

India's Arctic Policy: a critical appraisal

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Abstract After much procrastination, the Indian government has released its much awaited and delayed Arctic Policy document on 17 March 22 with the theme being “Building a Partnership for Sustainable Development”. It has been 15 years since India commenced its scientific research in the Arctic region and this policy document, charting out the direction that India aspires to assume will be keenly examined by the diverse stakeholders of the region. Despite being an Arctic Council observer for nearly a decade, India continues to view the Arctic from a mere scientific prism and yet again missed on the opportunity to elucidate her geo-economic, geostrategic, economic and geopolitical aspirations in the hugely vital region. There is no gainsaying that the research bases discreetly also act as pillars of geopolitical engagement and indirectly this scientific diplomacy ushers in peace and prevent conflict situations yet a holistic national policy enunciating a roadmap and vision for dealing in a region which has eight sovereign states, thirteen sovereign states as observers, various intergovernmental and inter-parliamentarian outfits, NGOs and a complex governance structure was much awaited.

Keywords Arctic, geopolitics, scientific diplomacy, Observer States, Permanent Participants, polar research, strategic direction

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1 Introduction

After much procrastination, the Indian government has released its much awaited and delayed Arctic Policy document on 17 March 22 with the theme being “Building a Partnership for Sustainable Development”. It has been 15 years since India commenced its scientific research in the Arctic region and this policy document, charting out the direction that India aspires to assume will be keenly examined by the diverse stakeholders of the region. The Arctic region connects three continents, which are the power centres of the global economy, trade, and military. Indian policy on global issues has gained much prominence with the gradual rise in its stature in fields of economy, diplomacy, commerce, and so on, and lately, India has been actively conveying and projecting its views on issues that

concern her, with keen notice by world powers.

India is among the five Asian nations including China, Japan, Singapore and Republic of Korea to be granted the observer status in the Arctic Council (AC) during the Kiruna Ministerial Meeting in 2013. Then, many Indian experts called this foreign policy step an “Arctic victory” and a “major diplomatic achievement” for the Ministry of External Affairs of India (Ramachandaran, 2013).

Among the Asian Arctic observers, both Republic of Korea (2013) and Japan (2015) had preceded China in issuing out their respective Arctic policies. China had released its white paper on the Arctic policy in January 2018. With the recent release of India's policy, Singapore remains the only Asian AC Observer State without a charted out Arctic Policy.

The policy document, in its concluding section affirms that “India's Arctic Policy is aimed to prepare the country for a future where the biggest challenges facing humankind, such as climate change, can be successfully addressed only

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through collective will and effort. India can, and is ready to play its part and contribute to the global good. Close partnerships with countries of the Arctic region and other international partners to ensure sustainable development, peace and stability in the Arctic region will also be essential for the realisation of India's national development plans and priorities. This approach is in accordance with the Indian philosophy of *Vosudhoivo Kutumbokom*—the world is but one family” (Government of India, 2022).

The document also promises that “India's Arctic Policy shall be implemented through an action plan and an effective governance and review mechanism consisting of an inter-ministerial empowered Arctic Policy Group. Implementation will be based on timelines, prioritisation of activities and allocation of requisite resources. The implementation will involve all stakeholders including academia, the research community, and business and industry” (Government of India, 2022).

The policy comprehensively covers the various sectors in which India aspires to participate in the Arctic affairs yet falls short on tangible efforts like the other Observer States like China, Republic of Korea and Japan, which have already instituted/commenced activities in diverse spheres. India's expertise in space technology with one of the most developed space programs in the world can offer substantial benefits towards enhancing the digital connectivity footprint in the Arctic. India's Regional Navigation Satellite System, remote sensing facilities and establishing ground stations to receive satellite data have been promised in the policy, though without concrete and measurable plans. Future plans on collaboration with Arctic States to strengthen partnerships in sustainable living and non-living resource exploration in the Arctic has been stated too, which is a beneficial takeaway for all parties.

In light of such profound and elaborate goals, it is imperative to critically analyse Indian efforts in balancing the delicate geopolitical and strategic goals that India aspires to pursue in this vital region. It is assessed that India's efforts in partnering and collaborating with the Arctic 8, especially in the domains of meaningful engagement with Permanent Participants, position on exploitation of Arctic resources and alignment of national policy with the climate change goals falls short of promises on certain parameters. The increasing economic, political, and geostrategic significance of the Arctic, which has witnessed tremendous transformation in recent times calls for more robust and tangible assertions by stakeholders including India to fulfil its aspirations (Pareek, 2021).

A Consultative Party of the Antarctic Treaty, India's research endeavors in Antarctica started in 1981 and Bharati Research Station was established on the continent in 1983. Based on this polar scientific activity, as well as the teleconnections between the Arctic region and Indian monsoon intensity, India turned its attention to the Arctic. In the Arctic domain, India had signed the Spitsbergen Treaty in 1920, accepting Norwegian sovereignty over Svalbard

Islands. India had established its research presence in the Arctic since 2007 and established the research station “Himadri” in 2008. The performance of Observer States has varied substantially during these years and while China has made progress by leaps and bounds, India remains lackluster. India was accorded observer status in the AC in 2013 yet the role of India in the Arctic remains an inconsequential theme, grabbing little traction in India and elsewhere (Pareek, 2020).

On the other hand, China is being increasingly viewed along with the US and Russia in their attempts to control the narrative in the Arctic, in vying for great power competition. The systemized dynamics of the changed relationship between the United States and China and also between Russia and China, is also complicating the confrontational demeanors. As opposed to India, which is taking baby steps in the Arctic, China relies on global regimes regarding navigation issues, prefers bilateral cooperation for purposes of resource extraction, and prioritizes Arctic regimes to justify the pursuit of dual-use scientific research (Taylor Fravel et al., 2022). The balance of power is subtly being changed with the forays of non-Arctic stakeholders in the domains of scientific pursuits, shipping, resource exploitation and will pave the grounds for geopolitical manoeuvring in the future. In short, there is tremendous difference in the approach adopted by China, focusing on economic global outreach and region based execution while India is treading the path of least disruption with limited goals. Nonetheless, the release of the policy by India which seeks to expand the capacity and awareness of Arctic-related scientific research in the country, and widen the pool of experts in sectors such as mineral, oil and gas exploration, blue-bio economy and tourism relevant to the Arctic.

2 Strategic direction

The policy document was released by Union Minister of State (Independent Charge) Science & Technology; Minister of State (Independent Charge) Earth Sciences; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr. Jitendra Singh on 17 March 22.

Despite being an AC observer for nearly a decade, India continues to view the Arctic from a mere scientific prism and yet again missed on the opportunity to elucidate her geo-economic, geostrategic, economic and geopolitical aspirations in the hugely vital region. The release of national policy by the Ministry of Earth Sciences (MoES) and not by the Ministry of External Affairs (MEA) reaffirms a stark deficit in national understanding of the complex and myriad framework that governs the Arctic and the increasing geopolitical and strategic relevance of the Arctic. India's reluctance to de-emphasize its scientific interest towards a more calibrated approach that takes into account the politico-strategic-economic dimensions in the Arctic reflects the tension between the exceptionalism and the

realism of its polar legacy (Sinha, 2019).

The MEA is responsible to chart out India's strategic goals and direction for policy formulation as well as strategic alliances, and the official stand of the government can be observed from its statements and issue briefs/statements as well as by official releases. At home, MEA is responsible for all aspects of external relations. Territorial divisions deal with bilateral political and economic work while functional divisions look after policy planning, multilateral organizations, regional groupings, legal matters, disarmament, protocol, and consular, Indian diaspora, press and publicity, administration and other aspects (Ministry of External Affairs, 2022).

There is no gainsaying that the Arctic research bases discreetly also act as pillars of geopolitical engagement and indirectly this scientific diplomacy ushers in peace and prevent conflict situations yet a holistic national policy enunciating a roadmap and vision for dealing in a region which has eight sovereign states (Arctic 8 namely, Finland, The Kingdom of Denmark, The Russian Federation, The United States, Iceland, Canada, Sweden and Norway), thirteen sovereign states as observers, various intergovernmental and inter-parliamentarian outfits, NGOs and a complex governance structure.

It has to be accepted that India's preoccupation with local and regional affairs as also with the vital geopolitical activities around the Indian Ocean, Indo-Pacific, and the Middle East take away the bulk of Indian foreign policy emphasis and resultantly the Arctic affairs are left to the National Centre for Polar and Ocean Research (NCPOR, functioning under the Ministry of Earth Sciences) rather than the MEA. A connected strand to the changed focus of the Indian policy towards the Arctic has been aired by some who have aired fears that "India whose geostrategic position enables it to exert considerable control over the Indian Ocean Region may suffer at the cost of the Arctic and the commercial viability of its polar routes" (Saran, 2012). In the times when the Arctic has assumed a major position on the world stage in light of its climatic and geopolitical relevance, the above view appears to be myopic and misfounded and both the regions merit suitable and bespoke responses.

The Arctic region has witnessed the presence of all contenders of great power status and to carve out a strategy for India requires deliberate forethought. The realisation of the acute discrepancies in the Indian state capacity and mismatch between the stated objective as a major world power is being adroitly noticed by the world community and there seems to be a huge differential between the rhetoric and action. It is also established that mere soft power and scientific diplomacy is not enough to progress any claims for global/major power status and the Indian strategy needed to have a multi-pronged approach to carve out a niche role in the Arctic affairs.

India's Ministry of Environment, Forest and Climate Change (MoEFCC) is the nodal agency for coordination of

efforts and commitment of national goals towards fighting climate change. The Ministry also serves as the nodal agency in the country for the United Nations Environment Programme, South Asia Co-operative Environment Programme, International Centre for Integrated Mountain Development and for the follow-up of the United Nations Conference on Environment and Development. The Ministry is also entrusted with issues relating to multilateral bodies such as the Commission on Sustainable Development, Global Environment Facility and of regional bodies like Economic and Social Council for Asia and Pacific and South Asian Association for Regional Co-operation (SAARC) on matters pertaining to the environment (Parivesh, 2022).

India's Department of Science and Technology (DST) functioning under the Ministry of Science and Technology (MoST) is also furthering individual collaboration in its domain areas with certain Arctic States. The International Cooperation Division of DST has mandated responsibility of negotiating, concluding and implementing Science, Technology and Innovation Agreements between India and other countries. Under the Agreement of Cooperation in Science & Technology concluded between the Government of India and the Government of Norway, the DST of the Government of India and the Research Council of Norway have started a program for joint funding of Indo-Norwegian joint research projects in mutually agreed fields to achieve world-class scientific results (Department of Science and Technology and Research Council of Norway, 2019).

The Ministry of Tribal Affairs (MoTA) looks after the affairs of the indigenous people. Indigenous peoples in India comprise an estimated population of 104 million or 8.6% of the national population. India voted in favour of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) on the condition that after independence all Indians are considered indigenous. Therefore, it does not consider the concept of "indigenous peoples", and therefore the UNDRIP is applicable to India (IWGIA, 2022). This being the dichotomy, India though, provides special schemes for economic and social upliftment of these people, yet doesn't address these groups with their unique social structures like the Arctic States. As brought out in succeeding paragraphs, India's engagement with the Permanent Participants is acutely limited.

Other than these Ministries, as per the policy document The National Centre for Polar and Ocean Research (NCPOR), Ministry of Earth Sciences, Government of India, is the nodal agency for India's Polar research programme, which includes Arctic studies. The Ministry of External Affairs provides the external interface to the Arctic Council. Several other Ministries and institutes are also involved in Arctic activities and are poised to deepen their engagement in the future. These include the MoEFCC, MoST, Department of Space, Ministry of Petroleum and Natural Gas, Ministry of Ports,

Shipping and Waterways, Ministry of Mines, Department of Telecommunications, Ministry of Commerce and Industry, Ministry of Agriculture and Farmers Welfare, Ministry of Fisheries, Animal Husbandry and Dairying, Ministry of New and Renewable Energy, Department of Biotechnology and Council of Scientific and Industrial Research (Government of India, 2022).

India's MEA addresses the Arctic region through three separate offices and there is no dedicated division looking into the finer nuances of the various levers that are at play in the region. The MEA's Americas Division looks after the US and Canada while the Eurasia Division looks after Russia and the Central Europe Division is looking after the remaining five states namely Iceland, Finland, Denmark, Sweden, and Norway. The AC is in itself a very unique organization and the disparate MEA's divisions are not able to do justice and thereby a void is experienced at the policy formation level. The most distinguishing feature of both the "Arctic exceptionalism" and the interplay of politico-economic-geopolitical factors between the various member states in the AC has to be viewed holistically based on a common viewpoint rather than a disjointed platform. There is one Additional Secretary (Europe) who draws out the policy based on inputs provided by these three divisions and thus the finer issues of relations between the Arctic 8 as well as shifting discourse due to rotational AC chair as well as varying participation by the Arctic 8 in international multilateral organizations tends to get missed. The existing disconnect between these three divisions does not provide a single point and seamless understanding of the complex Arctic issues and thus there are huge rifts in Indian position which could have afforded her with a robust strategic hedge as a safeguard for unforeseen situations. The diagram placed below succinctly places the context and role of the various government Ministries in this regard (Figure 1).

The process initiated after the end of the Cold War by the liberalization of the Indian economy, brought her to the centre of the global economy owing to the size and geopolitical dimension. Resultantly, there were greater demands on diplomacy to mould and carve new policy engagements delving into the geo-economic and geostrategic realms. The changing attitude and perspective of erstwhile unconcerned states like the US and certain European countries also gave impetus to India's self-belief. Since then, India has been trying to associate herself globally by weaving bespoke narratives of engagement like neighbourhood first, Act East, and so on. The ambition to be a great power, competing with a growing unilateralist and inwardly US, and ambitious and aggressive China are manifesting in greater power politics in international affairs. India's views on Northern Sea Route (NSR) and Arctic shipping as well as energy dependence and more importantly a more realist and practical approach, much more connected and synchronized with the changing

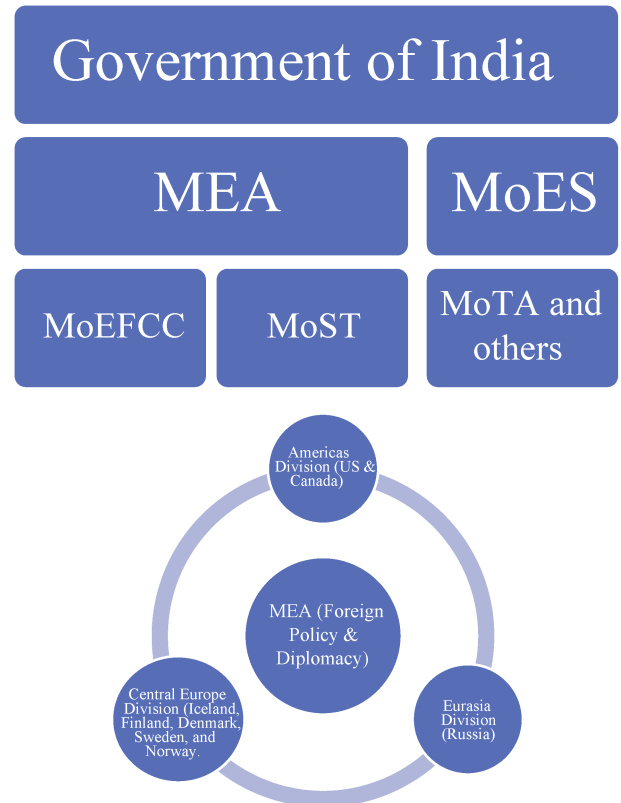


Figure 1 Ministry of External Affairs divisions.

geopolitical landscape in the Arctic were keenly anticipated by the international players in the Arctic, yet the policy remains muted on several key issues enunciated in succeeding paragraphs.

3 Layout

The policy document covers the direction in six broad areas namely, science and research, climate and environmental protection, economic and human development, transportation and connectivity, governance and international cooperation, and national capacity building in the Arctic region. This paper is merely highlighting a few of the major misses which have not been addressed in the policy document.

3.1 Permanent Participants

The founding document of the AC had stressed the significance of the indigenous people of the Arctic and granted them a special voice at the high table. More specifically, the council states that "Decisions at all levels in the Arctic Council are the exclusive right and responsibility of the eight Arctic States with the involvement of the Permanent Participants" (Arctic Council, 2019).

The AC is a wide and diverse platform bringing together Arctic 8, Permanent Participants, observers as well as international institutions, and it remains a decision-preparing rather than a decision-making institution.

The 6 Permanent Participants are composed of various communities, with differing political-ethno-socio-cultural characteristics with each other belonging to a localized community. Though there is presence of Permanent Participants, Working Groups, observers, etc yet the decision-making authority rests entirely with the Arctic 8, as they discuss and chart out AC policy and direct the working groups. As per the Arctic Council Rules of Procedure, 6 Permanent Participants though are not granted voting privileges but they can participate in all meetings and can offer full consultation. Also, the United Nations General Assembly had passed an important declaration on the rights of indigenous people in October 2006 affirming the rights of indigenous people. The Ottawa Declaration on the establishment of AC could be considered as a precursor and a farsighted step by the Arctic nations which had granted the indigenous people greater participation by making them Permanent Participants in the AC.

The Arctic is experiencing and facing the brunt of climate change and over the last century, the temperature rise in the Arctic has been two to three times greater than the global average. The volume of the Arctic Ocean is reported to have fallen by 75%, and it is predicted that in the coming decades the Arctic will be entirely ice-free during the summer months. Though the geophysical changes will open several economic opportunities yet there will be concurrent challenges namely the loss of pristine biodiversity, shipping-related pollution risks, and the irreversible impact on the Arctic indigenous population. The characteristics of loss of sea ice, shrinkages of ice cover, the spread of wildfires, etc have a corresponding and disastrous impact on the Arctic ecosystems and are adversely impacting the habitats, mortality, and sustenance of indigenous people's livelihoods. There is also an impact on the marine food web and marine ecosystems and there are concerns that the caribou, polar bears, seals, etc will not be able to cope with the rapidly changing scenario. For indigenous people, the primitive practices of hunting, fishing, and gathering food is an important facet of their lives. Also, these practices require them to rely on a functioning cash economy. There will be issues relating to migration as well as a swell in Arctic tourism that can change the nature of the Arctic. Not only the Arctic flora, fauna, and aquatic lives but the human population also has to adapt to the changes and be resilient in their methodology.

The estimated population of the Arctic region is around 4 million, out of which the indigenous make for around 10%. It is abundantly clear that the population of the Arctic does not make it a significant stakeholder in global politics, yet the indigenous people of the Arctic have been making a living for several millennia by employing sustainable means of living. Many places like Greenland have the indigenous people in the majority, while in others they may be less. There are over 40 different ethnic groups living in the Arctic. These communities include Saami in circumpolar

areas of Finland, Sweden, Norway, and Northwest Russia, Nenets, Khanty, Evenk, Chukchi in Russia, Aleut, Yupik and Inuit (Iñupiat) in Alaska, US, Inuit (Inuvialuit) in Canada and Inuit (Kalaallit) in Greenland, Denmark.

The indigenous people organizations are represented by the Permanent Participants like the Russian Association of Indigenous Peoples of the North (RAIPON), Saami Council, Aleutian, and others representing the different ethnic groups living in the Arctic. The Saami are among the largest groups and comprise more than 100,000 people base on a United Nations report on the theme "Indigenous People Indigenous Voices" (Department of Economic and Social Affairs, 2009).

Scientists have concluded that the native indigenous people have lived for around twenty thousand years in the Arctic and adopted the hunting, fishing, whaling, herding, and other means for sustainable living. They had devised means to sustain in the frigid environment by developing warm houses, and clothing to protect themselves from the frigid conditions. They pride themselves on ancient knowledge on predicting weather, languages, and don't follow the modern political divides between the communities. Many Arctic people now live much like their neighbours to the south, with modern homes and appliances. Nonetheless, there is an active movement among indigenous people in the Arctic to pass on traditional knowledge and skills, such as hunting, fishing, herding, and native languages, to the younger generation.

As per studies, the Arctic populations are in a later stage in the demographic transition thus the rate of growth may be stable or even negative. The major factor which will have an impact on the rapid increase or decrease in populations in pockets will be the discovery of resources or depletions thereof. As per the Arctic Human Development Report, "Urbanization in the Arctic is accelerating, propelled both by local and global forces, and the Arctic is becoming more 'marketable' and Arctic identities are seen increasingly as an asset" (TemaNord, 2014).

Various scholars have enunciated that the exploration and climate change in the Arctic in itself presents a paradox/dilemma or an antithesis. On one hand, the nations desire to uplift the economic status of their population by engaging in the commercial exploitation of their resources while simultaneously bowed down by the challenges to maintain the ecological balance and continue to the sustainable development of their indigenous people. These terms amply cover the predicament of fulfilling responsibility towards the environment or to progress the socio-economic upliftment of their populations. However, there are stark contrasts within the various states on issues like exploration and ecological preservation with varying parameters hence the dilemma and paradox get further widened.

While Republic of Korea has been organizing Arctic Partnership Week as well as offering scholarships, preferably to members from the indigenous community to Korea

Maritime Institute's Arctic Academy (Republic of Korea), India's engagement appears rhetorical and superficial every year.

India should take a cue from AC in governance issues, especially in rural backward areas so that there is strengthened networking between indigenous peoples' associations and a greater say in policies and schemes so that the fruits of economic development reach them. The representation and participation by India's indigenous groups in AC and especially Permanent Participant's deliberations will strengthen India's standing in the AC and provide India reliable partners to stand by her side during trying times. However, other than mentioning that "India has substantial expertise in meeting these challenges and is uniquely placed to make a positive contribution in collaborating with Arctic States to assist their indigenous communities to cope with similar challenges", India has not entered into any joint program with any of the Permanent Participants, so far. Neither has India initiated any program with any of the Working/Expert Groups/Task Forces to study or improve the livelihoods of the indigenous people. E-mail response by Gwich'in Council, Saami Council and Aleut International Association on India's engagement with these associations, obtained in the year 2019 is placed at Annexure. Other than these the other Permanent Participants like Arctic Athabaskan Council, RAIPON and Inuit Circumpolar Council elicited no response and the data on India's engagement with these could not be ascertained.

3.2 Climate change and India's environmental concerns

Lately, there are three prominent themes which have emerged threatening to disrupt the current structures in the Arctic region namely a resurgent Russia which has perceptibly reignited the post-Cold War geopolitics between the West and Russia, increasing focus on climate change amidst growing voices from increasingly militant young activists and general population and emergence of China as a global power with high aspirations.

Among these global agendas, climate change has assumed the zenith due to wide and cross-cultural and universal support demanding urgent government action. The impacts of global climate change are being experienced throughout diverse regions from Australia to Haiti, yet the most visible effects are being experienced in the Arctic region, with the region showing instantly recognizable signs of an increasingly warming planet. The alarming loss of ice cover, permafrost, and glaciers is pushing the world on an edge, forcing abrupt climate changes, denuding ice levels, inundating coastal areas, changing monsoons, and other sudden calamities leading to immense socio-economic suffering, migration, water stress, food shortages and so on. The year 2007 saw a record low in the extent of summer sea ice and a similar situation was again encountered in 2012 and there are different predictions that the Arctic will be

ice-free by 2044 or by 2067 based on various studies. "According to research published in the journal *Nature Climate Change*, the Arctic could be 'functionally ice-free' by September 2044—and no later than 2067—assuming no changes to global carbon emissions" (Strong, 2019). A rapidly receding sea ice is indicating that global climate change is taking its toll on the Arctic. The ice loss also causes greater coastal erosion due to the effects of warmer air and water leading to an increase in the storm, wave, and tidal activity.

The powers, even far away from the Arctic, both politically and geographically have been making calls citing their stakes in the Arctic region for reasons of either their self-interests or for expressing concerns over the wider global implications of climate change. The focus of non-Arctic States scientific research in the Arctic is directly primarily to gain insights and devise methodologies to fight climate change.

India has been looking at the Arctic mostly from a scientific prism yet there is a realization that it has to view it from a strategic construct as well as climate change as well as strengthen the bilateral and multilateral cooperation with the Arctic States and the Arctic intergovernmental organizations. It is astounding to note that despite climate change being at the top of the AC agenda, the draft of India's Arctic Policy, released in 21 January had no mention thereof. As per the stated 2013 Indian position, declared by the Indian MEA on its Arctic participation was India's interest in studying the climate change occurring in the High North. India initiated its Arctic Research Programme in 2007 with a thrust on climate change in the circumpolar north. Yet the absence of climate change from the draft policy document portrayed a myopic and disjointed view, which may have dismayed many who had high expectations from India.

The discussion on climate change in India remains largely focused on the conduct of conferences and debates and little tangible action. The research organizations have been seen to be utilizing the primary data obtained from government installed and funded sensors into individual research contributions, which is a serious drawback and drain on exchequer's resources. A case in point is that the size of the Indian delegation to a conference named "Polar-2018" was 18 in number, which was among the largest delegations and several papers presented there were multi-authored and based on government data. Since the conference was organized in Switzerland, the opportunity to participate also brings in the perks of tourism as well as expanding the scientific base, yet the country or the international research community has not benefited substantially and there have been few instances of recognition showered on Indian research endeavours.

Given the increasingly assertive foreign policy and strategic direction by India, buoyed by the respected political leadership and international acclaim it is now the opportune time for India to assert its role and position in

Arctic affairs. The Indian position is hugely influenced by the deep and strong bilateral relationship it enjoys with the US, Russia, and other Scandinavian and Nordic states. India's active participation in scientific endeavours at multilevel bodies in the Arctic has been adequately acknowledged and appreciated yet there is further scope to enhance it manifold. There are other parameters to widen the engagement into areas of conservation of the pristine natural environment and limit the adverse effects of climate change globally.

India should follow the Chinese model of science diplomacy wherein China had announced its first overseas satellite data receiving station in the Swedish Arctic, cooperation with Iceland to establish the China-Iceland Arctic Science Observatory at Kárhóll and so on. The efforts at continued scientific diplomacy should be promoted by way of joint research in climate change and changing the Arctic environment. The focus on geography, climatology (especially climate change), geology, glaciology, and oceanography must continue along with newer avenues like digitalization efforts, laying of submarine cables, and so on.

The focus of most of the Arctic 8 has been to view human security and sustainable development from climate change prism and thus they are focusing on the economic and social development of their human capital. An explicit and defined Indian strategy to combat climate change would have endeared and strengthened its position both bilaterally as well as in the realm of international multilateral scientific diplomacy in the Arctic.

Though the entire South Asian region is grappling the serious threats of the grave and hazardous effects of climate change, yet India being the most populous is at the pivot of these changes. India after its liberalization reforms initiated in the early 90s experienced rapid economic growth. India witnesses GDP growth nearing 10% in some of these high growth years, yet it also manifested in unwelcome environmental problems affecting the infant mortality rate and life expectancy due to the high air and water pollution levels. World Health Organization (WHO) has also warned that India has been experiencing the ill effects of climate change. India is also rated as the second most-affected country in terms of casualties related to extreme weather. As per some reports, a change in average weather conditions also create "hotspots" and has negative impacts on both the living standards of the population and also on GDP. Climate change will not only affect internal areas; in mountain areas, climate change will likely affect the frequency of natural disasters. This includes increasing the likelihood of events such as landslides, but also glacial retreat in the Himalayas. On the other hand, rising sea levels represent an existential threat to several coastal areas in south Asia: not only due to the increasing severity of tropical storms but because the large Bangladeshi share of the coast and most of the Maldives may disappear before the end of the 21st century (D'Ambrogio, 2019).

The problem is compounded by the ineffectiveness of the regulatory mechanism due to poor institutional settings and lack of enforcement. Though the problems of environmental degradation are experienced across the world, India's problems get compounded due to its high population as also the high population density and growing urbanization. Air quality in Indian cities is quickly deteriorating and it is today worse than the situation in China: in the 2018 WHO global ambient air quality database, 11 of the 12 cities with the highest levels of small particulate, PM_{2.5}, are located in India. The key problems faced by India include vehicular and industrial emissions, chemical and oil pollutions, lack of adequate sanitation, disposal and management of municipal waste, agricultural practices including logging and deforestation and stubble burning, and so on. The situation in November, December, and January becomes immensely critical due to the atmospheric conditions of low temperatures and human-induced post-monsoon biomass (stubble) burning by the farmer communities of Haryana, Punjab, and other countryside. These environmental problems lead to greater health and other social problems faced by the people which lead to a burden on human and economic costs. Chronic illnesses are also one of how the effects of environmental problems are encountered other than lower life expectancy and high infant mortality. The resultant cost due to these issues is lower productivity, poor quality of life, high level of misery, and other human rights issues.

The rural population still uses biomass extensively as fuel leading to health disorders as well as high infant mortality rates. The reliance on coal to power the thermal power plant leads to greater pollution and shows no signs of declining shortly. The forest cover has been worrisomely depleting too. The illegal cutting of trees, especially in the once forest-rich North-Eastern part of the country is progressing with no checks. The depletion of underground water levels as also waste management is another area of concern. As per a report of National Institution for Transforming India Aayog (Commission), India is placed at 120 in a list of 122 countries on water quality index.

India with its huge coastline, fertile plains, and foothills, and several ranges of the Himalayan Mountain ranges will experience the ill effects of climate change in varying forms and details. The impact on mountains will manifest in the form of natural disasters due to events like landslides and recession in glaciers. On the coastal zones, there will be calamities like inundation and submersion of several tracts by the rise in sea levels and the exaggerated impact of tropical storms/tsunamis and so on.

The Kyoto Protocol (1997) which was signed by India had set the goal for the period from 2008–2012 to reduce greenhouse gases emissions to 5.2% of 1990 levels. Yet the targets were later adjudged too high for India. The Copenhagen Accord on Climate Change had left it to individual countries to devise the necessary regulations and thus granted greater autonomy to fix the responsibility to

reduce greenhouse gas emissions. The problem of climate change agreements is juxtaposed with the problem of addressing the problem as a global one with localized inputs and individual contributions by each country to help in curbing the problem.

Given the foregoing, it is abundantly clear that a very difficult choice has to be made by the world community at large between economic development achieved by extraction and exploitation of the promise of huge natural resources hidden beneath and to preserve the last bastion of pristine and bountiful natural wonders. Most of the nations and people are divided into charting a middle path, of achieving some degree of balance between these scales by sustainable growth while maintaining the intricate ecological balance. Some governments, such as that of Russia give greater weight to economic development during these uncertain global economic times, while others may be unable to afford costly infrastructure requirements or favour stronger conservation efforts (Conley et al., 2013).

A well thought out and deliberate balance has also to be struck between the seeking of securing energy supplies and profits from hydrocarbons and on mitigating the environmental deterioration, exacerbated due to the former actions. It appears that current India's Arctic Policy is caught between the two opposing and divergent poles of India being a responsible member of the international community with a focus on parity and proportionate burden-sharing in climate change and contrarily on being a developing country with immense demand for energy resources by involvement in emerging opportunities in the Arctic.

In August 2015, India, China along representatives from several countries including the Arctic had attended GLACIER (Global Leadership in the Arctic: Cooperation, Innovation, Engagement and Resilience) conference. India and China, however, didn't sign the joint declaration at the end of the conference, hence raising questions on their commitment to slow the pace of global warming, with effects in the Arctic.

Though the countries of the world profess to adhere to the lofty goals of Paris climate goals, yet the global energy demand and carbon emissions have been growing at a faster pace, meaning that lip service is being paid to the emission and pollution reduction. The associated effects of that the current pace of growth are acutely swelling the rising emissions, which in turn lead to unpredictable weather patterns and thereby far greater energy for cooling and heating. India possesses a scientific base and structure to progress the climate change goals and there are a plethora of institutions yet its international cooperation falls short of the promise.

Likewise in COP (Conference of Parties) 25, both India and China along with the US and Brazil had also backtracked from climate change promises. The intransigence of big polluters—including China, the US, Brazil, and India—at the meeting led to the European Union,

small island states, and members of the public expressing frustration (Vaughan, 2019). This ironical dichotomy of call for action on issues like climate change and concurrent material progress and development related activity linked to receding ice cover in the Arctic in itself calls for a well thought out and robust action plan in the world community. The CO₂ emissions by India stand at number 3 in the world after China and the US and this lays tremendous responsibility as India vows to accede to climate change goals, which is a difficult path as the country is still on the path of economic growth.

Nearly all the Arctic 8 countries as well as the working groups of the AC are committed and steadfast in adhering to the stated promises on the issue of fighting climate change. Despite simmering geopolitical tensions, all Arctic States and indigenous peoples' representatives acknowledged today the enormous threat of climate change to the region's nature and people (WWF Arctic Programme, 2021). Though the current Russia-Ukraine war has derailed some of the promises, yet observer countries including India should demonstrate their resolute commitment to fight climate change.

3.3 India as an observer

The observers occupy a unique position in the Council and exercise nominal influence in the AC as the power to moderate discussion and decisions rests with the member states alone. The AC members have a stake in admitting observers as they engage with them economically with promises of investments, infrastructural development, and socio-economic development of the communities. The observers, on the other hand, have varying incentives like economic exploration, scientific research, and diplomatic leverage, and so on. Council observers are less influential than states in the Council. Member states accept observers to make economic gains. Non-Arctic States are interested in protecting the environment as well as making potential economic gains, in contrast to the more focused motivations of member states (Chater, 2016).

A normal tendency is to view India's status as an Arctic observer vis-à-vis the responses of other Asian observers namely China, Japan, and Republic of Korea. A common fabric among these three nations is that other than political and economic issues they have expanded their sphere in other domains like terrorism, search and rescue, and constructive business cooperation. Such an approach is missing in India's context as India has been repeatedly embarked on scientific pursuits alone. The North-East Asian nations are also hopeful that their coastline regions will further develop and have greater cooperative arrangements with other neighbouring countries in the times to come. China is also renting out two ports in Democratic People's Republic of Korea to further fuel its exports to Europe and hydrocarbon imports from the Russian Far East (Xu, 2012). India though has remained aloof from the political participation in the AC meetings as well as by

non-attendance of most of the meetings of the Working Groups as well as with Permanent Participants. This is indicative of an imbalance between India's physical scientific presences in the Arctic (e.g., Himadri Station at Svalbard) and its participation in Arctic governance mechanisms (Chahal, 2016).

The representation of India was done by the Secretary MoES Dr. M Rajeevan during the ceremony when India's observer status was renewed in May 2019, thereby downplaying the importance for the region and affirming that India considers the region as a major scientific expedition threshold and not as a region with growing inter-regional and global geostrategic significance. Also, in view of the foregoing it emerges that Arctic figures for India as a field for mere scientific study rather than the tremendous geostrategic place it occupies which is not in line with the professed lofty goals that India has set for herself at international level.

Since Arctic Council observer membership, as well as diplomatic relations with sovereign Arctic States, falls in the mandate of the MEA, yet India has been continuously viewing the Arctic through the scientific prism which impairs the geopolitical and geostrategic view, which is critical for India to enhance its position and credibility in the region.

The opening paragraph in the policy lists Russia (officially called The Russian Federation) among the eight countries as members of the Arctic Council. The usage of "Russia" instead of the "Russian Federation" smacks of lopsided diplomacy or error on part of the Indian government, especially in view of the ongoing Ukraine crisis, yet this issue is left for political scientists and analysts to comment.

As per paragraph 1.2.2 of India's Arctic Policy "In 2016, India's northernmost atmospheric laboratory was established at Gruebadet". This statement gives the impression that India has established a Lab at Gruebadet, yet Gruebadet is an atmosphere laboratory and observatory located midway between Ny-Ålesund, the Zeppelin observatory and the Climate Change Tower. The building currently hosts instruments for among others aerosols sampling (Ny-Ålesund Research Station, 2021). The main focus area of this lab is atmospheric research. Today Gruebadet has activities with Consiglio Nazionale delle Ricerche (Italy), NCPOR (India), National Institute of Polar Research (Japan), Korea Polar Research Institute (Republic of Korea), Finnish Meteorological Institute (Finland) and The Arctic University of Norway (Norway).

Since Svalbard (Norway) has been welcoming international scientific research at various locations under the Research in Svalbard (RiS) programme with Gruebadet having five rooms for instruments, where three rooms have inlets from the roof. The Indian presence at Gruebadet is succinctly given out at NCPOR website (<https://ncpor.res.in/arctics/display/395-gruebadet-lab>) whereby the following instruments have been set up—Microwave Radiometer profiler, Micro Rain Radar,

Ceilometer, Photo Acoustic Soot Spectrometer, nephelometer, and aethalometer.

As per the Ny-Ålesund Science Managers Committee (NySMAC) website, Ny-Ålesund offers a wide range of shared scientific infrastructure to include, including Kings Bay Marine Laboratory, Zeppelin Observatory, Amundsen-Nobile Climate Change Tower, Gruebadet Atmosphere Laboratory and Light Sensitive Cabin (Ny-Ålesund Science Managers Committee, 2019).

3.4 Arctic resources

On the eve of Indian Prime Minister's visit to Vladivostok in September 2019, it was stated that cooperation in the search for Hydro-Carbon and liquefied natural gas in the Far East and the Arctic have been agreed. This statement asserted that India was keenly watching and interested in the exploration of Arctic resources. This statement has relevance both in pragmatism in participating in unlocking resource potential of the Arctic as also progressing the Russian partnership in this field. An identical statement was also issued in October 2018 during the visit of Russian President to India, wherein it was stated that exploring opportunities for joint development of oil fields in the Russian territory, including in the Arctic shelf of Russia and joint development of projects on the shelf of the Pechora and Okhotsk Seas (Ministry of External Affairs, 2018). These statements affirm Indian openness to having joint partnerships with Russia in the exploration of hydrocarbons in the Arctic region. Likewise, during the St. Petersburg Declaration on 1 June 2017, it was stated that "we are interested in launching joint projects on exploration and exploitation of hydrocarbons in the Arctic shelf of the Russian Federation".

Speaking at a discussion at Valdai Discussion Club on 27 August 2019, the External Affairs Minister (EAM) had said that "greater maritime opportunities would also arise from what is happening in regarding the Arctic: the possibility of new maritime routes opening up" (Ministry of External Affairs, 2019a). This was first acknowledgment by a senior government functionary on the impact of the opening of new routes which will have profound maritime opportunities. Though specifics like hydrocarbons transit, trade was not addressed yet it was the realization of India accepting the tremendous geophysical and structural changes taking place which will have profound global impacts.

Should NSR become a regular transit passage, there will be a great shift in geopolitical leverage. The Indian policy document has briefly stated that "Traffic, especially through the NSR is rising exponentially and is projected to rise to 80 million tons by 2024" and doesn't give out India's stand/reservations related to geopolitical levers accruing to China as well as the ecological and environmental costs with the operationalization of NSR. Though the oil and gas from the Arctic region are lucrative, yet for optimally utilizing the benefits of NSR, the areas best suited are those lying north of Hong Kong. The areas south of Hong Kong

and beyond may have an equal or perhaps more benefit from the present Southern routes in terms of time, cost, seaborne threats, marine insurance, and so on. Thus, given India's geophysical location, it will not benefit directly from the Arctic shipping routes. Hence, India is in very unique position to chart out a carefully drawn out strategy to limit the Chinese influence as well as to stand shoulder to shoulder with its Arctic partners to limit the environmental degradation on this issue.

The Russian position on NSR may contain a potential for arguments/disagreements in the coming days. Since several countries including China have obliquely referred to the requirement of freedom of navigation in the Arctic, this issue has the potential for conflagration and needs careful handling. The Indian Prime Minister's speech had in September 2019 in Russia, completely skirted the NSR and adopted a myopic and continental perspective on connection with Russia's Far East with the Indo-Pacific, instead of the assistance in developing the NSR to secure competitive payoffs later from the oil and gas riches located there.

Till now, the strategic rivalry between India and China was witnessed in areas of border disputes, sea power, and trade but the Arctic can spiral this rivalry to newer dimensions of energy security and access to sea routes. For India, the headache is increased by the Chinese of not limiting its engagement only to NSR but the Polar Silk Road's goal and objective of deep economic integration with the polar region. Hence the transportation and communication realm of Russia's NSR will be expounded by political, institutional, and commercial instruments.

NSR offers one third distance reduction for full transit from Eastern Asia to Northern Europe. China has offered its assistance to Russia in the development of the NSR by providing advanced marine technologies and fleet modernization. As a signatory to the United Nations Convention on the Law of the Sea (UNCLOS), Russia is reaping the benefits of Article 234 of UNCLOS which permits it to monitor and control the movement of the vessels traversing the NSR as NSR lies in its Exclusive Economic Zone (EEZ). Presently, Russia levies icebreaker escort fees on vessel traversing the NSR and its control is unrestricted and absolute. In 2009, the fee was set to 40 USD per ton of container cargo. The US is more concerned about Russian claims of NSR being its internal waters and thus there is contention between the US calling the route an international waterway. The most strategic advantage opening of NSR will offer to China. And China could diversify its energy supply routes and reduce disputed chokepoints like the straits of Malacca. Over and above this, there will be substantial cost and time saving as the distance and time between North-East Asia and Europe will be substantially narrowed. Quite like the Japanese and Koreans, the Chinese shipping and shipbuilding industry will also stand to gain with increasing traffic in the NSR.

Among the Asian states, Japan and Korean policy

documents convey conservative estimates and calling for detailed feasibility studies while China is relatively more ambitious in its approach. As far as the routes go, both Russia and Canada have cited Article 234 of UNCLOS which provides for protection and preservation of the ice-covered EEZ areas of the Arctic Ocean, resulting in laying exclusive rights over North Western Passage and North Eastern Passage NSR respectively.

India has to realize that its economic engagements in search of hydrocarbons are also contributing in one way or the other to the dismantling of existing structures in the Arctic region.

4 Disputation of global commons

While signing the AC admission norms as an observer, each of the observer's states has acceded to abide by the governance structure, which offers the right to vote and voice on matters only to the circumpolar member states. There is another dilemma here wherein the adherence to UNCLOS claims specifically lowers the space for international scientific research as the area becomes sovereign territory with sovereign rights becoming applicable and the call for global commons is deflated.

Select Indian thoughts had called for declaring the Arctic as global commons, a view which has found less traction among the international fora as well as the Arctic States. Gautam (2011) has stretched the global commons domain and called on developing states to take a leadership position and not leave the matter to the developed countries alone. In the years preceding India's inclusion as an observer and even later, many Indian commentators hinted at the Arctic as a place for "global commons", a view which was emphatically demolished by the 2008 Ilulissat Declaration. This reasoning was specifically expressed by the notion of the Arctic as a "common heritage of mankind"—a vision that some Arctic rim states might have found both ill-conceived and misinformed (Chaturvedi, 2014).

After inclusion as an observer, India listed its interests in the Arctic region as scientific, environmental, commercial as well as strategic (Ministry of External Affairs, 2013). In the same piece, India also called for the participation of all those actors who have a stake in the governance of global commons. (Ministry of External Affairs, 2013). It is apparent that the official stand of the Indian government centred on regarding Arctic as global commons, a view which has been reversed in consonance with the transformed geopolitical realm and steady realization thereof affirmed in the current foreign policy.

EAM himself acknowledged during his speech on 14 November 2019 that "The global commons is also more in disputation as multilateralism weakens. Even climate change is a factor, contributing to geopolitics amongst others by the opening of an Arctic passage" (Ministry of External Affairs, 2019b). The moral high pedestal of an idealistic stand taken by Indian commentators (with some of the pieces even put up

on MEA website) often drawing India's position in the Arctic as a place of global commons was also set aside by the EAM.

5 Conclusion

India by virtue of certain parameters like its size, democratic and inclusive society, vibrant multi-ethnic-cultural social fabric, and soft power make it a candidate to aspire for great power status. Yet, there are several obstructions to this aspiration for assuming global leadership. In the current era of global politics, which is witnessing the third era of transformation since the 1987 Murmansk speech namely the period of the post-Cold War peace, the era of a unipolar world under the US and the current era of growing challenges to the world order by demanding global leadership by Russia and China.

The Arctic region which has already witnessed the presence of all contenders of great power status and to carve out a strategy for India requires deliberate forethought. In light of the acute discrepancies in the Indian state capacity and the stated objective as a major power is being noticed by the world community and there seems to be a huge differential between the rhetoric and action. It is also established that mere soft power is not enough to any claims for global/major power and the Indian strategy has to have a multi-pronged approach to carve out a niche role in the Arctic affairs. In the recent past, India has been plagued by vocal internal strife, withdrawal from trade arrangements, and history of delayed implementation of projects. In light to effectively engage with the Arctic States bilaterally, India has to sort these matters urgently. Since the Arctic can be a playground to outsmart China, India will have to soft balance with others to develop and present a viable alternative to China.

India has maritime boundaries with Sri Lanka, Maldives, Myanmar, Indonesia, Thailand, and two terrestrial nations, Pakistan and Bangladesh. Thus, India shares maritime boundaries with more nations than it shares on the hinterland and hence the importance of universal application and enforcement of UNCLOS has greater importance. India is a signatory to the UNCLOS and has settled its maritime border with Bangladesh based on the treaty parameters. Also, in light of its stated stand on respect for international law and dispute settlement under the framework of such international law including UNCLOS does take away all claims on the Arctic as part of global commons as most of the area is claimed by respective countries under the UNCLOS framework on sovereign ownership. India has consistently favoured as per UNCLOS, the equidistant/median line as the line of maritime demarcation, and hence India's position on the disputed Hans Island and other disputes in the Arctic can be easily extrapolated. The India Pakistan dispute in the Sir Creek area which remains disputed also lessens India's profile as it contains huge economic potential but the lack of political will and action to enforce sea Laws to strengthen its hold over marine resources and project itself as a firm state with

necessary wherewithal or as a tool for conflict resolution has not been exercised. India's action in her neighbourhood on adherence to UNCLOS will echo on the its position with respect to claims in the Arctic, too.

On the issue of climate change, India has been found to be dragging its feet in reiterating firm commitments. While India is within its right to specify its emissions pathway, it should not—at any forum—promise more than what it can deliver as this undermines the moral authority that India brings to future negotiations (The Hindu, 2022). Since India occupies an important place in the future discourse on Arctic, in light of path breaking geopolitical developments, its policy will be keenly studied and provide strategic direction.

India enjoys considerable rapport and understanding with both Russia and the US, despite their tensions, exacerbated with the Ukraine crisis, it calls for enhancing her stranglehold over the other members. Since smaller countries like Norway, Denmark, Sweden and Iceland occupy a seat at the Arctic high table, and India enjoys friendly bilateral relations with them, this demands raising one's footing by adapting bilateral engagements to suit their demands and become an indispensable Observer State and gradually steer the course. The equation in the Arctic region is made more complex as there are several divergent states, non-state and international players, often with deviations in goals, objectives, and methodology which demands that India should chart out a policy discourse which is adapted and adopted by these diverse players which will further strengthen India's position.

India should also take a cue from its recent addition of a separate Division, New, Emerging and Strategic Technologies in the MEA and set up either a separate Division or amalgamate the function of the existing Americas, Central Europe and Eurasia divisions to leverage and decipher the Arctic issues with precision. The existing disconnect between these three divisions does not provide a single point and seamless understanding of the complex Arctic issues and the creation of an umbrella subunit will offer better and precise inputs that will enlarge India's engagement. Also, the inputs and involvement of other Ministries like MoES, MoST, MoTA and other thinktanks should be leveraged into chartering fresh and incisive policy direction.

In the Arctic Circle Assembly of 2019, India was the only exception that didn't depute any Ambassador/Special Representative like China, Japan, and Republic of Korea. It is vital to have a benign and responsible person, committed to climate change goals and with established and respected credentials to portray India's position. This Arctic ambassador will be the Indian voice of Arctic at unrepresented fora like SAARC, Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, India, Brazil and South Africa, etc to garner the attention of these multinational fora and also emerge as a strong voice for Arctic affairs and thereby gain the trust of the Arctic nations.

The Arctic States and the AC along with its associated fora have been successful, especially in times where great

power rivalry and inter-regional manoeuvrings were rampant in isolating and insulating the region from these dynamics. India, by its democratic heritage and collaborative lineage, fits the requirements of an external Observer State and must continue to build on its strengths for mutual betterment.

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