biodiversity, and lead to migration. Sea level rise is not globally uniform and varies regionally. The large uncertainties about the impact of sea level rise is detrimental to future planning and increases the challenges to policy coordination within and between governments and departments. Sea level rise responses also raise equity concerns about marginalising those most vulnerable and could potentially spark or compound social conflict.[9]. The change in global weather pattern because of the changes in the Arctic has resulted in changed weather phenomenon including change in monsoon patterns, harsh winters and more severe summers across countries in Europe and Asia. It has been observed

that ocean warming contributes to changes in biogeography of organisms ranging from phytoplankton to larger marine mammals like whales. It also effects the community composition of marine organisms, and in some cases, alters interaction methods between organisms. Warming-induced changes in spatial distribution and abundance of fish stocks have already challenged the management of some important fisheries and their economic benefits.[10] Changes in ocean temperature will impact ocean current circulation which will in turn affect marine food chain and habitat such migration of small fishes, survival of coral reefs etc .This has a direct bearing on the socio-economic development of countries as nations increasing look forward to the development of blue economies.

One the other hand, the thinning and retreating Arctic sea ice is being seen as an opportunity. As the global economy undergoes a transformation with technologies, nations are looking new sources of raw material and markets through new routes to reach both. With the Northern Sea Route[11] (NSR)[12] and the Northwest Passage opening earlier in the season due to reduced sea ice formation, it is possible that in the future these passageways will witness increased traffic thereby opening new avenues of connecting the global economy.

The possible exploration of minerals from the Arctic sea bed (EEZ and High Seas) is another aspect of the growing interest in the Arctic. 'It is important to differentiate between seabed mining within the exclusive economic zones of coastal States and seabed

Map Two: The Northern Sea Route and the Northwest Passage

Sources: https://www.britannica.com/place/Northwest-Passage-trade-route

Source: https://www.rt.com/business/425325-northern-sea-route-transit/

mining in the high seas or 'the Area' that lies beyond national jurisdictions.'[113]On August 2, 2007, Russia used a submarine to plant its flag on the bottom of the Arctic Ocean. The largely symbolic move is an attempt to lay a claim to oil, gas, and minerals expected to be found in the Arctic. The Arctic contains significant amounts of minerals and hydrocarbons, including an estimated 90 billion barrels of oil and 44 billion barrels of natural gas, long protected by ice. Growing demand for minerals and metals by industries and the corresponding depletion of land-based resources, has led to a surge of interest in marine mineral resources. Many States such as Finland, Greenland, Canada, Norway and Sweden have started exploring this sector[14].[15] Russia has abundant mineral resources[1617] and is exploring and working in these areas. China, a non-Arctic country is also engaged in the mineral sector of the region by closely collaborating with Greenland.[18] Chinese firm have invested in Kvanejfeld mine while other companies are involved in mineral extraction. According to the U.S. Geological Survey's, the Greenland Coastal region consists of the "25% of the world's undiscovered hydrocarbon resources along with 9% of the world's coal and other economically critical minerals". According to another report, the U.S. Geological Survey (2008) estimates as follows: "a

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1 In the case of the high seas, seabed mining is governed by the United Nations Convention on the Law of the Sea (UNCLOS) and associated Mining Codes, and regulated by the International Seabed Authority. Seabed mining applications that fall within a country's exclusive economic zone (within national jurisdiction) are regulated by that country's domestic law.

mean of 7.3 billion barrels of oil and a mean of 52 trillion cubic feet of undiscovered natural gas in the West Greenland–East Canada Province north of the Arctic Circle". Greenland is also interested in expanding its rights beyond the 200 nautical miles by following the process regulated by UNCLOS Annex II, art. 4.

The climate change in the Arctic has created opportunities, but at the same time has laid the foundation for geo-strategic, geo-economic challenges as well as further problems in the ecosystem of the region. One of the downsides of the climate change is its ability to change the topography of a given region. This change is capable of invoking (new) territorial and maritime sovereignty claims that have geo-strategic implications in the future. This has raised the prospects of an increased militarisation of the area by the countries of the region to protect their interests in the maritime zones of the Arctic Eight. A number of overlapping maritime claims between the members of the Arctic Council will strain the existing international regimes and increase power politics between the members of the Council. It must be kept in mind that most members of the Arctic Council apart from Russia are allies of the US with most countries members of the North Atlantic Treaty Organisation (NATO) as well. While this does allow them to build a better understanding of their interests in the Arctic it has not always meant that differences do not exist. For example, Canada and Denmark (via Greenland) continue to dispute the status of Hans Island. On March 31, 2021, Russia submitted documents to an international commission claiming far more of the vast Arctic Ocean seafloor.

Similarly, in the recent years five nations bordering the ocean—Russia, the U.S., Canada, Norway and Denmark (via its territory of Greenland)—have submitted claims that certain large portions of the Arctic seafloor are natural extensions of their continental shelf, giving them rights over those regions. But Russia's new claim would take an additional 200,000 square kilometers from Denmark and even more from Canada. Four of the five Arctic Nations have ratified the UNCLOS. The US has till date not ratified the treaty. With the warming of the waters as a result of climate change, the Convention has become a tool for nations to establish their respective territorial claims through UN appeals and report submissions to the Commission on the Limits of the Continental Shelf UN Subcommittee (CLCS). Countries are attempting to use the various provisions of the UNCLOS to extend legitimate Arctic claims beyond the 200 nautical mile mark.

After the end of the Cold War, the Arctic lost some of its pre-eminence in the geopolitical sphere for the Arctic countries and the immediate non-Arctic ones. With the threat of the Soviet Union no longer a factor, the world focused on close relations with Russia and the rise of a uni-polar world. However, with climate change opening the possibility of exploration of the resources of the Arctic, the flux in the international order, the rise of new powers and reassertion of power by Russia has ones again brought to the forefront the strategic importance of the Arctic. The pace has gathered further steam with the Ukrainian crisis of 2014 between Russia and the West (including

the Arctic Council members), which pushed Moscow and the other members to legitimise their claims or to extend their claims in the Arctic. The differences between the two most powerful members of the Arctic eight- Russia and the US- are also reflected in other areas of divergence, including the Arctic with the two nations upgrading their defence system as well as conducting military exercises in Arctic waters[19]. To a large extent the Arctic Council members seek cooperation to bridge these growing differences.

The Arctic Council is the leading intergovernmental forum for promoting cooperation, coordination and interaction between the Arctic States, indigenous communities and other Arctic inhabitants. The Council's efforts have not always yield quick results but it has over the years made steady progress. It has been successful in its efforts to ensure that overt conflict does not arise in the Arctic even though the Council does not look at military security issues. Given the increase in interest of the Arctic States and other Observer states how far the Council will be able to sustain and maintain order and stability remains to be seen. As the Arctic has moved from the margins of international affairs to become a focus of global concern, the question of what regional governance should look like has become increasingly loaded. As the Arctic Council continues to try to answer that question, the stakes will only grow.[20] With the many possibilities opening due to the climate change and the ambitions of the members and Observer states such as China, the complexities within the Council seem inevitable. The Council has tried to balance

the views of the Arctic Eight with the opinions of its non-state members. It is also trying to counter the it is elitist and hierarchical in its operation by listing to all members, including Observer states. It is trying to balance the need to protect its distinctive "northern voice" and orientation with the reality that global actors far from the Arctic Circle are increasingly interested in participating in its deliberations and research.[21] As the number of Observer members increase the Council would have to take into consideration the interest of these non-Arctic members as well while balancing the interests of its member states.

[II] Russia in the Arctic

Russia's introduction to the region can be traced back to the 11th century when Russian seafarers touched the coastal waters of the Arctic. Till the 17th century, it was largely geographical, economic and spiritual discovery with monasteries being established here. The strategic significance of the region came into prominence from the 18th century that led to the vision of developing the NSR (the shortest route connecting the European Russia to the Far East).[22]The militarisation of the Arctic began in the Second World War as the Soviet Union and the US[23] developed strategic bombers capable of delivering nuclear weapons[24] overseas.

Since the end of the Second World War, the importance of the Arctic has waxed and waned for Russia in the past century. However, in the past two decades, this region has been featuring in Russia's foreign policy, defence and economic papers with

Russian Deputy Prime Minister Dmitry Rogozin highlighting in 2015 that "the Arctic is the Russian Mecca".[25] As the biggest Arctic power and a key stakeholder, any development in the Arctic under the Arctic Zone of the Russian Federation (AZRF) is bound to generate interest, especially in the current global context. The development of the Russian side of the region is important for Russia's domestic economic development. It also provides it with the space to engage in scientific cooperation, energy cooperation etc with nations, both within and outside the Arctic Circle.

[II] (a) Importance of the Arctic for Russia

Since the 1960s, Arctic has served as the base for Russian early warning radars. [26]The region provided the shortest flight path for both strategic bombers armed with long-range cruise missiles as well as American and Soviet ICBMs to target each other. It was also the most plausible area for the deployment of SSBNs by the Soviet Union and the US.[27] To ensure nuclear deterrence during the Cold War and to counter any claims by the US, the Northern Sea Fleet (NF) of the Soviet Union operated in the Arctic (Kola Peninsula). The fleet included surface combat ships and SSBNs. It was a '*naval fortress*' that was established in the Arctic to prevent possible intrusion and attack from the NATO fleets.[28]

Developing Russian Arctic Outlook

The importance of the region found its place in various policies that the Kremlin introduced—in 2004, 2008 and updated in 2020 (the

'Russian Federation's Policy for the Arctic to 2035'. This policy is a long-term plan).These policies defined the main goals and strategic priorities of Russia in the Arctic, which are—socio-economic development, development of science and technology; creation of an up-to-date information and telecommunication infrastructure; environmental safety and international cooperation in the Arctic.[29]

The importance of this region comes up in the speeches of President Putin as well as in the country's foreign policy or other strategic documents. In the 2011 Arctic Forum, a conference meeting in the White Sea port of Arkhangelsk, President Putin said, "I want to stress the importance of the NSR as an international artery that will rival traditional trade lanes (such as the Suez Canal[30]). It will be the shortest route between Europe's largest markets and the Asia-Pacific region that lies across the Arctic."[31]President Putin has stated that Russia would like to increase the traffic on the NSR to 80 million tons by 2024 from the current over all traffic of less than 30 million tons.

The Soviet Union – and now Russia – has claimed that parts of the NSR, such as the Vilkitskii, Shokalskii, Dmitrii Laptev, Sannikon Strait and all straits in the Karsky Sea are 'internal waters'.[32] This has meant that ships from other stated would need permission from Russia to enter these waters. Over the years the route has gained importance within Russia as it makes plans to develop its remote Far East. The proposed route will connect the Far East not just to Russia's western regions but to international markets as well. Russia wants

to transform the NSR into a viable commercial route, providing an alternative to the Suez Canal. While the NSR is not the only transport route in the Arctic region, it does provide an advantage over the Suez in that it saves shipping time. Shipping is faster on the route due to the circumference of the Arctic Circle being two times smaller than that if the Tropic Cancer, which is what the Suez canal is close to. However, there are other disadvantages that overshadow the route's time saving advantage. Cost and specialisation in travelling through what is still ice filled waters. Nonetheless, Russia is continuing to develop the NSR as an alternative route. To develop the capabilities of this route, Russia decided to spend 38 billion roubles (US $1.2 billion) in 2014 for building more atomic icebreaker fleet, which would help in accessing the route. In December 2018, Russia's state-owned nuclear corporation Rosatom could use this route with the help of Russia's fleet of icebreakers.[3334]

The Economic Importance

During the Cold War, the Soviet Union developed its Arctic regions 'differently from geographically comparable areas in Canada or the US in Alaska. Russia built full-scale industrial facilities, infrastructure and large permanent settlements'.[35]Russia's focus in its Arctic zone went through phases of concentration and negligence. During the Soviet Union time, the Russian government laid down a strong industrial layer in the Arctic zone. The scale of economic activity surpassed the activities of other circumpolar countries.[36]While the Arctic was very important for Kremlin, due

to various domestic and external problems, it could no longer focus on the region—strategically, militarily as well as economically.[37]

Many Russian cities also have close connection to the Arctic. Murmansk, in north-western Russia, lies 125 miles into the Arctic Circle and is the largest city in terms of population in the Arctic Circle. It has a deep water port and is connected to rest of Russia through railway lines. The town, founded in 1915 as a supply port in World War I, was a base for the British, French, and American expeditionary forces against the Bolsheviks in 1918. In World War II, Murmansk served as the main port for Anglo-American convoys carrying war supplies to the U.S.S.R. through the Arctic Ocean. The town is now an important fishing port, and its fish-processing plant is one of the largest in Europe. Murmansk's ice-free harbour makes it Russia's only port with unrestricted access to the Atlantic and world sea routes.[38]The town Tiksi, near Lena River, has also been a point of attraction for the explorers, traders and fishermen since the Tsarist times. Under the Soviet government, a port was built in this town in 1938 and it also hosted many military bases, with the first base build in 1959. One of the 10 searches and rescue centres that the Kremlin is planning to open soon will be in Tiksi.[39]

This region, with its rich natural resources, helps the country in its geo-strategic and geo-economic ambitions. The area boasts of major oil and gas producing locations such as the West-Siberian, Timano-Pecherskaya and East-Siberian fields. Russia believes that these energy resources guarantee the country's overall security and energy security.[40] During a speech in 2008, the then Russian President

Dimitry Medvedev said that one of the biggest tasks of Russia was to turn the 'Arctic into Russia's resource base for the twenty-first century'.[41]The Arctic overall represents 20 percent of Russia's Gross Domestic Product (GDP) and 22 percent of its national exports.[42]

Strategic and Military Importance

Russia is re-building and upgrading its military equipment in the region. This is in contrast to the position during the Cold War, when the emphasis was laid on limiting the militarisation of the region. General Secretary of the Communist Party Congress and the first president of the Soviet Union, Mikhail Gorbachev, spoke about demilitarisation in the Arctic and protection of the region from becoming an arena of war and transforming it to a place of cooperation between Soviet Union and the US during the Murmansk speech in 1987. However, with the re-emergence of tension between Russia and the US, and rising geopolitical interest in the region, there is a rekindling of interest in the militarisation in the region, including from the Russian side.

The 2008 policy document 'Russian Federation's Policy for the Arctic to 2020', laid down Russia military objectives in the region. The document stated that, in the sphere of military security the following would be the key focus for Russia in the Arctic:[43]

- *Russia needed to look at the **defence and protection** of the state border of the Russian Federation lying in the Arctic zone of the Russian Federation and*,(emphasis added)

- ***Maintenance of a favourable operative regime*** *in the Arctic zone of Russia, including maintenance of a necessary fighting potential of groupings of general purpose armies (forces) of the Armed Forces of the Russian Federation, other armies, military formations and organs in this region.*(emphasis added)

In 2020, Russia released its second 'Basic Principles of Russian Federation State Policy in the Arctic to 2035' [44] (Basic Principles 2035). The document continues from its predecessor and identifies the Arctic as important to Russia economic and strategic interests. The Basic Principles 2035 lays stress on development of the NSR as a globally competitive and viable transport corridor. Promoting the prosperity and well-being of people living in the Arctic is something that has been the focus of Russia's Arctic development strategy and socio-economic development programme for some time. The previous Russian Arctic policy document also mentioned the improvement of the well-being of indigenous peoples in the Russian Arctic. The goals however have been elevation to the status of national interest in the new policy document. The question is really to what extent Russia will live up to its promise. With the exception of the autonomous Yamalo-Nenets province, all areas of the Russian Arctic have seen decrease in population and have difficulties when it comes to well-being, healthcare and housing.[45] In the military and security dimensions, there is continuity from the Basic Principles 2020 in maintaining operational capability and readiness of the armed forces to deter aggression against Russia in

the Arctic and further developing Border Guard and Coast Guard forces in the Arctic.

In a sign of the strategic importance of Russia's Arctic military assets, President Putin has upgraded the status of the Northern Fleet. The fleet, primarily based near Murmansk, which was previously upgraded and designated a Joined Strategic Command in 2014, now joins four other military districts in Russia. It consolidates a large part of Russia's Arctic capabilities under one roof and contains territory of the Republic of Komi, the regions of Arkhangelsk and Murmansk and the Nenets Autonomous Region.[46]As of 2017, Moscow's active strategic ballistic missile submarine (SSBN) force consists of, one Project 667BDR Kalmar (NATO designation: Delta III) submarines based with the Pacific Fleet in Rybachiy and six Project 667BDRM Delfin (Delta IV) submarines based with the Northern Fleet at Yagelnaya Bay. It also included several Typhoon-class SSBNs based with the Northern Fleet at LitsaGuba.[47]

Russia's foreign minister Sergey Lavrov during a panel at the International Arctic Forum in St. Petersburg in April 2019 mentioned that Russia does not threaten anyone. It ensures sufficient defence capabilities given the political and military situation around its borders. He further said that the country will always be ready to defend its security, interests and territorial integrity. The US Air Force General Terrence O'Shaughnessy, who heads the US Northern Command, said at the beginning of the year (2019) that the Arctic has become the front line of the country's defence against

Map Three: Novaya Zemlya

a growing Russian presence in the North.[48] Various components of the Russian and American missile warning systems are located in the Arctic Zone. The American air-defence interceptors are located in Alaska, and Russian analogues are located on the coast of the Arctic Ocean[49]. Russia also has a nuclear testing area on Novaya Zemlya (an archipelago in the North of Russia in the Arctic Ocean).

The Arctic countries have also conducted military exercises in the region. In 2013, Russia conducted military exercises using the cruiser "Peter the Great" and nuclear submarines "Orel" and "Voronezh"; and launched cruise missiles. In response, the US in 2013 carried out the "Arctic Challenge" training exercises in the Gulf of Bothnia and in the Barents Sea with the participation of the air forces of Sweden, Finland, and the United Kingdom.'[5051] In 2015, Russia conducted maritime exercise with China in the Arctic

which coincided with the US taking the Chairmanship of the Arctic Council.

Russian military presence in the Arctic is linked to its political, economic, and scientific interests. According to experts, "a permanent military presence in the Arctic will permit Russia to significantly strengthen various research and other expeditions in the region developed by representatives of Russian academic and economic sectors on the high-latitude track of the NSR". In order to achieve this goal, in 2014 the Ministry of Defense of the Russian Federation took the initiative to enhance air defence system, reconstruct the transpolar military airfields, restore the military base on the New Siberian Islands, upgrade its armed forces units in the region and started to conduct more military exercises here. An important step is the creation of the Joint Strategic Command "North" based on the Northern Fleet.[52]

In zones where the country could face external military pressure in the future, such as Crimea, Kaliningrad, and the Arctic ,Russia has developed its anti-access/area denial (A2/AD) capabilities (air and missile defences, surface-to-surface ballistic missiles, land, air and sea launched cruise missile batteries, layered anti-submarine warfare capabilities).[53] In 2014, on the formation of the Joint Strategic Command, President Putin had said that the formation of the Northern Fleet Joint Strategic Command has enhanced security in the Arctic. The command will also help in promoting the modernisation of military infrastructure in this region, which is

important for the Russian [54] national interests. Russia has also built the Tor-M2DT anti-aircraft missile battalion suitable for the Arctic region.[55]

Russia has also commissioned the construction and development of several permanent bases in the region. These include the Alexandra Island (the Franz Josef Land archipelago), the Kotelny[56] Island [57] (this division will be rearmed with more precise and high-speed weapons[58]), Sredny and Wrangel Islands, Novaya Zemlya, the village of Alakurtti and Cape Schmidt. This reflects the broader pattern in Russia's Arctic activity. These activities will in the future assist Moscow to establish monitoring outposts and stake a symbolic territorial claim.[59] Russia is also reopening and reconstructing the Soviet-era ports and airfields in the region. In its military doctrines, including the Maritime Doctrine of 2015[60], Russia has clearly mentioned the Arctic, apart from the Atlantic, will be the country's focus. The doctrine further states the importance of the Arctic by pointing that it helps in the unhindered and free access to the Atlantic and Pacific Oceans.[61] All of these activities will help Russia to have its strategic presence in the region as well as protect its claims.

Territorial Claims

In 2001 Russia, submitted its proposed outer limits of the continental shelf of the Russian Federation beyond 200 nautical miles from the baselines to the United Nations Commission on the Limits of the Continental Shelf (CLCS)[62]. In 2002, the CLCS stated that the application submitted by Russia required additional

scientific evidence to prove that the Arctic shelf is part of Russia's landmass. Since 2002, Russia has made all efforts to prove its rights to the Lomonosov and Mendeleev ridges. It has conducted many scientific expeditions to collect information to strengthen its CLCS application, and among them was the Arktika 2007 polar expedition.[63] The CLCS is yet to take a decision on Russia's claim. If the decision favours Russia, then it will be able to have rights over the two ridges, Lomonosov and Mendeleev[64]. It will help expand its strategic reach into the Arctic while expanding its economic policies for the region. For Russia the claim has become a strategic priority. The effort by Russia has led to a scramble from the other Arctic countries. They are not only protesting Russia's claims, but to also mark their territorial claims in the Arctic and the Arctic Seabed.

The legal framework of the Arctic region is under the non-binding soft legal laws such as the Arctic Environmental Protection Strategy (AEPS) later developed into the Arctic Council and UNCLOS. The five coastal Arctic Council Members (Russia, the US, Canada, Norway and Denmark), have adopted the 'Ilulissat Declaration of 2008'. According to this declaration, the UNLCOS provides enough rights and obligation to serve as a framework for a responsible management of the Arctic and it is not necessary to implement a new legal system regime.[65] Russia supports the UNCLOS, nonetheless as the US is not party to the Convention and the non-fulfilment of the obligations set out in Article 76 of this Convention concerning the delineation of its own Arctic shelf[66] creates discomfort for Russia and its interests in the region.

Another worrisome factor for Russia and the other Arctic Council members, especially the five coastal members, is that according to UNCLOS, all states, coastal or not, possess legitimate rights and interests regarding the high seas as well as the deep seabed, in the Arctic as in the other oceans, and are therefore able to participate in decision-making. This ensures that the thirteen Observer members have an equal say in the matters that relate to the Arctic.

Responses to Russia's Arctic Policy

Russia's activities in the Arctic, over the last decade and a half, have sparked responses from other regional states. One finds that the Arctic has increasingly become a geo-strategic and geo-economic priority for both Russia and the US.

The political developments near Russia's borders such as the Colour Revolutions in Ukraine and Georgia along with the opaqueness in the policies of the West, especially the US, towards Russia have pushed the latter to rethink its policies in the Arctic. The Russian academic and strategic community has also increased its discourse on the importance of the Arctic in the recent years.

In Septmeber 2019 the Russian Defense Ministry conducted it strategic command staff exercises codenamed Tsentr-2019.[67] This was Russia's biggest military drill. It brought together Russia's Northern Fleet, Pacific Fleet and Central Military District. It was held at the remote archipelago of Severnaya Zemlya[68]. Apart from checking the range and capabilities of new weaponry such as air-

defence missiles, armoured vehicles, all-terrain vehicles and support equipment, the exercise also tested the impact of climate conditions on both the armed forces and weapons systems.[69] The success of the exercise is a positive development for the Russian government given the competition the region is facing.

Apart from the US and China, Russia also faces problems from the other Arctic members. The five member countries of the Arctic Council[70] are also members of the NATO, whose charter commits member states to collective self-defence. Finland and Sweden partner the US on various international issues. Though the Arctic Council is supposed to work as a fulcrum for the member states however, it suffers from an atmosphere of distrust given the growing difference between Russia and the US. Members like Finland, Norway and Sweden also have to deal with the baggage of Soviet history in the current times.

[II] (b) Challenges for Russia in the Arctic

Russia has identified the Arctic as both a strategic priority and a resource base for the 21st century. Against a backdrop of expectations about the opportunities available in the Arctic, Russia faces a few challenges in the region.

The *primary challenge* for Russia is the growing presence of the NATO and US forces in the Arctic region. The US has also repeatedly identified Russia as a strategic competitor in its various policy documents. Given the already distant relations between the

two nations, it is natural to state that Russia would keenly follow US policy developments towards the Arctic. Contributing to this tension are differing views on the legal definition of the NSR. Russia views the NSR as internal waters where as the US views it as part of international passage, Russian legislation requires advanced 45-day warning from foreign naval vessels passing through the NSR and charges a fee for Russian icebreakers and co-pilots. The US has included the NSR as part of Freedom of Navigation (FON) operations claiming Russia claims are contrary to the UNCLOS. A key component of Russia's operational focus in the region is defense of the territory and seas surrounding the Kola Peninsula and denial of access to this region by U.S./NATO forces.

The changing international situation also remains a challenge for Russia's Arctic development plans. Following Russia's actions in Crimea, the European Union (EU) and the US imposed targeted sanctions against high-ranking Russian officials, sanctions limiting access to the US debt market to a number of Russian banks and companies, among them Rosneft and Novatek and sanctions targeting specific companies and industries. The Russian Arctic projects have been particularly affected as sanctions have banned the export to Russia of hi-tech oil equipment needed in Arctic, deep sea and shale extraction projects. However, as Russia assumes the chairmanship of the Arctic Council, it provides it with an opportunity to work on a plan for a sustainable Arctic development plan with the US and other Arctic eight nations.

The *second challenge* is China's increased presence in the Arctic. The comprehensive strategic partnership between Russia and China has helped the two countries to engage and cooperate in their bilateral and multilateral relations. Russian policy documents have repeatedly reflected the need and desire to turn east, to pay more attention to Asian energy markets and to attract investments from Asia. This policy change is visible in the Arctic region, where Moscow is engaged with Beijing in the energy sector. The sanctions by the US and EU has allowed China to offer capital to Russia for Arctic development. Along with China, Russia is exploring energy cooperation with India and Japan. However, there remains a question mark on the trust deficit between Russia and China. Russia needs to balance its relations with China and those with European and Asian consumers. For the moment, Russia is collaborating with China but in a limited manner. It is too early to assess whether a major breakthrough will occur in shipping cooperation, although Chinese ships have made some first experimental voyages via the NSR.

Russian officials have repeatedly stated that Non-Arctic States are welcome to the region, especially if they follow the 'rules of the game' and, in particular, respect the sovereign rights and jurisdiction of the Arctic states.[71]

As the largest Arctic nation, it is obvious that climate change will pose a challenge for Russia. The country is warming 2.5 times faster than the rest of the world and in 2020 regions across Russia have experienced the hottest temperatures on record.[72] Permafrost, which

covers nearly two-thirds of Russian territory, is rapidly thawing leading to negative consequences for Russia's Arctic cities. Among 24 Russian regions that are permanently frozen, nine contain extensive infrastructure and cities. These regions are crucially important for the national economy, as they account for the bulk of Russia's raw material production. The melting of the permafrost will cause significant damage to buildings and crucial infrastructure, including Russia's 200,000 kilometers of oil and gas pipelines along with thousands of miles of roads and rail lines bridging some of Russia's widest rivers.]More dramatic freeze-thaw cycles in the subsoil are eroding urban infrastructure in Russia's Arctic cities, home to over 2 million people. In a statement in November 2020, Deputy Minister for the Development of the Russian Far East and Arctic Alexander Krutikov stated that, direct damage from global warming in the Arctic zone can range from 2 to 9 trillion roubles ($99 billion) by 2050. In an effort to find solutions, Russia has established a monitoring system using modern information and communication technologies and communication systems. How far this system will be able to help Russia fight the climate change in the region remains to be seen in the coming times. The challenge for Russia would be to balance its economic development plans for the Arctic while ensuring minimum contribution to climate change processes.

Linked to the above is the growing concern over pollution as a result of increasing presence of the military. While this encompasses all arctic eight nations, Russia currently has the largest

military presence in the region. Moscow has taken steps to clean the metallic waste left behind by military infrastructures in Franz-Joseph Island and Wrangel Island. It has also taken steps to ensure safe decommissioning and dismantling of certain Soviet nuclear submarines stationed in the Kola Peninsula and disposal of nuclear wastes. However, military pollution remains outside the purview of most climate change regulations and is rarely discussed. The Russian government has not been forthcoming to the industrial pollution. They are yet to find solution for the chemical contamination from industries. There is also growing concern from pollution as a result of increased container ship and cruise ship movement in these waters.

Overall, Arctic presents Russia with both opportunities and challenges. How Russia balances its geo-strategies, geo-economic and global climate change commitments remains to be seen.

[III] The United States in the Arctic

The US became an Arctic nation when it purchased 586,412 square miles of land from the Russian Empire for $7.2 million in 1867. The then US Secretary of State William H. Seward wanted to expand the boundaries of the new nation and make the US into a global power. The purchase increased the territory of the country and added more natural resources while allowing the US to strategically halt the northern Pacific march of the Russian Empire. The Arctic has therefore been of strategic interest to the US from the very beginning, with economic, political and security implications.

The challenge for the US' Arctic policy is to address a range of diverse issues such as protecting the homeland, pursuing environmental adaptation and building resilience, addressing the economic dynamics of the region and managing the changing security situation while engaging in anticipatory policymaking. For the moment, a clear indication of the policy is not forthcoming as most documents have been largely descriptive, highlighting the aim of the US in the region, rather than the path to achieve the said goals. Except for recent congressional funding for one heavy-icebreaker, which will be predominantly used in Antarctica, resource allocation or the need to establish new organisational structures that can more efficiently address these cross-cutting issues has not been addressed. The documents however, do place a set of priorities for the government.

[III] (a) Importance of the Arctic for the US

The US government has articulated its fundamental interest in the Arctic through a series of government strategies, with the first articulations being the National Security Decision Memorandum (NSDM-144) by the Nixon Administration in 1971. The NSDM stated, "*...the United States will support the sound and rational development of the Arctic ... and will at the same time provide for* ***the protection of essential security interests in the Arctic, including preservation of the principle of freedom of the seas and superjacent airspace...***"[73](emphasis added). The 1983 National Security Decision Directive (NSDD-90) highlighted that the US has "...unique and

critical interests in ***the Arctic region related directly to national defense***, resource and energy development, scientific inquiry, and environmental protection."[74] (emphasis added).

During the Cold War, the strategic location of the Arctic played an important role in the policy making towards the region. The North American Aerospace Defense Command (NORAD) was established with Canada, as a defensive air shield, which they believed was necessary to defend against a possible attack by long-range, manned Soviet bombers. One finds that there was an emphasis on the need to understand the adverse impact on the environment. The above two documents point to the fact that while the threats were being looked at through the Cold War prism, there was also a call to international cooperation. It is likely that scientific cooperation was being envisaged with partners and allies in the region and not so much with the Soviet Union.

The end of the Cold War allowed Arctic militarisation to experience a thaw as the US and Russia moved to reset their relations. The Presidential Decision Directive/NSC-26 issued on 09 June 1994, *"...directs the implementation of United States policy related to the Arctic and Antarctic regions. (The US') ... policy reflects the importance of protecting both of these unique and fragile environments, including their potential for scientific research on regional and global environmental issues. It also recognizes the need for international cooperation in both regions and the role for U.S. leadership in these cooperative international efforts*."[75]

The post-Cold War environment allowed a shift in US Arctic policy, with a focus on openness and cooperation with Russia. The document laid emphasis on the need to work together on environmental protection especially marine pollution. It alludes to the fact that Russia has a disproportionate share in Arctic pollution and while they have the expertise to reduce this, they lack the financial resources. The US proposed that its relevant agencies would be encouraged to carry out conservation and sustainable development strategies with Russian counterparts. Nonetheless, it cautioned that the US continues to have security and defence interests, and needs to maintain the ability to protect itself from any attack across the Arctic.

As cooperation between Russia and the US grew after the 9/11 terror attacks, it was reflected in more cooperative environment in the Arctic Council. However, as the relations became distant, they impacted the relations in the Arctic too, leading to policy changes in the US. The National Security Presidential Directive/NSPD – 66 and the Homeland Security Presidential Directive/HSPD – 25 of 2009 stated that "***the US is an Arctic nation, with varied and compelling interests in that region***."[76] (emphasis added) In contrast to the 1994 directive, there was a considerable emphasis on national security and homeland security interests in the 2009 directive. It stated that, "The US has broad and fundamental national security interests in the Arctic region and is prepared to operate either independently or in conjunction with other states to safeguard

these interests."[77] It elaborated that the US would safeguard these interests through the development of early warning systems, missile defence, deployment of sea and air strategic lift capabilities, strategic deterrence, maritime security and ensuring freedom of navigation and over-flight. The US identified the Arctic as a primarily maritime domain with freedom of the seas for use in international navigation as its top priority. These goals were to be achieved through close cooperation between the secretaries of state, defence and homeland security and other relevant agencies. One possible reason for this was the crisis between Russia and Georgia in 2008. The US along with other NATO members called for a ceasefire, the crisis resolved after Russia decided to halt its military from advancing further. Though Russia formally recognised South Ossetia and Abkhazia as independent states after the war, few other countries have joined them in doing so.

Interestingly, the NSPD 66 and HSPD 25 documents also mentioned the extended continental shelf and boundary issues in the Arctic. Canada and the US have an unresolved boundary in the Beaufort Sea. On legal and international recognition of its extended continental shelf would be through procedures available to all parties of the UNCLOS[78]. It needs to be pointed that while the US recognises the UNCLOS as a codification of customary international laws, it has not ratified the same. There are growing calls from within the US by security experts who feel that ratification of the UNCLOS would allow the US to better address the growing

challenges from both Russia and China as well as settle its maritime boundary dispute with Canada.

The stress on international laws and conventions needs to be noted as it was not present in the earlier document on the Arctic. It was perhaps because of the symbolic planting of a Russian flag on the Arctic sea bed, which Moscow claims is connected to its continental shelf in 2007. Although the planting of the flag on the ocean floor is irrelevant under international law, it reveals the difficulty in resolving issues as an uphill task.While the flag mission by Russia and its claims have been refuted by the international community, including the members of the Arctic Council, it led to a realisation of the sovereignty claims in the Arctic. This is important as awareness of the considerable amounts of untapped resources in the Arctic increases. Further, Russia also started to build its Arctic military leading to a redirection of the US' Arctic strategy.

In taking forward the view of the White House's National Security Strategy 2010, the National Strategy for the Arctic Region 2013, articulated the strategic priorities of the US government in the Arctic region. The strategy was intended to position the US to effectively respond to not only the opportunities presented by the retreating ice, but also challenges that emerged from the new Arctic environment. The Strategy document outlined three priorities for the US. They were- *"One, advance US security interests, two, pursue responsible arctic region stewardship and three, strengthen international cooperation."*[79] The document acknowledged that the above would

be achieved as the US developed its capabilities and capacity in the region within the ambit of international considerations and thought to the protection of the Arctic environment and culture. The stress on the need to involve the people of the region is noteworthy. One of the main impacts of climate change will be on the activities of indigenous peoples. The growing realisation that the indigenous population of the land have a say in its development has gained importance given the overlapping claims on territory.

President Obama and his administration viewed the Arctic from the perspective of US national security. In response they created new administration positions such as a US special representative to the Arctic Region and an executive director of the Arctic Executive Steering Committee. They were to manage the US's Arctic Council Chairmanship and also to bring greater public visibility to Arctic issues within the US while engaging more with the state of Alaska. The administration in its National Strategy for the Arctic Region (2015) stressed on the changing environment in the Arctic-both in terms of natural environment as well as the security environment. In 2013, China and India became permanent observers in the Arctic Council. China's entry into the Council came with the development of the Belt and Road Initiative (BRI) of President Xi Jinping. And in 2014 Russia militarily annexed Crimea. The 2015 Sino-Russian naval exercise off the coast of Vladivostok, Russia coincided with the US taking over the Chairmanship of the Arctic Council Chairmanship (2015-2017). These developments of an assertive Russia and the rise of China were mentioned in the National Security Strategy 2015 of

the Obama administration. It identified American interests in the region as,

> "...providing for the security of the US; protecting the free flow of resources and commerce; protecting the environment; addressing the needs of indigenous communities; and enabling scientific research."[80]

> In protecting these interests, the US would promote, "...freedom of navigation and over-flight and other internationally lawful uses of the sea and airspace related to these freedoms; security on the oceans; maintaining strong relationships with allies and partners; and peaceful resolution of disputes without coercion."[81]

On June 9, 2020, the Trump administration unveiled a new national security and defence strategy for the Polar Regions titled "Memorandum on Safeguarding U.S. National Interests in the Arctic and Antarctic Regions". The memorandum along with the DoD's 2019 Arctic strategy was an indication of the US continued interest in polar affairs. The memorandum acknowledged the lack of ready capability to retain a strong presence in the polar regions. It stated that, "the United States requires a ready, capable, and available fleet of polar security icebreakers that is operationally tested and fully deployable by Fiscal Year 2029.The United States will develop and execute a polar security icebreaking fleet acquisition program that supports our (US) national interests in the Arctic and Antarctic regions."[82] The Biden administration is likely to continue to look at the Arctic from a security lens, but given the stress by President Biden on climate change mitigation and multilateral cooperation, it is likely that the US will cooperate with countries including Russia

in such areas as fisheries management, search and rescue capabilities, emergency icebreaking, and mitigating environmental damage.

Based on the study of the above stated documents, one can summarise that there are largely three main drivers of US interest in the Arctic region. Among the most important are the *security concerns it has vis-a-vis Russia*. The power competition between the US and Russia, with an assertive and militarised Russia will, be a challenge for the US, as its own military capabilities are below par. Apart from Russia, the US is also wary of the *growing interests of China* in the Arctic region. China is not only trying to link the Arctic to its idea of a Polar Silk Route but is also building ice breakers to take advantage of the receding sea ice. Apart from the issues from across the waters, the US would also like to *settle its maritime borders with Canada*. According to Canada, the 1825 Anglo-Russian treaty, delineates the boundary at the meridian line of the 141st degree on both land and sea; whereas the US claims that it is simply a land boundary and that normal maritime boundary delimitation applies beyond the coast. Canada's efforts to conclusively establish its sovereignty over the Northwest Passage, have also not been readily accepted by the United States..

Linked to the security concerns are the *economic drivers*. The natural resources of the Arctic include the mineral wealth, energy resources and living resources that are harvested in large quantities. According to assessments of the US Geological Survey (USGS), the Arctic holds close to 13 per cent (90 billion barrels) of undiscovered

oil and 30 per cent of undiscovered natural gas resources. While the commercial viability of these resources remains a question mark due to the difficulty in extraction in an extreme environment, nations are hopeful that in the future it would be prove to be cost effective.[83] The other resource is the large-scale harvesting of mammals and fishes, which is expected to grow with global warming. "More than 50 per cent of America's fish stock comes from the Nation's EEZ off Alaska. Moreover, trans-shipment of cargo through the Arctic region is increasing."[84] With a change in global diet, leaning more towards seafood, fisheries industry is looking at a boost. Fishing in the Arctic gets the US close to 3 million tons of fish each year, with a value of around US $ 2 billion. Linked to this is the important aspect of US Arctic strategy focused on the need to protect the environment.

While changes in the Arctic environment are fuelling new avenues of revenue, they are also linked to detrimental changes in not just the Arctic, but *global climate and weather changes*. To protect the environment and stop unregulated fishing, Canada, China, the Kingdom of Denmark in respect of the Faroe Islands and Greenland, the European Union, Iceland, Japan, the Republic of Korea, the Kingdom of Norway, the Russian Federation and the US have signed an agreement to prevent unregulated fishing in the Central Arctic Ocean (2018)[85]. The US policy towards the Arctic is driven by these factors as well as Alaska's important domestic economic role in providing vital energy, mineral, and fishery resources.

[III] (b) Defence Capabilities in the Arctic

Alaska remains crucial to US national security for several reasons. The US has placed its ground-based missile systems in an effort to intercept potential missile launches from Asia and it has operating bases where aircraft can refuel for missions across the waters. Alaska is also on the great circle route from the US to Asia. Keeping in mind the capability of the US forces in Alaska to rapidly deploy to the Pacific Rim, the area becomes a very important forward operating base or stopover point.

The US Department of Defence (DoD) also outlined its strategy to protect US interests in the Arctic. The US DoD in its 2013 Arctic Strategy stated that, the US military objectives in the Arctic supported the broader national security interests. "It was in the DoD's interest to shape military activity in the Arctic region to avoid conflict while improving its capability to operate safely and sustain forces in a harsh, remote environment in anticipation of increasing accessibility and activity in the Arctic in the coming years."[86]

The 2019 Arctic Strategy taking inputs from the 2016 DoD Arctic Strategy, the 2017 National Security Strategy and is anchored in the priorities of the 2018 National Defense Strategy (NDS) and its focus on competition with China and Russia as the principal challenge to long-term U.S. security and prosperity. It outlines that, "DoD's desired end-state for the Arctic is a secure and stable region where U.S. national interests are safeguarded, the U.S. homeland

is defended, and nations work cooperatively to address shared challenges."[87] It identifies three ways to support the desired Arctic end state- Building Arctic awareness; Enhancing Arctic operations; and strengthening the rules-based order in the Arctic.

The Arctic is important for the US to conduct its maritime security operations, while ensuring the safety of its military bases in Alaska and the US would be willing and prepared to 'act unilaterally if necessary in defence of its interest in the region.'

American defence interests in the Arctic region can be divided into several groups. *Primary* among them is its military-strategic interests. This included its strategic deterrence, the NORAD missile defence and early warning systems, deployment of sea and air assets with maritime presence and maritime security operations and ensuring freedom of navigation and over-flight. *Secondly*, the US has a national security interest in preventing terrorist attacks or other criminal acts that increase its vulnerability in the Arctic region while bolstering its sea power. *Third*, the US' defence interests are inadvertently linked to its political and economic interests.

While remaining within the limits of its jurisdiction in the Arctic, the US seeks to protect its sovereign rights and exercise "appropriate control" over the contiguous waters; maintaining freedom of trans-Arctic over-flights and freedom of navigation throughout the Arctic, including the Northern Sea Route. These have been its top national priorities.

On January 12, 2017, former Secretary of Defense James Mattis stated that

> "[t]he Arctic is key strategic terrain.... Russia is taking aggressive steps to increase its presence there.... I will prioritize the development of an integrated strategy for the Arctic. I believe that our interests and the security of the Arctic would benefit from increasing the focus of the Department of Defense on this region".[88]

Despite articulating its defence interests in the region, one finds that the hard security aspect within the US strategy for the Arctic has been limited. As Russia modernises its armed forces, questions are being raised in the US Congress and security apparatus on the preparedness of the US forces to meet the growing challenges in the Arctic, especially in the military domain. Years of limited investments have meant that the US Coast Guard, the primary agency responsible for the security of the American Arctic is thinly resourced and fighting a modern war with outdated capabilities.

The 2013 US Coast Guard Arctic Strategy stated that, "It would require the agency to... develop infrastructure for surveillance, collection and sharing of information and critical preparedness to respond to contingencies."[89] "... The Coast Guard faces readiness challenges in a resource constrained budget climate. Aging surface and aviation assets, as well as antiquated shore- and information-technology infrastructure, challenge our operational readiness. While we are working to recapitalize essential assets, we also require the resources to sustain and operate them."[90]The US Coast Guards

Arctic Strategic Outlook 2019 identifies "Russia and China's persistent challenges to the rules-based international order around the globe cause concern of similar infringement to the continued peaceful stability of the Arctic region."[91] However, it continues to face a resource crunch. "*Effective capability requires sufficient heavy icebreaking vessels, reliable high-latitude communications, and comprehensive Maritime Domain Awareness.* ***In order to respond to crises in the Arctic, our Nation (the US) must also muster adequate personnel, aviation, and logistics resources in the region.*** (emaphsis added.) *The Coast Guard is the sole provider and operator of the U.S. polar capable fleet but currently does not have the capability or capacity to assure access in the high latitudes. Closing the gap requires persistent investment in capabilities and capacity for polar operations, including the Polar Security Cutter.*"[92]

The US Coast Guards currently has one heavy polar icebreaker, Polar Star, and one medium polar icebreaker, Healy. The second heavy polar ice breaker –Polar Sea is non-operational and is used for providing spare parts for the Polar Star. The two ships entered service in 1976 and 1978, respectively, and are now well beyond their originally intended 30-year service lives. The Department of Homeland Security (DHS) in 2013 had stated, "The Coast Guard will need to expand its icebreaking capacity, potentially requiring a fleet of up to six icebreakers (3 heavy and 3 medium) to adequately meet mission demands in the high latitudes.... The analysis considered both the Coast Guard statutory mission requirements and additional requirements for year-round presence in both polar regions."[93] Short of the 3+3 formula, the Coast Guard needed two heavy ice cutters

to maintain operational capacity. The US Congress approved the Coast Guard's program for acquiring new polar icebreakers for a cost of about US $1.0 billion in [94]procurement funding for the fiscal year 2019. The need for capabilities and capacities, both assets and people, equipped and trained to operate and lead in this austere environment is acknowledged by the DHS' 2021 Strategic Approach for Arctic Homeland Security. The document stresses on the need to also develop technological capabilities such as unmanned systems to "...understand, track and monitor, suspicious and non-threatening activities across the harsh terrain in an efficient and cost effective manner."

As the only US service that combines both military and civil authorities, the US Coast Guard must build dual capacity. *First* is to build cooperation among federal, state and local authorities to address issues arising from growing commercial activities, resource extraction and tourism. The *second* is to build capacity and capability to meet the demands of service based missions such as search and rescue to support the naval operations. Apart from the close cooperation between the three services, the US Coast Guard partners with its counterparts from the Arctic nations, and allies and partners with interests in the Arctic to uphold international law and ensure the region is conflict free. The same is also reflected in its Coast Guard Strategic Plan 2018-2022, which further elaborates on measure that the US Coast Guard will take to have operational preparedness in an environment of fiscal constraints. It stated that the organisation will "invest in mission enabling technologies" by modernising its infrastructure such as protecting its cyber capabilities, continue

acquisition programme for modern aviation and surface fleet, more ice cutters and invest in surveillance and reconnaissance technology. In essence, at present, the US Coast Guard is not at its optimum capacity due to lack of resources.

The US Navy has also focused on the Arctic. In 2011, the US Navy shifted the responsibility of the Arctic from three commands to two, from the US Pacific Command (PACOM)[PACOM is now the US Indo-Pacific Command US INDOPACOM][2] to just the US Northern Command (NORTHCOM) and US European Command (EUCOM), with US NORTHCOM in the lead. 'The US Navy's Arctic Roadmap for 2014 to 2030', released in 2014, stated that "...(The US Navy will) execute several key missions in concert with joint forces, interagency stakeholders, and allies and partners, to protect sovereignty, ensure freedom of the seas, and defend the homeland in order to maintain stability and prevent conflict in the Arctic Region."[95] It also point to the fact that, "The Navy's unique capabilities allow it to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, contribute to deterrence, and to enhance regional stability."[96]

The document further lists that in its efforts to address the near-term, mid-term and far-term challenges; it will improve its capabilities and presence in the region. In the near-term (2014-2020), it will

2 In 2018, the US Pacific Command (PACOM) was renamed the US Indo-Pacific Command (INDOPACOM)

enhance its undersea and air assets. The document stated that "... surface ship operations will be limited to open water operations in the near-term which will employ ice strengthened Military Sealift Command (MSC) ships to conduct Navy missions." The US Navy also intends to increase the number of personnel trained to operate in Arctic conditions. "Through ongoing exercises, such as Ice Exercise (ICEX) and Scientific Ice Expeditions (SCICEX) 37 research, and transits through the region by Navy submarines, aircraft and surface vessels, the Navy will continue to learn more about the evolving operating environment."[97] In the mid-term (2020-2030), as the Arctic become more ice free, the US Navy would continue to build its capabilities to operate in the changing environment while focussing on working with partners in the region.

The US Navy has understood that it would have to redefine its operations in the Arctic region as global warming is changing the way the maritime warfare was planned. For example, the Arctic sea ice would no longer be available to conceal nuclear submarines in the future. The Navy has identified search & rescues and disaster response missions as the primary risks, along with maintaining the freedom of navigation. In the far-term (2030-2040), it envisages diminished ice cover that would require greater maritime security and the need to have surface, sub-surface and air capabilities to meet national security goals. The US Naval and Coast Guard strategy points to an acknowledgement that they must improve their hardware and software capabilities to address the challenges in this theatre as part of the large changing security environment.

While the US Coast Guard and the US Navy address the challenges on the waters, the NATO and NORAD provide the much-needed continental protection from threats that may arise in the Arctic. For NATO, Arctic is important and it is concerned about the growing presence of Russian military in the region. The NATO is strengthening its maritime posture by investing more in naval capabilities and has also established a new Atlantic Command with a headquarters in Norfolk, Virginia, and that will address also some of the challenges in the Arctic. In October 2018, the NATO held its largest Arctic military exercise since the Cold War. Designated TRIDENT JUNCTURE, this exercise involved more than 50,000 service members from 31 countries. Demonstrating commitment to operational presence, Canada, Denmark, and Norway have made strategic investments in ice-capable patrol ships charged with national or homeland security missions. "While the US is committed to engagement across a wide array of Arctic organisations, it is the only Arctic state that has not made similar investments in ice-capable surface maritime security assets. This limits the ability of the Coast Guard, and the Nation, to credibly uphold sovereignty or respond to contingencies in the Arctic. It also diminishes America's position as the partner of choice for allies and partner nations."[98]

The opening of the Arctic along with Russian and Chinese interest along the US and Canadian northern borders is a major worry for the top officer at US NORTHCOM and NORAD. One of the focal areas of concern for the US is Alaska where the US Air Force has intercepted Russian aircrafts at its borders. Within the

NORAD, Canada and the US have started planning a replacement for the North Warning System. It is likely to be finished by 2030. It will have a network of air defence radars across the top of the continent. The project is jointly funded and operated through NORAD, though it is going to be located primarily in Canada. The system's renewal comes in the context of a persistent Cold War revivalism that presages a preoccupation with national defence and geostrategic competition.[99] The primary strategic role of the system, like in the past, would be to track long range Russian military aircrafts. Apart from bringing strategic stability, it was felt that an improved system is needed to respond effectively to the changes in the physical climate and enhance domain awareness for security and safety reasons. With increasing access to and movement in the Arctic by both commercial and military vessels, the countries have felt the need for to imporved the infrastructure to support national defence, public safety as well as environmental safety.

[III] (c) Future challenges for the US in the Arctic

The very environment of the Arctic poses a challenge for the US. As the Arctic changes because of climate change, it will have an impact on people, economics and national security. As the US builds a better understanding of the Arctic, it would have to address some key challenges for the future.

A major challenge for the US would be the *geopolitical competition in the region*. As national security comes to play an important role in

the Arctic strategy of other nations, it may overshadow the consensus building approach that has been followed vis-a-vis the Arctic till date. With growing militarisation of the Arctic and exercises being conducted for 'training and interoperability for Arctic conditions' tensions and mistrust are likely to grow. For the US, Russia has become the most prominent challenge that needs to be addressed. As the largest state in terms of territory, Russia dominates the Arctic geography and correspondingly dominates the security and infrastructure development. As an Arctic state, Russia has legitimate sovereign interests in the region, including navigation safety, search and rescue, and environmental protection. It also has needs to have an enhanced presence to ensure that it can guide other ships in the region through radar coverage and emergency services.

However, the question for the US is whether Russia would be willing to use this power to coerce other nations with an aim to expanding Russian influence in the region. This fear is compounded by the fact that the US Coast Guard and Navy are under-equipped whereas Russia continues to improve its icebreaker fleet, which is already the world's largest, and modernises its naval vessels with the latest defence technology. "Russia is also rebuilding and expanding other Arctic capabilities and infrastructure, including air bases, ports, weapons systems, troop deployments, domain awareness tools, search and rescue resources, commercial hubs, and floating nuclear power plants. As a strategic competitor, the US must take heed of Russia's actions and potential dual-use of its capabilities. It needs to also rapidly build its forces in the region to counter any

challenge from outside powers. Russia and the US should endeavour to maintain some collaboration within a multilateral framework to not only diffuse tensions but also build mutual respect for established international rules and national sovereignty."[100]

Another geo-strategic challenge for the US in the Arctic region is *growing interest of China* here. China, a non-Arctic state, in its strategy has stated that it is a 'near Arctic nation' that is the closest nation to the Arctic from continental Asia. China views the opening of the Arctic as a strategic advantage for its connection to Europe via the northern sea route. It also ensures that China does not remain dependent on the Indian Ocean sea routes for its trade and commerce, routes that have US military bases at strategic points. China has consistently challenged international law in the East and South China Seas, built artificial islands and claimed territories that are disputed based on its historical records. This disregard for international law and dispute settlement mechanisms has caused concern for the US in the Indo-Pacific region.

The US concern is that with the Arctic gaining significance for China, it may gradually disregard international law in the region which will disrupt US economic and scientific presence in the Arctic. "In recent years, China is pursuing its Polar Silk Road plan with a range of Arctic infrastructure activities to include ports, undersea cables, and airports. These plans are supported by the construction of a second multi-mission ice-capable ship, the announcement that it will construct a nuclear-powered icebreaker, annual deployments

of research vessels into the Arctic, and investments in vulnerable communities. China's attempts to expand its influence could impede US access and freedom of navigation in the Arctic as similar attempts have been made to impede US access to the South China Sea."[101]

Territorial disputes in the Arctic with Canada need to be resolved.

As a result of climate change, energy resources buried under the ice that were previously unavailable are now becoming accessible. This has set off a scramble by the Arctic (and several non-Arctic) states to use whatever international legal regimes available to them to place their claim on as much territory as possible. The US has not ratified the UNCLOS, which is the one treaty that governs the Arctic. It needs to be kept in mind that while the Antarctica is a landmass governed by a specific treaty, the Arctic is an ocean basin and thus is overwhelmingly part of the maritime domain thought not exclusively. Some scientists define the Arctic as an area north of the Arctic tree-line which includes the land domain as well. As different countries start to lay claim on the Arctic sea bed, the regimes would resolve conflicting claims based under the UNCLOS. Non-participation in the UNCLOS would mean that any claim made by the US would be unilateral in nature and would be similar in example to China's claims in the seas that surround it. It would leave the US with little ground to oppose Chinese unilateral positions in the Indo-pacific region in the future.

Apart from these geo-strategic roadblocks, the US also faces challenges in the region such as *developing its infrastructure for*

future energy exploration in the Arctic. It needs trade-off for the risk associated with fossil fuel extraction in the Arctic, which continues to be high. For the moment, the Biden administration has suspended oil and gas leases in Alaska's Arctic National Wildlife Refuge pending an environmental review. The move reverses former President Donald Trump's decision to sell oil leases in the refuge to expand fossil fuel and mineral development. Apart from the cost to the environment, policymakers have to also grapple with the cost of drilling and need to have a strategy in place to respond swiftly to oil spills. There are also questions being raised on the commercial viability of the oil that is extracted given the policies that are being adopted by nations to expand their renewable energy sources.

The US needs to build infrastructure and respond to the *growing activities of commercial shipping* in the region. The lack of adequate infrastructure resources along the American Arctic shores poses a significant challenge to service this increased traffic. Overall the economic activities such as the extraction of energy resources, greater shipping traffic, and increased fishing opportunities add to the possibility of more accidents at sea. For the moment, there is insufficient infrastructure within the US to ensure safe navigation, initiate search and rescue missions in case of emergency, or to coordinate pollution response if required. This is evident in the lack of an American port in the Arctic for ships in distress and no permanent presence of the US Coast Guard here. America's Arctic infrastructure and readiness would be severely tested in the event of any challenge.

[IV] The Common Challenge: China in the Arctic

China has emerged as a common challenge for both Russia and the US in the Arctic region. While China is not engaging in the Arctic militarily, it has made its economic interest clear. Both Russia and the US are wary of China where the Arctic is concerned.

The shortest distance between China and the Arctic is 900 miles[102], which has led to subtle assertions by China of its claims in the region by referring to itself as a '*near Arctic*' nation[103]. Speaking to the Arctic Circle Assembly in late 2015, China's Vice Foreign Minister Ming declared his country "a major stakeholder in the Arctic."[104]

For China, apart from the energy and minerals, the rich reservoirs of fish[105] and bio -protein are reasons enough for its interest. Its Maritime Silk Road initiative which links China to Europe[106][107] also makes the Arctic region important. (Beijing is envisioning its strategy in Arctic through the 'Polar Silk Road'[108][109]- declared in China's 2018 Arctic Policy.[110]) The Polar Silk Road along with its Arctic Policy allow China to showcase its status as a rising power. Ensuring its claims in the Arctic will also help China in asserting its claims in the South China Sea[111][112]. Till now, China's claim in the Arctic has not been recognised internationally. In an effort to gain prominence in the region, Beijing through its 2018 Arctic Policy, called upon states to support 'the peaceful settlement of disputes over territory and maritime rights and interests by all parties concerned in accordance with such treaties as the UN Charter and the UNCLOS and general

international law'. It also supports 'efforts to safeguard security and stability in the region'.[113]

The Russia-China relationship in the Arctic is nuanced. They have shared interests but they also have competing interests. Moscow's engagements are largely seen as signalling to the US. As new commercial relationships emerge in the Arctic, Russia and China are increasingly collaborating with each other on Arctic development with China providing Russia with the much needed capital that has been on hold due to various US and international sanctions on Moscow. The 2016 South China Sea military drill with China carried two messages from Russia:

- Firstly, the drill was a signal to the US and its allies such as Japan, indicating its naval power in the region. It also showed its non-compromising attitude towards the Kuril Islands. The drill to some extent was also to break the US hegemony in the region and to check its influence over international organisations such as UNCLOS and the International Tribunal in Hague[114].

- Secondly, the exercise was also to show Moscow's assertiveness, naval power and its ambitions in the region and beyond to China.

Cooperation between Moscow and Washington will help protect the Arctic—be it politically, economically or environmentally from becoming a field of confrontation rather cooperation.

[V] **India and the Arctic**

The changing Arctic is of importance to India. China's growing Arctic footprint and the growing tensions between Russia and the US may impact India's energy security and climate change interests.

Indian engagement in the Arctic region can be traced back to 1920s when, as part of the British Empire, it signed the Treaty of Svalbard with Norway, Denmark, France, Italy, Japan, the Netherlands, the USA and Sweden concerning the sovereignty of Norway over the Archipelago of Spitsbergen.[115] India initiated its Arctic Program in 2007 with four broad aims: *first,* to study the hypothesised tele-connections between the Arctic climate and the Indian monsoon by analysing the sediment and ice core records from the Arctic glaciers and the Arctic Ocean; *second*, to characterise sea-ice in the Arctic using satellite data to estimate the effect of global warming in the northern Polar Region; *third*, to conduct research on the dynamics and mass budget of the Arctic glaciers focusing on the effect of glaciers on sea-level change; and *fourth,* to carry out a comprehensive assessment of the flora and fauna of the Arctic vis-à-vis their response to anthropogenic activities. In addition, it proposed to undertake a comparative study of the life forms from both the Polar Regions.[116] In 2013, India became an Observer member of the Arctic Council and over time India's interest in the Arctic has also gained strategic significance.

Changes in the Arctic and global ecosystem induced by melting Arctic ice, can be highly disruptive for India. Indian agriculture

is heavily dependent on the monsoons. Any change in monsoon patterns will have implications for the agro-climatic conditions of countries like India whose food security itself is dependent on ecosystem stability. Coastal erosion will have a dual impact of economic insecurity along with internal as well as possible international displacement of population leading to related security issues. It will likely effect of these changes on critical aspects of national development, economic security, water security and sustainability, weather conditions and monsoon patterns, coastal erosion and glacial melting. The Arctic research has obviously helped to initiate studies on glaciers in the Himalayan region.

The changes in the Arctic such as thinning sea ice, loss of permafrost etc would, apart from sea level rise, also impact the ocean temperature. The loss of habitat, changes in the marine ecosystem such as loss of plankton etc will affect fish stocks and other marine bio-proteins. This would have an adverse impact on the development of the blue economy and the food security for the future.

As stated before, the Arctic is a reservoir of mineral wealth and energy sources. India would need all of these resources in the near to long term future. India is the third largest consumer of energy in the world and is increasingly interested in exploring the possibility of exploring the resources of the Arctic. Cooperation with Russia in the energy sector is a shared interest. To this end, in May 2014, ONGC Videsh and Russia's Rosneft[117] signed a MoU, which "paved way for the companies' cooperation in subsurface surveys, exploration and

appraisal activities and hydrocarbons production in Russia's offshore Arctic."[118]

India's policy towards the region was also the central issue during the PM Narendra Modi's visit to Russia in September 2019. The joint statement refers to India's interest in the Arctic and its readiness "... to play a significant role in the Arctic Council". Russian President Vladimir Putin also invited Indian energy companies to participate in projects like Arctic LNG 2, which is Novatek's LNG plant and is estimated to have a capacity of about 19.8 million tons of LNG per year and is expected to be operational by 2022-23. As relations with the US deepen it is likely that India's future cooperation would prominently feature the Arctic.With the US, India shares the platform to mitigate the effects of climate change. It is an area where cooperation in the Arctic is to their mutual benefit.

Similar to Russia and the US, India also has concerns on China's rising interest in the Arctic region. By calling itself as a "responsible major country," China, has tried to dispel concerns of the Arctic or non-Arctic states about China's geopolitical ambitions in the Arctic. Despite Beijing's "commitment to international law and cooperation and balancing economic interests with environmental protection" for the Arctic, India is concerned that the region may become an arena for competition.

As the natural environment effects the security environment of the Arctic, it is in India's interest to increase its engagement

with the nations of the Arctic. In this regard, India's draft Arctic Policy (2021) presented the blueprint of India's approach to the region. It is based on five pillars - Science and Research; Economic and Human Development Cooperation; Transportation and Connectivity; Governance and International Cooperation; National Capacity Building. It lists a wide range of activities and initiatives to be taken through Action Plans encompassing scientific, economic and diplomatic fields. The policy is a welcome sign of the growing awareness and increasing strategic relevance of the Polar Regions - the Arctic and the Antarctic - to India's national interests and security. A policy outlining India's interests in the Arctic was much needed. It would also help navigate the dynamics of the Russia-US relations in the Arctic as India shares strategic relations with both nations.

[VI] Conclusion: Impact of the US-Russia Relations on the Arctic

With its growing importance, the Arctic is becoming more susceptible to external geopolitical influences while playing a very limited role in the events that affect it. The resources of the Arctic -- natural and human --, the growing tensions between the US and Russia and the strategic location of the Arctic, all demand attention in national and international policy making. Bilateral relations between the US and Russia have an impact on the various programmes that are in place to protect the Arctic and its environment. The relations also impact cooperation initiatives among the coast guards of the member-countries. The Arctic Council is the primary organisation

dealing with Arctic governance and provides the two nations with an opportunity to cooperate and collaborate at both the multilateral and the bilateral level. The Council's other member-states have important stakes in the development of a peaceful, secure and sustainable Arctic. Nonetheless, it needs to be noted that apart from Russia all other members of the Council share a close relationship with the US. This means that the US can influence the decision of its partner nations and pursued them away from Russia. It also means that, as tensions with Russia increase, the US and its partners are looking at the possibility of increased military presence of the NATO in the Far North. This raises the possibility of a militarised Arctic.

Other crises also have had an impact on the Arctic. For example, as the conflict over Ukraine dragged on, it led to increased tensions between Russia and US in the international arena effecting the cooperation between the two in the Arctic as well. These dynamics have started to influence the economics of the Arctic region and the development of mineral deposits, research, and search and rescue operations. As a result of Russian actions, the US called off joint search and rescue training operations by the coastguard services. The updated list of the US and EU sanctions against Russia mention the economically significant energy sector. As western countries refused to transfer the technology for deep-water drilling to Russia as a result of the sanction, it has reduced the prospects for oil and shale oil extraction in the Arctic for Russia. The sanctions also put

restrictions on investment and financing of oil and energy projects in Russia leading to a number of western energy companies to withdraw from projects to develop Russia's Arctic offshore zone.

Tensions in US-Russian relations have generated concerns about stability and security in the Arctic for the littoral states as well. These countries, while small in size and power, are important players in the region and the Arctic Council. As tensions between the two former superpowers mount, these smaller nations have started a process to review and revise their security and defence programs. They are building plans to modernise and enhance their capabilities in the region. For example, the Norwegian air force has increased the frequency of its sorties into the Arctic Circle. Norwegian Air Force also used its bomber and F-35 for night exercises near the Arctic Circle in March 2021. Russian air force has also increased its activities here. The littoral States of the Arctic continue to call on both the US and Russia to develop the Arctic together and to ensure that the Arctic remains a region of low political tensions.

For Russia, the Arctic presents an opportunity in terms of new shipping routes from Asia to Europe and further on to North America. This not only provides Russia with economic opportunities to enhance its trade, but also allows it to deepen its relations with other countries that would like to use this new sea route. While the opening of the NSR is likely to reduce the time taken for container shipment and thus cut costs, environmentalists are worried about the effects of growing container traffic in an already fragile environment.

The movement of ships and the waste they generate will further add to the pollution and the warming of the Arctic waters. There is also the fear that oil spills would not only damage the environment but due to the cold climate of the region cleanup operations would be expensive. As the country with the largest coastline, it will be Russia's burden to be the first to respond to crisis in the Arctic.

Though Russia claims that the NSR is a viable route, however, it seems that it is yet to prove itself viability as sea ice continues to pose a major hurdle to the movement of ships. The floating blocks of ice require not just specialised ships but well-trained captains and crew to navigate the Arctic. It remains costly compared to the Suez Canal for ships to transit from this route.

As the largest Arctic coastline nation- Russia would, by default, need to be well prepared to handle the calls for searches and rescues. It is the country that has the largest number of ice breakers operational in the Arctic waters, and can provide assistance to a ship in need very quickly. It also has the expertise in terms of personnel to operate in the harsh climate of the Arctic. It is further enhancing its capabilities for modernisation and development of the infrastructure of the Arctic transport system and the fisheries complex in the Arctic zone of Russia.[119] However, Russia's growing military infrastructure in the region has become a cause of concern for the other Arctic States. While the military capabilities are required to protect the economic interest as civil and commercial infrastructure is limited, the growing Russian military focus is a concern. Russia has stated that

it is strengthening its coast guard facilities but its policy document for 2020 also clarifies that the military should be able to provide security in various military-political situations.

For the US, a major hindrance is the fact that the US Congress has not ratified the UNCLOS. This excludes the US from participating in one of the most important legal frameworks available for adjudication of sovereignty issues and the governance of the Arctic. The US needs to reconsider its decision to not be part of the UNCLOS. The DoD being the primary agency in securing American interests would have to work with other departments notably, homeland security, commerce and environment to coordinate territorial, regulatory and environmental considerations in its missions. The Arctic has several indigenous tribes that call the region home and their concerns need to be taken into on board as Russia and the US build their Arctic policies.

[VI] (a) Future (nuclear) arms race in the Arctic

In its Nuclear Posture Review 2018, the US DoD stated that, "While the US has continued to reduce the number and salience of nuclear weapons, others, including Russia and China, have moved in the opposite direction."[120] It is being increasingly thought that the Russia-US nuclear posture is to a large extent an effort to counter the growing nuclear assets of China. An example of this is the Intermediate-Range Nuclear Forces (INF) Treaty[121]. In 2018, President Trump announced that the US was withdrawing from the

INF Treaty claiming that Russia was in violation of the terms of the agreement, most American experts of defence studies feel that the withdrawal allows the US to build a formidable arsenal of missiles to challenge China and Russia. On Aug. 2, 2019, the United States formally withdrew from the INF Treaty. The collapse of the INF treaty allows Russia to develop and deploy significant numbers of intermediate-range missiles that it can place in its bases on the Arctic Coast.There was also the fear that the demise of the INF may impact the New Strategic Arms Reduction Treaty (New START) , which limits strategic nuclear weapons and is a pivotal arms control agreement still in play between the US and Russia. President Biden and President Putin in 2021 agreed to extend the New START for another five year, till 2026.Further, the recent summit between the two heads of government in Geneva has provided the opportunity for the two countries to lead the way towards a new phase of arms control and expand cooperation on the Arctic.

NATO's nuclear deterrence policy states that it is a 'nuclear alliance', with its fundamental purpose being effective deterrence. In response to the growing Russian military presence in the Arctic, NATO is also pushing for increased presence and patrolling by member states. Within the NORAD, the US has the capabilities to protect itself from possible nuclear missile attacks and operate surface to air missiles. NORAD works in close cooperation with US NORTHCOM and US Strategic Command (USSTRATCOM), which have "global responsibilities assigned through the Unified Command Plan that include strategic deterrence, nuclear operations,

space operations, joint electromagnetic spectrum operations, global strike, missile defence, and analysis and targeting."[122]

As the US starts to improve its missile defence shield, Russia has enhanced its nuclear forces potential. Russia is not only building but also deploying better and high range intercontinental ballistic missiles on its platforms. Its nuclear submarines have been on combat patrol duty including in the Arctic Ocean. Russia is likely to continue to develop its sea based nuclear forces to counter the possibility of increased nuclear missile strikes from the US. Russia is in the process of creating a continuous radar network on all its borders, while ensuring that ground and space based missile systems are updated. Russia has also built military bases in its territory in the Arctic. It currently has three bases on its borders closest to the US, while has opened close to 450 such stations across its borders with the NATO on the western front. Russia's Northern Fleet, the fleet in charge of the Arctic Ocean is being modernised with the most advances surface ships and is in the process of upgrading its aging submarine force. This is apart from overhauling of its port infrastructure; Russia recently launched the first of its three nuclear powered icebreakers for the Arctic region.

Despite these military/defence advancements in the Arctic, governance of the region's resources and sea-lanes is a coordinated effort proceeding in an orderly manner. The notion that the Arctic might evolve into a flashpoint for global tensions for the moment remains remote. Nonetheless, as military activity in the region sees an upward trajectory along with increased commercial activity, the chance of

accidents, misunderstandings and miscommunications heightens. "It is entirely possible that some of these modern weapons will be used to protect territory from threats coming from the Arctic."[123]One has to keep in mind that the Arctic is linked to the global climate change and increased activity, including military activity which is a leading cause of environmental pollution, would have global consequences including for the people who call it home.

The new Cold War between Russia and the US for the moment does not seem to be one that would lead to an arms race or a nuclear arms race in the Arctic. There is an increased build-up of military assets and increased military exercises and sorties. Nonetheless, this is more to project power rather than to militarise Arctic. The military assets are required as the military frequently steps in where civilian capacity in the region is lacking or expensive such as search and rescue operations. In the near future, it is likely to be a race to lay claim to the resources that the region has to offer. Undoubtedly, there will be an increase of insecurity amongst these two countries as well as in the region. With the up-gradation in military capabilities in the region as well as competition amongst the Arctic and non-Arctic countries (such as China) to expand their territories or claim them, the Arctic region faces the emergence of a new Cold War.

[VI] (b) The Need for Cooperation

Cooperation in the Arctic needs to be based on the understanding of the surroundings which includes the experiences of the indigenous

communities, as well as members of the military and merchant navy crews that operate in its waters. The difficulties of operating in such a rigorous environment make it inherently beneficial to collaborate; challenges such as oil spills, the need to protect the flora and fauna are transnational in nature and, therefore, require collective responses and lastly, the increased maritime access due to climate change would also require cooperation. The common challenges faced by the stakeholders present in the region make working together easier and necessary. Within this backdrop, the US and Russia share mutual interests in safeguarding national interests, managing the Arctic resources in a sustainable manner, protecting the environment, strengthening scientific research, community development, strengthening scientific research and building international cooperation on matters related to the Arctic. Despite heightened tensions between Russia, US, and the 'West', cooperation on Arctic affairs has remained largely intact.

Both Russia and the US have laid stress on the centrality of the Arctic Council for dialogue and cooperation, and to their credit, have ensured that the Council functions without disruption. Though defence related subjects are excluded from the mandate of the Arctic Council, it remains one of the most important organisations for Arctic cooperation. The forum's eight Arctic countries, six Indigenous peoples' organisations and the thirteen observer states are prominently placed to cooperate on a number of issues such as safety in the Arctic, protecting the Arctic environment and working together on various areas of mutual concern. The continued talks

and political interactions also allow the nations an opportunity to explore and protect the fragile environment through an exchange on best practises and scientific knowledge.

The paper was aimed to understand the changes in the Arctic including the militarisation of the region and the effects of the same on the bilateral relations between Russia and the United States. The two nations are invested in their respective policies towards the Arctic, though in differing degrees. As the nation with the largest Arctic coastline and close to two million people living along it, Russia will have a disproportionate interest in the Arctic. Russia believes that it can benefit from the Arctic in the economic sphere and this has pushed Russia to invest in energy projects such as the Yamal Liquefied Natural Gas (LNG) project and explore other such projects. As the largest Arctic nation, Russia by default would also have to improve its coast guard and naval assets, and other equipment such as radars to ensure safe passage, search and rescue operations and deployment in emergency situations such as to contain oil spills etc. Russia has benefited from the UNCLOS and the existing legal order governing the Arctic and it has little to gain from upsetting this rule based order.

The US, by virtue of Alaska, is an Arctic country and has political, economic, energy, environmental, and other interests in the region. The realisation of the importance of the Arctic has meant that it is becoming part of the overall US policymaking in terms of issues like resource exploration, disputes over sovereignty and

navigation rights, and military forces and operations. The melting sea ice will lead to increased commercial ship and cruise shipping as well as research ship, and naval surface shipping operations. It would also increase the potential for exploration for oil and other resources, in the Arctic. These activities would require increased presence of the US Coast Guard and Navy in the waters of the Arctic. It would also require coordination and interaction between the US and other Arctic States, including Russia. It is unlikely that the two nations would risk a conflict over the Arctic, but it needs to be acknowledged that with the reduction in sea ice, Russia will continue to update and upscale its military in the region to protect its assets and it is genuinely concerned about the growing NATO presence.

While the international community is hoping for a thaw in the relations between the two countries which may allow for more cooperation in the region in the medium to long-term, few believe that tense relations would contribute to a 'military or arms race' in the Arctic. The Arctic remains financially expensive for operations. Waterways remain treacherous to navigate and need expert shipping crew. The hydrocarbon reserves continue to be difficult and environmentally costly to exploit and the Arctic environment remains hostile. It can be safely said that all Arctic nations, including Russia and the US, stand to gain more from cooperation than competition. This was evident at the Geneva Summit of June 2021, where President Biden and President Putin spoke of the Arctic being a zone of understanding or a region of cooperation rather than conflict. The entry of non-Arctic states such as China and India will

open a new dimension of complications and cooperation for the Arctic, including for Russia and the US.

The Arctic is home to the only shared US-Russia border. It would be prudent to strengthen the channels of communication and build operational protocols to avoid are conflict, enforce international laws and protect the environment and the sovereignty in this region. Cooperation allows the US and Russia to work towards developing technologies for the future such as to help mitigate climate change. With increased competition for the natural resources of the Arctic, it is important that both Russia and the US work to build a policy of cooperation with each other. Regional collaboration between the Arctic states is essential for them to pursue their regional goals and ensure the prosperity of their Arctic populations. Perhaps, the Arctic's harsh environment offers hope for cooperation. As Law of the Sea scholar Caitlyn Antrim said, "It is easy to be friends when the elements are your common enemy."[124]

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