

Arctic and North. 2022. No. 48. Pp. 225–236.

Original article

UDC [94(54):32:001.891](98)(045)

doi: 10.37482/issn2221-2698.2022.48.261

India's Arctic Policy: The Historical Context *

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Abstract. India released its Arctic Policy in March 2022, a long-awaited document by one of the four Observer countries to the Arctic Council indicating India's realisation of the significance of the Arctic. This article examines the evolution of India's Arctic engagement through a historical analysis of India's Arctic discourse. Apart from enunciating the scientific and political endeavours to date, the article traces the historical evolution of India's Arctic dialogue by political, strategic and academic experts and the process of India's engagement in the region. The objective of the article is to trace the historical context of India's Arctic policy. The article's analysis of India's recently published Arctic policy suggests that India's cooperation with Arctic council countries needs to be expanded, and it also must build up on its Arctic expertise by forging links with scientific institutions and universities across the Arctic. The practical significance of the article is in its use by policymakers and researchers interested in cooperation with India in the Arctic and for academic use at universities.

Keywords: Arctic, India, Arctic policy, scientific research, cooperation

Introduction

"It will thus be seen that if the Vedic evidence points to an Arctic home, where the ancestors of the Vedic Rishis lived in ancient times, there is at any rate nothing which would warrant us in considering the result improbable."

Bal Gangadhar Tilak [1, Tilak B.G., p. 35]

India released its Arctic policy on March 17, 2022. Prior to that, India was only one of the four observers in the Arctic Council to release an Arctic policy. Over the past five years, India has intensified its economic cooperation with Russia in the Arctic. Given the current attempts to isolate Russia by the Arctic Council member countries and the obvious turn to the east of Russian policy in the Arctic, a qualitative analysis of India's current agenda and strategy in the Arctic is extremely relevant. The article aims to highlight the reasons and the evolution of India's Arctic engagement through a historical analysis of India's Arctic discourse.

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© For citation: Zaikov K.S., Bhagwat J.V. India's Arctic Policy: The Historical Context. *Arktika i Sever* [Arctic and North], 2022, no. 48, pp. 261–274. DOI: 10.37482/issn2221-2698.2022.48.261

Methodology

Primarily, Indian scholars have examined the reasons for India's Arctic engagement. In this regard, the pioneering contribution was made by Vijay Sakhujā¹ [2, Sakhujā, pp. 6–13; 3, Sakhujā V., Narula K., pp. 1–163]. Many Indian researchers supported the Global commons theory [4, Chaturvedi S., p. 226–260; 5, Kumar, p. 14–22; 6, Nayak, pp. 649–677; 7, Rajan, pp. 31–39; 8, Gautam P.K., pp. 1–10]. This was supported for changing the existing governance system in the Arctic and maintaining the existing management system in the Antarctic influenced indirectly by India's intervention in the United Nations in the 1950s spearheaded by India's first Prime Minister Jawaharlal Nehru and by an influential former diplomat Shyam Saran²³⁴. Most Indian researchers also supported the view that scientific research should be given primacy [9, Sinha U.K., pp. 23–30; 10, Sinha U.K., Gupta A., pp. 872–885], with few arguing for strategic necessity⁵ [11, Gadihoke, pp. 1–12]. Some foreign researchers were intrigued by India's interest and attributed to science diplomacy⁶, geopolitical and geo-economic interests, including following China's lead⁷ as the primary drivers notwithstanding India's public stance [12, Lackenbaur P.W., pp. 1–19]. Russian researchers also examined India's interest in the Arctic [13, Gudev P., pp. 57–73; 14, Vopilovskiy S.S., pp. 29–43]. This study has used historical research methods at every stage. Primary and secondary sources have been utilised in the preparation of the thesis. The primary sources are Government of India policy documents, including India's Arctic policy (2022)⁸, India's draft Arctic policy (2020)⁹, Parliamentary debates, Lok Sabha; Government of India, Parliamentary debates, Rajya Sabha; Government of India, Ministry of External Affairs, Foreign Affairs Documents, Annual Reports; Government of India, Foreign Policy of India. In addition, secondary sources include conference proceedings of the Institute for Defence Studies and Analysis (IDSA), international conference

¹ Sakhujā V. The Arctic Council: Is There a Case for India (Policy Brief). New Delhi: Indian Council of World Affairs, March 30, 2010. URL: <http://www.icwa.in/%5C/pdfspolicy%20briefs%20dr.pdf> (Resource removed/no longer available) (accessed 18 July 2022).

² Saran S. India's stake in Arctic cold war, *The Hindu*, January 02, 2011. URL: <http://www.thehindu.com/opinion/op-ed/indias-stake-arcticcoldwar/article2848280.ece> (accessed 18 July 2022).

³ Saran S. Why the Arctic Ocean is important to India, *Business Standard*. December 16, 2011. URL: http://www.business-standard.com/article/opinion/shyam-saran-why-the-arctic-ocean-is-important-to-india-111061200007_1.html (accessed 18 July 2022).

⁴ Saran S. India's date with the Arctic, *The Hindu*, July 15, 2013. URL: <http://www.thehindu.com/opinion/op-ed/indias-date-with-the-arctic/article4915241.ece> (accessed 18 July 2022).

⁵ Bisen A. MP-IDSA Issue Brief - India's Arctic Policy: Building a partnership for sustainable development, March 17, 2022. URL: <https://idsa.in/issuebrief/india-arctic-policy-abisen-170322> (accessed 18 July 2022).

⁶ Gewalt A.E. India in the Arctic: Science, Geopolitics and soft power, 2016. URL: <https://www.duo.uio.no/bitstream/handle/10852/52355/GeweltMAfinal1.pdf?sequence=1&isAllowed=y> (accessed 18 July 2022).

⁷ *The Diplomat*. India releases draft Arctic Policy, January 10, 2021. URL: <https://thediplomat.com/2021/01/india-releases-draft-arctic-policy/> (accessed 18 July 2022).

⁸ India, Ministry of Earth Sciences. India's Arctic Policy: Building a partnership for sustainable development, March 17, 2022, <https://www.moes.gov.in/sites/default/files/2022-03/compressed-SINGLE-PAGE-ENGLISH.pdf> (accessed 18 July 2022).

⁹ India, Government. Draft Arctic policy, December 27, 2020, URL: <https://www.arcticpolicyindia.nic.in> (page removed) (accessed 26 January 2021).

“AsiArctic” on the Arctic, 23–24 September, 2013, organised along with the Fridtjof Nansen Institute (FNI), Norway and the National Maritime Foundation (NMF), international conference SaGAA III which discussed Science and Geopolitics of the Arctic-Antarctic-Himalaya, 29–30 September, 2015.

Establishing India's Arctic interest: from the Vedas to the Svalbard Treaty

India's official engagement in the Arctic started with its first expedition to Svalbard in 2007, during the International Polar Year. Nevertheless, some locate India's interest and engagement with the region further back, to both colonial and pre-colonial times. These arguments view India as a non-polar state within the domain of Arctic affairs, establish historical grounds for India to be viewed as a rightful player in the Arctic and refer to India's historical links with the Arctic region. At the international conference on SaGAA (SaGAA III), which discussed the Science and Geopolitics of the Arctic–Antarctic–Himalayas in Delhi, in September 2015, Director General IDSA, Arvind Gupta, together with UK Sinha, a research fellow at IDSA, traced India's “Arctic roots” back to the Vedic era, by referring to Bal Gangadhar Tilak's work, *The Arctic Home in the Vedas*¹⁰. This book (1903) was ostensibly founded on astrological observations found in Vedic texts that the Aryans subsisted in the Arctic region in prehistoric times, and subsequently emigrated to Europe and the Indian subcontinent [1, Tilak B.G., pp. 1–238]. Tilak tried to establish a link between the Arctic region and India by propagating this idea. This Vedic historical scholarship is intriguing as it was written in 1903 by Bal Gangadhar Tilak, one of the great leaders of India's freedom struggle, who was also an eminent scholar, activist and lawyer. It will thus be seen that if the Vedic evidence points to an Arctic home, where the ancestors of the Vedic Rishis lived in ancient times, there is nothing which would warrant us in considering this result as a priori improbable¹¹. It represents how the Arctic is viewed from India, as both a distant, and yet an important region, connected with Indian history and culture.

Arvind Gupta and UK Sinha highlighted that during British rule, India was a signatory to the Spitsbergen (or Svalbard) Treaty in 1920. Therefore, as Gupta and Sinha stated, “The Arctic is not alien to India”¹². Further, they stressed that for India, “The Arctic has a racial memory and a colonial participation”¹³. Along similar lines, Dr Sanjay Chaturvedi also referred to India's Arctic Vedic roots at the Science & Geopolitics of Arctic-Antarctic-Himalaya [SaGAA III] conference in Delhi in September, 2015. During his talk on India's polar challenge, Sanjay Chaturvedi reminded the audience that Bal Gangadhar Tilak wrote a book “Arctic Home in the Vedas”. The most important in

¹⁰ India and the Arctic, SaGAA III Conference ‘Arctic – Antarctic - Himalayas’ September 2015 – Conference material, Iris Publications, New Delhi, 2015. URL: <https://saghaa.org/SaGAA-Report-2015.pdf> (accessed 18 July 2022).

¹¹ Gewalt A.E. India in the Arctic: Science, Geopolitics and Soft Power, op.cit., p. 50.

¹² India and the Arctic, SaGAA III Conference ‘Arctic – Antarctic - Himalayas’, op.cit.

¹³ Ibid.

this book was that the Arctic was integrated into Indian historical memory and, in truth or imagination, embraced linkages with far-flung regions north of the Eurasian continent¹⁴.

India's current Arctic presence and engagement are fairly new, just about fifteen years. Due to its considerable geographic distance from the region and the minuscule Indian presence, India's participation in Arctic affairs is not obvious too much. However, linking Bal Gangadhar Tilak's book with contemporary Indian foreign policy priorities is fascinating. It adds an element of entitlement and ancient connectivity to India's Arctic engagement by establishing a prehistoric bond between India and the Arctic region. The justification for India's links with the Arctic is strengthened by invoking Tilak's Vedic scholarship, providing a traditional link to the region. Linking contemporary foreign policy issues with India's cultural and civilisational heritage, regularly surfaces in contemporary debates and discourses, on Indian foreign policy, particularly under the BJP-led government headed by Prime Minister Narendra Modi. Nevertheless, this argument has pitfalls as it contradicts India's views on China's imaginary nine-dash line and freedom of navigation in the South China Sea.

Svalbard is more than 6000 kilometres away from India and about 1200 kilometres away from the North Pole. India signed the "Treaty concerning Spitsbergen" on February 9, 1920¹⁵. The Svalbard Treaty awarded sovereignty of the Archipelago of Spitsbergen to Norway, and other member countries of the Treaty could access its natural resources¹⁶. The membership of the Treaty has expanded over the years¹⁷.

India in the Arctic: science

The Indian scientific mission in the Arctic falls under the Ministry of Earth Sciences [MoES]. In July 1981, the Department of Ocean Development (DOD) was formed as a part of the Cabinet Secretariat, directly under the charge of the Prime Minister Mrs Indira Gandhi, under whose personal initiative India's first expedition to Antarctica was launched in 1981. It became a separate Department in March 1982¹⁸. The erstwhile DoD functioned as a nodal Ministry for ocean development in the country. In February 2006, the Government notified the Department as the Ministry of Ocean Development¹⁹. The Government of India reorganised the Ministry of Ocean Development, and the new Ministry of Earth Sciences (MoES) came into being vide Presidential Notification dated July 12, 2006. According to the website of MoES, the mission of the ministry is to conduct scientific and technical activities, related to Earth System Science to improve forecasting of weather, monsoon, climate and hazards, exploration of polar regions, the seas around India, and

¹⁴ Sanjay Chaturvedi, Polar Challenge, Talk at the SaGAA III Conference 'Arctic – Antarctic - Himalayas', September 29, 2015, New Delhi.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ Ministry of Earth Sciences, Government of India, About the Ministry of Earth Sciences, URL: <http://moes.gov.in/>, 2022. URL: <https://www.moes.gov.in/about-us/about-our-Ministry> (accessed 18 July 2022).

¹⁹ *Ibid.*

develop science and technology for ocean resources and coordinate Antarctic/Arctic research²⁰. According to the plans released by the ministry, polar science is a focus area for the MoES²¹. To further this vision, the Antarctic mission appears to have topmost priority and consequently garners more funding. The size of the Arctic programme is currently small, with an estimated annual budget of approximately one tenth that of the Antarctica mission²².

India watched with interest the evolving Arctic climate change. On July 30, 2007, India launched its first scientific expedition to the Arctic and established a scientific research station Himadri, at the International Arctic Research Base at Ny-Alesund, Svalbard, Norway (1200 km from the North Pole), under the guidance of the National Centre for Antarctic and Ocean Research (NCAOR), which is administered by the MoES [15, Chaturvedi S., pp. 73–79]. The research base named “Himadri” was officially opened at Ny-Alesund in July 2008, for research in glaciology, atmospheric sciences, biogeochemical studies and cryosphere studies²³. India also entered into a MOU with the Norwegian Polar Research Institute of Norway, for cooperation in science, as also with Kings Bay (A Norwegian-Government owned company) at Ny-Alesund for logistic and infrastructure facilities for undertaking Arctic research and maintaining Himadri. NCPOR, which was earlier called the NCAOR, is the nodal agency, makes sure that the requisite facilities are available at Himadri²⁴. In 2007, India launched its first official expedition to the Arctic region when five Indian scientists were dispatched for a month to Ny-Ålesund at Spitsbergen, the largest island in the Svalbard archipelago. On August 04, 2007, the Indian newspaper *Live Mint* reported that the goal of the expedition was to do scientific research: “*The scientists will be specifically studying the impact of aerosols, which are solid and liquid particles that stay suspended in the atmosphere, (sic) on global warming. They will use this knowledge to understand environmental changes taking place in India*”²⁵. The purpose of the first Arctic expedition was to study bacterial life and to measure environmental changes in the Arctic²⁶. The scientists also hoped to establish a link between the Arctic region and glacial melting in the Himalayas, sparking debates over the negative effects of global warming²⁷. According to the *Live Mint* article, when asked whether India would follow nations like South Korea, China and Japan in establishing a research base on Svalbard, the director of India’s Antarctic and Arctic research activities at the MoES, Ajai Saxena said: “*There are*

²⁰ Ministry of Earth Sciences, Government of India. About the Ministry of Earth Sciences, op.cit.

²¹ Ibid.

²² Ministry of Earth Sciences, Government of India. Detailed demand for grants. URL: <https://www.moes.gov.in/sites/default/files/DDG%202021-22%20scanned%20copy.pdf> (accessed 18 July 2022).

²³ S. Rajan and K.P. Krishnan, India’s Scientific Endeavours in the Arctic, Talk at the National Maritime Foundation, Conference ‘Asia and the Arctic – Opportunities and Challenges’, New Delhi, 19 – 20 February 2015.

²⁴ NCPOR, Himadri Station, July 2022. URL: <https://ncpor.res.in/app/webroot/pages/view/340-himadri-station> (accessed 18 July 2022).

²⁵ Koshy J.P. India’s first Arctic expedition to study bacterial life, climate change. *Live Mint*, April 08, 2007. URL: <https://www.livemint.com/Industry/KOCaR2LXYluWxiNsmoqML/India8217s-first-Arctic-expedition-to-study-bacterial-lif.html> (accessed 18 July 2022).

²⁶ Ibid.

²⁷ Shailesh Nayak, Secretary, Ministry of Earth Sciences, Discussions on Melting Glaciers in The Himalayas, Arctic – Antarctic – Himalayas SaGAA III Conference’, New Delhi, September 2015.

no plans yet for establishing an Indian research station, or oil-exploration, centre in the area"²⁸. However, one year later, on July 01, 2008, the Indian research base *Himadri* ("the abode of snow") located in Ny-Ålesund, Svalbard was inaugurated²⁹.

Considering the immense scope for scientific research, NCAOR, as the nodal agency for the Indian Arctic Programme, entered into an MoU with the Norwegian Polar Institute for scientific cooperation in Polar Sciences. In view of the successful achievements in the very first year of research in Arctic science, India's proposal to become a member of the Ny-Ålesund Science Managers Committee (NySMAC) was accepted in November 2008³⁰. The major role of NySMAC is to enhance cooperation and coordination amongst research activities at the Ny-Ålesund International Arctic Research and Monitoring Facility. Mr Prithviraj Chavan, the Minister of Science and Technology, together with Ms Tora Aasland, Hon. Minister of Research and Higher Education of Norway, led a high-level delegation to Ny-Ålesund on June 06, 2010. At Himadri, both the Ministers formally launched the Indian Arctic web portal. The major development of the Indian Arctic programme was in 2013, when India became an observer in the Arctic Council³¹.

India's Arctic research includes glaciology, atmospheric sciences, biogeochemical studies and cryosphere studies. The atmospheric research encompasses investigations into aerosols and precursor gases with respect to their radiative, physical-chemical and optical properties, and studies of the effects of space weather on the auroral ionosphere. Biological studies include sea-ice microbial communities, and marine research: phytoplankton pigments, nutrients, pH, DO, seawater salinity, and other ecological parameters have been investigated. Earth sciences and glaciological observations include studies of snow-pack production of carbon monoxide and its diurnal variability. India has a multi-purpose floating observatory, "IndArk" at Kungsforde in Svalbard since 2014. It also has plans for a polar research ship. However, the progress on this project, originally announced in 2008–2009 and initially approved in 2010, has been tardy. The last clarification by the MoES in Parliament was on May 06, 2015³².

Nevertheless, apart from India, several Asian countries have also shown great interest in doing research at Svalbard. A few Indian politicians have emphasised that it is important for India to be active in the Arctic region. In an interview in December 2008, shortly after India had opened its research base in Ny-Ålesund, Mr Kapil Sibal expressed pride and excitement over India's polar programme. Mr Sibal emphasised: "*Polar Regions offer an exceptional environment to study the natural processes operating on the earth, which cannot be recreated on the mainland. The research on microbial diversity and climate change processes is going to have a large impact on our*

²⁸ Koshi J.P. India's first Arctic expedition to study bacterial life, climate change, op.cit.

²⁹ NCAOR, Polar Sciences and Cryosphere, July 2022. URL: <https://ncpor.res.in/pages/view/260/189-polar-science-cryosphere> (accessed 18 July 2022).

³⁰ Ibid.

³¹ Ibid.

³² MOES, India. *Construction of Polar Research Vessel*, May 06, 2015. URL: https://moes.gov.in/sites/default/files/LS_US_6595_06052015.pdf (accessed 18 July 2022).

existence. Any investment in polar research is therefore essential for answering fundamental questions that are linked to human survival itself³³. Mr Sibal highlighted the importance of scientific research in the Arctic from a wider perspective, transcending the region, and indicating the reasons why polar science is vital for India. India's official scientific engagement in the Arctic is summed up on the website of the MoES, and the scientific objectives in the Arctic highlighted are the following:

(a) *“Continuation of the scientific programs in the Arctic in atmospheric sciences, climate change, geosciences and glaciology, and polar biology.*

(b) *Ensuring India's prominent and sustained presence in the Arctic through the initiation of scientific research in some of the frontier realms of polar science”³⁴*

India's Arctic research Program focuses on climate change in the circumpolar north. Several scientists from different national institutions have participated in the Arctic programme and in recognition of its scientific contribution, India was invited to the Council of the International Arctic Science Committee (IASC) in 2012. The MOES listed the major objectives of the Indian Research program in the Arctic Region as follows:

- *“To study the hypothesized teleconnections between the Arctic climate and the Indian monsoon by analyzing the sediment and ice core records from the Arctic glaciers and the Arctic Ocean.*
- *To characterize sea ice in the Arctic using satellite data to estimate the effect of global warming in the northern polar region.*
- *To research the dynamics and mass of Arctic glaciers focusing on the effect of glaciers on sea-level change.*
- *To comprehensively assess the flora and fauna of the Arctic vis-à-vis their response to anthropogenic activities. In addition, it is proposed to undertake a comparative study of the life forms from the Polar Regions.”³⁵*

Another reason for India's scientific presence in Svalbard is that some scientists were of the opinion that there is a hypothesised connection between the changing climate in the Arctic and the Indian monsoon³⁶. It means that variations in the Arctic climate may directly affect the monsoon weather system, which consequentially could impact India. This hypothesised connection between the Arctic and the Indian monsoon system was a much-discussed issue during the third Science & Geopolitics of Arctic-Antarctic-Himalaya (SaGAA III) Conference in New Delhi in September 2015. The monsoon rains are crucial to India, and monsoon instabilities have a major impact

³³ Indian Journal of Marine Sciences, *Interview with Minister Kapil Sibal, 2008*. URL: <http://studylib.net/doc/7251160/indian-journal-of-marine-sciences> (accessed 18 July 2022).

³⁴ MOES, India. *Scientific Endeavours in the Arctic*, July 2022. URL: <http://www.moes.gov.in/programmes/indian-scientific-endeavors-arctic> (accessed 18 July 2022).

³⁵ MOES, India, *Scientific Endeavours in the Arctic, op.cit.*

³⁶ SaGAA III Conference, *Discussions on Variations in Arctic Climate Affecting the Indian Monsoon System*, Arctic – Antarctic – Himalayas SaGAA III Conference', New Delhi, September 2015.

on the Indian economy, in particular, in the agricultural sector. The melting of glaciers in the Himalayas is controversial, which became evident during the discussions of the Science & Geopolitics of Arctic-Antarctic-Himalaya [SaGAA III] Conference in New Delhi in September 2015³⁷. A scientist from the Norwegian Polar Institute (NPI) displayed satellite images, indicating that in certain parts of the Himalayas, especially in the Western part, the Karakoram mountains in Pakistan, the amount of snow and ice had in fact increased in recent years³⁸. This led to an extensive discussion, and there was a variation in the procedural approaches applied in measuring the ice, that created this discrepancy³⁹.

The National Centre for Polar and Ocean Research (NCPOR)

All polar research in India is coordinated through the National Centre for Antarctic and Ocean Research (NCAOR) in Vasco da Gama, Goa. NCAOR is an autonomous research and development institute under the MoES. The NCAOR's location allows direct access to the Arabian Sea, the Indian Ocean and onwards to the Southern Ocean, in other words, a direct route to the Antarctic continent. The NCAOR is responsible for the management and practical execution of India's Arctic programme. A handful of scientists, about eight people, are dispatched for a period of approximately 30–40 days before being rotated with a new group. The research station in NyÅlesund is manned from March to November, being closed for the rest of the year. The composition of scientists is diverse, with a wide difference in disciplinary backgrounds such as biology, chemistry and glaciology. The main priority for Indian research appears to be the teleconnection between the Arctic and the monsoon system⁴⁰.

A paper published by researchers of the NCAOR in 2018 stated that the pace of Arctic ice melt had accelerated post-1970. The research spearheaded by Manish Tiwari and Vikash Kumar of the NCPOR examined organic productivity from sediment samples of the Arctic. This assisted them in the reconstruction of Arctic warming for the last two centuries. The researchers conclude that the surging effects of changes in the Arctic are likely to considerably alter the state and equilibrium of the earth's climate system. The NCAOR projected that the quicker melting of the Arctic ice could have deleterious effects on the Indian monsoon. The scientists expressed optimism that this research would help in furthering understanding of global climate and particularly India's south-west monsoon, which they assert hinges on the rate of melting of polar ice caps⁴¹. In July 2018, India renamed the National Centre for Antarctic and Ocean Research [NCAOR] based in Goa, as the National Centre for Polar and Ocean Research [NCPOR].

³⁷ SaGAA III Conference, Discussions on Variations in Arctic Climate Affecting the Indian Monsoon System, op.cit.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ DeSouza G. Fast Melting Ice May Hit Indian Monsoon. August 18, 2018. URL: <https://www.hindustantimes.com/environment/fast-melting-arctic-ice-may-hit-indian-monsoon-study/story-6KcXhvTGp5QDoNPeGKIViM.html> (accessed 18 July 2022).

Current research studies in the Arctic include monitoring of aerosols over the polar regions under the aegis of the Indian Polar Aerosol Network (POLAERNET), role of ocean advection on decadal variability of sea-ice in the Arctic, phylogenetic null modelling of bacterial communities in Kongsfjorden, metagenome assembled genomes (MAGs) from Midtre Lovénbreen glacier foreland ecosystems and phytoplankton dynamics and bio-geochemistry of Kongsfjorden⁴².

Prerequisites to India's Arctic Policy – geopolitics and geo-economic aspects

In March 2010, Dr Vijay Sakhuja, Director of Research at the Indian Council of World Affairs in New Delhi, unambiguously stated that “by virtue of the Svalbard Treaty, India is a ‘stakeholder’ in the region”⁴³ and presented a pioneering brief on the Arctic emphasizing articulation of an Arctic strategy including cooperation, policy research, scientific expeditions, developing technical capability and promoting a *nuclear-free Arctic*⁴⁴. This proposal did not seem to have taken into account that the Arctic is a highly militarized zone dating back to the Cold War.

The Norwegian Minister of Foreign Affairs, Jonas Gahr Støre, during the Indo-Norwegian seminar on maritime safety in New Delhi in March 2010, stated that major changes in the Arctic were underway⁴⁵. The Minister emphasised that the Arctic is a test bed of climate science, necessary to understand and mitigate the deleterious effects of climate change, and confirms the accelerated pace and effects of climate change resulting in the development of nascent sea routes, increased economic development and new strategic interests⁴⁶.

In 2012, an official foreign ministry note stated that India was “seeking an observer status in the Arctic Council as we want to undertake scientific studies from Antarctica to the Arctic”⁴⁷. In April 2012, India was given observer membership of the International Arctic Science Council, a working group of the Arctic Council in April 2012⁴⁸. On May 15, 2013, India was granted observer status in the Arctic Council at the Kiruna Ministerial Meeting of the Arctic Council, along with other Asian countries, China, Japan, South Korea and Singapore⁴⁹. This landmark event in the 20-year history of the Arctic Council happened six years after India's first scientific expedition to the Arctic region and establishment of its first research station in Ny-Ålesund. The Ministry of External Affairs [MEA] supervises the geopolitical and geo-economics aspects of India's engagement in the Arctic. In addition to the focus on science, geopolitical and geo-economics aspects are also part of

⁴² MOES, India. Annual Report 2021-22, July 2022. URL: <https://www.moes.gov.in/documents/annual-reportsc> (accessed 18 July 2022).

⁴³ Sakhuja V. The Arctic Council: Is There a Case for India, op.cit.

⁴⁴ Ibid.

⁴⁵ Støre J.G. Keynote Address - IDSA-IFS Bilateral Seminar, March 02, 2010. URL: https://www.idsa.in/keyspeeches/JonasGahrStoreMinisterofForeignAffairsofNorway_02032010 (accessed 18 July 2022).

⁴⁶ Gewalt A.S. India in the Arctic: Science, Geopolitics and Soft Power, op.cit, p. 50.

⁴⁷ Gupta A. and Sinha U.K. Discussions on India and the Arctic, op.cit.

⁴⁸ International Arctic Science Committee, About the International Arctic Science Committee. July 2022. URL: <https://iasc.info/about> (accessed 18 July 2022).

⁴⁹ MEA, India. India and the Arctic, June 10, 2013. URL: <https://mea.gov.in/in-focus-article.htm?21812/India+and+the+Arctic> (accessed 18 July 2022).

the Indian Arctic dialogue [16, Sinha U.K., pp. 119–120; 17, Bhagwat J., pp. 73–90]. India's official position in the Arctic region was projected through the Indian MEA's website:

*"The impact of rapid changes in the Arctic region goes beyond the littoral states, and any legitimate and credible mechanism to respond to these challenges calls for active participation of all those actors who have a stake in the governance of global commons. The interplay between science and policy has the potential to contribute to the better handling of the complex issues facing the Arctic. India, which has significant expertise in this area from its association with the Antarctic Treaty System, can play a constructive role in securing a stable Arctic. India, in its new role as a permanent observer in the Arctic Council, is committed to contributing to the deliberations of the council to develop effective cooperative partnerships that can contribute to a safe, stable and secure Arctic"*⁵⁰.

Apart from Norway, India also attempted to engage with other Arctic Council countries through joint declarations. The Saint Petersburg declaration of June 01, 2017, by the Russian Federation and India [a vision for the 21st century, stated, *"we are interested in launching joint projects on exploration and exploitation of hydrocarbons in the Arctic shelf of the Russian Federation"*⁵¹. The joint statement of February 23, 2018, released during the State visit of Mr Justin Trudeau, the Prime Minister of Canada, to India on February 18–24, 2018, includes reference to Canada actively considering Indian participation in Canadian Arctic research⁵². However, in reality, none of these declarations have become significant joint projects or collaborative scientific research [18, Bhagwat J., Shaparov A., pp. 16–22].

India's Arctic Policy

India's Arctic policy was released on March 17, 2022 by the Minister of Earth and Natural Sciences after revisions to its draft Arctic policy that was released in December 2020. The draft policy invited comments from Indian citizens by January 26, 2021. The document states that the pillars of India's Arctic policy are *"Science and research, Climate and Environmental Protection, Economic and human development cooperation, Transportation and connectivity, Governance and international cooperation and National capacity building"*⁵³. The main justification for India's Arctic engagement can be attributed to the statement, *"India is particularly impacted due to the likely*

⁵⁰ Ministry of External Affairs (MEA), India. *India and the Arctic*, op.cit.

⁵¹ MEA, India, The Saint Petersburg declaration by the Russian Federation and India: A Vision for the 21st Century, Saint Petersburg, June 01, 2017. URL: <https://mea.gov.in/bilateral-documents.htm?dtl/28507/saint+petersburg+declaration+by+the+russian+federation+and+the+republic+of+india+a+vision+for+the+21st+century> (accessed 18 July 2022).

⁵² MEA, India. Joint Statement between India and Canada, State visit of PM Canada, New Delhi, February 23, 2018. URL: <https://mea.gov.in/bilateral-documents.htm?dtl/29512/indiacanada+joint+statement+during+state+visit+of+prime+minister+of+canada+to+india+february+23+2018> (accessed July 16 2022).

⁵³ Ministry of Earth Sciences (MoES), India. *India's Arctic Policy: Building a partnership for sustainable development*, March 17, 2022. URL: <https://www.moes.gov.in/sites/default/files/2022-03/compressed-SINGLE-PAGE-ENGLISH.pdf> (accessed 18 July 2022).

effect of these changes on critical aspects of national development such as economic security, water security and sustainability, weather conditions and monsoon patterns, coastal erosion and glacial melting"⁵⁴. It refers to the "*Indian philosophy of Vasudhaiva Kutumbakam – the world is but one family*"⁵⁵.

The policy is a neutral, politically correct document and steers clear of any controversies, such as the "near Arctic state" concept propagated by China. The policy document emphasises India's rich scientific base in terms of personnel, expertise in space, as well as entrepreneurship, which could be utilised by the Arctic Council countries for mutual benefit, recognizes the existing legal regime established in the Arctic by the Ilulisaat declaration and acknowledges India's interest in the development of the Northern Sea Route and Arctic natural resources in a sustainable manner. This has been reflected in certain discussions that have started, for example, between India and Russia⁵⁶ [19, Bhagwat J., pp. 488–506]. So far, India's focus has been on scientific research, mainly with Norway and the EU⁵⁷. It remains to be observed whether this will change after the publication of this policy. For India's Arctic endeavour to be successful, the country needs to build up its Arctic-specific expertise, and for this, it needs to follow the example of China, Japan and the Republic of Korea, all of whom have extensive scientific and academic exchange programs with all Arctic Council countries, including Russia.

Conclusion

This article has focused on the manner in which India's Arctic policy evolved, with a distinction between the geopolitical and geo-economics focus of the MEA and the scientific mission under the MoES. The MoES provides clear visions and goals for its Arctic programme. Analysis of the Arctic debate and dialogue by strategic experts, foreign policy advisors, commentators and journalists have conclusively established that India cannot afford to be oblivious of the transition underway in the Arctic.

The analysis has enunciated India's Arctic interests, from its origins to the current engagements, strategic and geopolitical significance and what the Arctic implies for India in terms of scientific research, climate change, shipping, energy, natural resources and other geopolitical considerations. It also revealed the role played by different voices in the discussions on India in the Arctic and the role of Indian science and scientists in the Arctic region. The policy accentuates that India's interests in the region are scientific, environmental, commercial as well as strategic, though

⁵⁴ Ministry of Earth Sciences, India. India's Arctic Policy. op.cit.

⁵⁵ Ibid.

⁵⁶ Sputniknews. India expedites dialogue with Russia to trade via Arctic route amid Ukraine crisis, April 22, 2022. URL: <https://sputniknews.com/20220422/india-expedites-dialogue-with-russia-to-trade-via-arctic-route-amid-ukraine-crisis-1094971865.html> (accessed 18 July 2022).

⁵⁷ The European Union. EU-India calls on Polar Climate and Developing the next generation of Earth system models, December 13, 2019. URL: <https://euraxess.ec.europa.eu/worldwide/india/eu-india-calls-polar-climate-and-developing-next-generation-earth-system-models> (accessed 18 July 2022).

most analysts seem to advocate that science ought to be leveraged as India's main thrust towards these interests.

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The article was submitted 20.07.2022; accepted for publication 24.07.2022.

Contribution of the authors: the authors contributed equally to this article.

The authors declare no conflicts of interests.